Water services in Ontario:

For the public,

By the public

A Submission to
Phase 2 of the Walkerton Inquiry

From:
The Canadian Environmental Law Association
The Canadian Union of Public Employees
The Ontario Public Service Employees Union

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"The Continuing Tale of One City and Privatization"

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Executive Summary

At the end of the twentieth century, the occupants of the blue planet have been startled into the realization that they have failed to protect their waters -- the source of all life on earth. Water quality and quantity problems continue to grow and new threats and challenges to water protection have emerged. Ontario is no exception. The Walkerton Inquiry into the E. coli contamination of one Ontario town's drinking water has heard testimony about new emerging strains of pathogens threatening drinking water. Groundwater supplies are threatened by the growing scale of agricultural and chemical contamination and by human induced threats of climate change. It is clear that the job of protection and stewardship of water is and will continue to be one of the most complex, important and enduring jobs on earth.

Few can argue with this. However, many are arguing that it does not matter who does the job as long as it gets done. Chronic neglect and the exceptional challenges of providing safe drinking water are causing governments to consider relinquishing responsibility for this essential public service. They are being encouraged to do this in a global business climate where the private sector views competition and market forces as an end in themselves and a panacea for all woes. Considerable hysteria about the capital needed in the long term to replace and upgrade neglected water and wastewater infrastructure and facilities has fueled local governments' fears as they juggle diminishing budgets with competing demands.

This has left the door open to demands from some for privatization as the solution to these growing pressures. The private sector currently plays a relatively small role in North America but has targetted the North American water services sector for major business expansion. Global water companies are currently vying for billions of dollars of business promised by this revolutionary transformation from a system where water policy is based on regional and local public objectives to one where water policy is determined on the basis of private income and profit levels, and the objectives of company owners in distant countries.

The Ontario government has been a particularly strong advocate of privatization. The government has already enacted a number of legislative and policy changes that make it easier for private sector involvement in water treatment and distribution in Ontario. At the same time, the government has also made financial changes which put municipalities under increasing financial pressure through downloading services, capital funding reductions, and reduced Ministry of the Environment services.

As yet, no irrevocable decisions have been made on the privatization of water. But we are clearly at a crossroads on this issue. Prior to the Walkerton Inquiry, the Ontario government was well advanced in its plans to privatize water delivery. Initial work was undertaken by their Office of Privatization until after the 1999 election when the work was resumed directly by the Cabinet. In January of 2000, the Cabinet had 'Qs & As' (Questions and Answers) prepared for tendering their Ontario Clean Water Agency to SuperBuild for privatization. However, during a recent Question Period in the Legislature, the government made a commitment to put those plans on hold until the outcome of the Walkerton Inquiry. This reinforces the importance of the Inquiry considering this issue. These deliberations will provide one of the few public forums for consideration of this important public policy issue.

The authors of this report and the accompanying companion studies have attempted to step back and not let ideology determine whether a public or a private system would best suit the needs of all Ontarians. In order to consider what water management structure will best serve Ontario in the challenging future, this study utilizes a framework of five essential elements of a healthy and safe water system in order to evaluate public vs. private provision of water services in a fair and consistent manner. These elements are:

- **Security of supply:** Water users need a secure supply of adequate quantities of water. Society needs to ensure that it can provide for both current and future water needs.

- **Ensuring quality:** Water supplied must be of a consistently high quality that meets or surpasses regulatory standards to ensure health protection and public confidence in the system.

- **Environmental protection:** The water taking, treatment and delivery system must be carried out in a way that takes source water protection into consideration and that minimizes environmental harm.

- **Public accountability and involvement:** Decisions about water resources and services are critical. The public needs to be informed about decisions and there must be a right to public participation in decision-making. Public accountability needs to be ensured through clearly defined areas of responsibility and authority, with avenues available to question decisions.

- **Full and fair pricing of water:** Water should be sold to all users at a full and fair cost. Price levels and structure should be based on recouping all of the costs of the system, full cycle funding to cover future needs, reasonable cost, the principle of equitable access to water, and the promotion of water conservation.

This report looks at each of these essential elements in terms of public ownership vs. private ownership. In addition, the four separate complementary studies accompanying this report look at aspects of this evaluation in more detail. There are two studies on the two Hamilton, Ontario public-private partnership agreements for the running of their water and wastewater plants. Consultants in England have done a study of water privatization in the UK twelve years after the Thatcher government fully privatized that system. Finally, a specialist in municipal finance has drawn on his experience in Ontario to illustrate with data and examples successful public alternatives to privatization.

Together, these studies show that on a criterion-by-criterion analysis based on this framework, there are no criteria for which the private sector has an advantage over the public sector in providing water services. The analysis also shows that for most of these criteria, the public ownership and management option has a clear advantage, regardless of whether it is compared to outright private ownership or public-private partnerships.

In our conclusions we strongly recommend Ontario's water systems remain in public ownership, and that the provincial government should stop its plans to facilitate and actively promote the

privatization of water systems. We have found little validity in the arguments commonly raised to argue for the privatization of water systems. Municipalities are more capable of financing the water system infrastructure and at better rates than the private sector. Municipalities are just as capable of running an efficient operation as are private companies – if not more capable because they do not have to add in profit margins. Municipalities can obtain just as much access to expertise and technologies as can private companies. There is no evidence of a conflict of interest in municipal ownership that results in reduced enforcement. At least three-quarters of the public want their water systems to be publicly owned and managed.

This study then examines how this public system should be arranged. First, public ownership and management require that the provincial government implement an appropriately rigourous regulatory regime, for example by following the recommendations in *Tragedy on Tap: Why Ontario Needs a Safe Drinking Water Act*, submitted to the Walkerton Inquiry by the Concerned Walkerton Citizens and the Canadian Environmental Law Association. (*Concerned Walkerton Citizens and Canadian Environmental Law Association*)

In determining who should provide water services, the need for public accountability and public participation needs to be balanced with factors such as security of supply, ensuring quality, and full and fair pricing. Larger municipalities and regional governments have the capacity to achieve these aims. Smaller municipalities could investigate improving service quality and efficiency by working together through regional or county government or through other municipal co-operative arrangements, or through the Ontario Clean Water Agency (OCWA).

The Ontario Clean Water Agency should be retained as a provincial crown corporation and the uncertainty over plans to privatize it should be ended. OCWA's role should be to assist municipalities, especially small ones, in the financing, building, and operation of water and wastewater treatment plants in ways that will help them achieve self-sufficiency. It could also play a new lead role in training municipal employees in water and wastewater operations. OCWA should also be available to step in if another water emergency occurs, as it did in the case of Walkerton.

Financial reforms should include the adoption of life cycle costing by municipalities to include long-term infrastructure costs in the current rate structure. The province and municipalities should work together on finding ways to ease the transition to life cycle costing through measures such as phasing in rate increases gradually or providing interim provincial and federal grants or low interest loans with the goal of eventually establishing self-supporting municipal systems. Finally, municipalities should adopt an increasing (inverted) block rate system or a flat rate system for pricing water to encourage water conservation, while adopting appropriate mechanisms to ensure that no one is denied access to water because of lack of financial resources.

Three studies are being prepared for the Inquiry on public versus private ownership. The last Walkerton Inquiry public hearing in September is also devoted to this issue. One study prepared by the Energy Probe Research Foundation supports privatization; this paper done collectively by the Canadian Environmental Law Association, and unions representing water workers in the Province, the Canadian Union of Public Employees and the Ontario Public Service Employees

Union, supports keeping water public. The Walkerton Inquiry has commissioned its own study being done by University of Toronto Political Science Professor, David Cameron. We urge you to read all of these submissions and contribute to this discussion.

PART 1: INTRODUCTION

Access to clean, safe water is essential for the well-being of all people. Therefore, obtaining access to a suitable water source, testing and treating that water, and distributing it to users are essential services for all communities. Unlike other resources, there is no alternative to water.

With the exception of systems serving very small communities, e.g., some subdivisions, trailer parks and campgrounds, and some small northern communities, communal systems to supply water are all owned by Ontario's municipalities. In 1998, there were 639 publicly owned water treatment plants in Ontario (*Ontario Office of Privatization, 1998, p. 8*).

In addition to being publicly owned, almost all of these water treatment and distribution systems are publicly operated. In 1998, municipalities operated approximately 80% of water works; the Ontario Clean Water Agency (OCWA), a provincial crown agency, operated almost all of the remaining 20% of the municipally owned waterworks.

As of 2001, there are two instances in which municipalities in Ontario had contracts with private companies to operate their water treatment and delivery systems. These contracts are between Hamilton and Azurix Corporation, and between Goderich and USF Canada.

The disastrous failure of Walkerton's water system to supply safe water in 1999 and the subsequent increased monitoring and testing of water systems all across Ontario have shown serious deficiencies in Ontario's water treatment and delivery system.

One of the questions that these revelations have raised is whether Ontario's municipalities should continue to be responsible for the ownership and operation of water supply services.

Upon the request of the Walkerton Inquiry, the Canadian Environmental Law Association (CELA), the Canadian Union of Public Employees (CUPE), and the Ontario Public Service Employees Union (OPSEU) collaborated on this paper to address the question of who should own and operate water supply systems. Each of these organizations has a long history of involvement in water related issues. This previous work is outlined in Appendix 1.

We begin this paper by presenting the criteria that we use to make assessments throughout the paper. Then, in Part 2 we summarize the current state of water supplies in Ontario, across the North American continent and throughout the world. This gives us an understanding of some of the pressures that we will have to address in the future as we deal with water supply issues. In Part 3 of the paper, we describe the various forms of privatization, and outline the current state of the private sector water industry. We then outline the attitude of the provincial government towards privatization, and the actions it has taken that affect the likelihood that the private sector will get involved in water delivery systems in Ontario.

The next two parts of this paper provide our detailed assessment of whether a public or private approach is best for Ontario's water systems. In Part 5 we take each of the criteria we presented at the beginning of the paper and determine whether a public or private approach best fulfils the objectives in each criterion. In Part 6, we address the main arguments that are frequently used to support privatization of water supply and delivery systems.

In Part 7 of the paper we outline some methods that we believe should be adopted to improve the provision of water in Ontario.

Four background papers accompany this submission to the Walkerton Inquiry:

- *Financial Management of Municipal Water Systems in Ontario*, which was prepared for this project by Gary Scandlan of C.N. Watson and Associates Ltd.;

- *UK Water Privatization – A Briefing*, prepared for CUPE for use in this project by Emanuele Lobina and David Hall;

- *An Analysis of a Public-Private Sector Partnership: The Hamilton-Wentworth-Philip Utilities Management Corporation PPP* prepared for CUPE by David Anderson and Salim Loxley; and

- *The Continuing Tale of One City and Privatization*, a paper on Hamilton prepared by Sarah Miller of CELA for this project.

The background papers have been an essential part of our research. The conclusions and recommendations in them, however, are solely those of the individuals who wrote them and have not necessarily been adopted by the organizations that are submitting this overall paper.

As a result of our research and assessments, we conclude that privatization of Ontario's water supply and delivery system would not solve the problems afflicting our water system.[1] Indeed, we conclude that privatization would worsen the situation. We make recommendations that would improve the public provision of water services and would restore public confidence in that service.

Assessment Methodology

Our research methodology included the following: literature review, commissioning of research projects, interviews with experts, and observations based on the experiences of the authors and their organizations.

To provide a framework for our analysis, we determined our goals for the water system and used these goals as assessment criteria throughout this paper. These goals are based on those used by acclaimed policy analysts and, just as importantly, by the involved public and their political representatives.[2] The following goals are the basis of this paper:

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[1] By privatization, we mean a private company purchasing a previously publicly owned water system, a private corporation holding a long-term contract to operate a publicly owned water system, or a private company financing the construction or upgrading of a water system that remains or becomes at a designated time publicly owned.

[2] These criteria are primarily based on the work of Professor Oran R. Young, who has been prolific in refining criteria to assess the effectiveness of environmental criteria (see Young), and an agenda put together by environmental groups in the Great Lakes basin for addressing water use issues (Gilbert et al).

1. Security of Supply:
Water users need a reliable system that ensures the continual delivery of sufficient quantities of water with minimal disruptions to the service. Society also needs assurance that there will be sufficient water available for both present and future needs.

2. Ensuring Quality:
To protect human health, the water supplied must be of a consistently high quality that meets or surpasses regulatory standards. Achievement of this criterion not only ensures protection of human health, but also ensures public confidence in the water system.

3. Environmental Protection:
The water taking, treatment and delivery system must be carried out in ways that avoid or minimize disruption or harm to the environment and public health. The system should also contribute towards the restoration of degraded water sources.

4. Accountability to the Public and Public Involvement:
The importance of water resources and services demands that decisions pertaining to the supply and delivery of water be made in a way that is open to scrutiny by the public and to public participation in that decision-making. To ensure public accountability it must be easy to determine who has the authority and responsibility to make decisions and there must be avenues to question those decisions. The public must have the opportunity not only to be informed about decisions but also to participate in decision-making and shape public policy. To achieve the goals of accountability and public involvement, there must be transparency of decision-making and public access to information.

5. Full and Fair Pricing of Water:
Water should be sold to all users at a full and fair cost. The following factors should be taken into account in determining the price levels and structure:

- *Recouping all of the costs of the system*: The cost of water should reflect the actual costs of delivering the water to the consumer without overt or hidden subsidies to the system.

- *Full cycle funding*: The cost of water should include the costs of continual maintenance, upgrading and renewal of the water infrastructure. This means anticipating future needs and ensuring that there are sufficient resources within the system to deal with foreseeable problems.

- *Reasonable cost*: Water should be delivered at a reasonable cost on the basis of an efficient operation. We define reasonable costs as those that are necessary to achieve the criteria we have just listed and at the same time minimize the costs necessary to do so.

- *Equitable access to water*: People cannot survive without water; unlike with most resources, there is no alternative to water. Hence, water should be priced in a way that it does not burden low-income people or people who have special needs, e.g., people with heavier water needs such as someone on dialysis treatment.

- *Promotion of conservation:* Water should be priced in ways that encourages homeowners, and agricultural, commercial and industrial users to reduce their use of water.

PART 2:
THE EMERGING CRISIS CONCERNING WATER QUANTITY AND QUALITY

Dr. David Schindler, an eminent Canadian ecological scientist, recently concluded, "Unless there is a quick reversal of recent trends in water management, freshwaters will become Canada's foremost ecological crisis early in this century" *(Schindler, p. 26)*.

In this part, we provide a brief overview of the status of water in the rest of the world, on this continent and in Ontario. This provides a context to help understand some of the pressures Ontario could face that we should take into account when making decisions about how to manage Ontario's water systems.

The Ontario Situation

Ontario has always felt blessed by limitless quantities of fresh clean water. This feeling of living in abundance has resulted in Ontarians being the second highest users and wasters of water in the world, using two to three times as much water per capita as many European countries *(Environment Canada, 1998)*.

But the current status indicates that this blessing is not one that can be taken for granted any longer:

- In 1999, almost 12,000 tonnes of pollutants were discharged from site-specific sources directly into Ontario's waterways. Another 80,000 tonnes were released into the air and onto the land, much of which ended up in Ontario's surface and groundwater *(PollutionWatch)*.

- In the early 1990's it was found that one-third of the wells used for drinking water in rural Ontario had concentrations of pollutants over the provincial drinking water objectives *(Swaigen & Winfield, 535)*.

- In cottage country, one-third of all septic systems are classified as public health nuisances because of their potential to contaminate water *(Cooper)*.

- 10 percent of the estimated 34,000 underground storage tanks in Ontario are leaking into groundwater *(Environmental Commissioner of Ontario, 1996, 47)*.

- An estimated 1,400 active and 2,500 closed landfill sites throughout Ontario pose a threat to ground and surface water supplies *(Cooper)*.

- Ontario's 3.4 million hogs produce as much raw sewage as the province's total population, but intensive farming operations are not required to meet strict treatment requirements *(Environmental Commissioner of Ontario, 2000, 52)*.

- The Ministry estimates that there are over half a million wells in Ontario drawing water and that this increases each year by 14,000 wells *(Ministry of Environment and Energy).*

- Environment Canada scientists predict that climate change will result in dramatic changes in Ontario's water supplies during this century:

    - a temperature increase of 5 degrees centigrade by 2060 *(Canadian Centre for Climate Modelling and Analysis);*
    - a decrease in runoff to the Great Lakes of 23 to 51 percent *(Environment Canada, 1993)*;
    - a decrease in soil moisture and groundwater supplies *(Auld)*; and
    - a drop in the levels of the Great Lakes of one to two metres *(Auld).*

The pollution of Ontario's existing water supplies and ever-increasing taking of water combined with the changes caused by climate change necessitates substantial shifts in the assumptions that we have long made about Ontario's water supplies.

The Continental Situation

Each stressor viewed by itself does not seem all that harmful (at least to some), but the overall effect will be the degradation of Canadian freshwater on a scale that was not comprehensible to the average Canadian at the end of the twentieth century. *(Schindler, 2001).*

Canada and North America appear to have an abundance of fresh water. The Great Lakes alone contain almost 20 percent of the world's fresh water.

But groundwater is being mined at a rapid rate in several major parts of North America. The Worldwatch Institute points out serious depletions of groundwater in the High Plains of the United States (the Ogallala Aquifer), California, the southwestern United States, Mexico City and the Valley of Mexico *(Brown et al, 42).*

The Commission for Environmental Cooperation (CEC), which was set up under NAFTA, observed that "in 1995, the lack of water in northern Mexico killed crops and cattle, while fish and other aquatic life died from rising salt levels in rivers" *(Commission for Environmental Cooperation).* The CEC concluded that this situation is likely to worsen. These problems led Mexico to ask the United States for alternative water supplies; the United States refused the request.

Water shortages have resulted in numerous schemes for diverting water out of the Great Lakes to other parts of the continent. These have included, for example, a proposal to close off James Bay to turn it into a fresh water lake and divert this water through the Great Lakes to western Canada and the U.S. southwest. This plan has been brought forward repeatedly. As water sources throughout North America are depleted, the grand plans that have thus far been set aside may become more viable.

Currently, the main calls for water diversions out of the Great Lakes basin are to communities just across the basin's boundaries into spreading suburban communities in Wisconsin, Illinois, Indiana and Ohio *(Bolster & Kershner)*. Already diversions of water out of the Great Lakes basin have been allowed for these purposes to Pleasant Prairie, Wisconsin, and Akron, Ohio.

The Global Situation

As of 1990, experts calculated that each year over 12 million people in the world die because of polluted water, water shortages, and unsanitary living conditions *(Hinrichsen, Robey & Upadhyay, 4)*. This number is undoubtedly much higher today.

In 1990, approximately 335 million people in 28 countries were chronically lacking adequate supplies of safe drinking water *(Engelman & LeRoy, 20)*. Experts predict that twenty-five years from now, in 2025, between 2.7 and 3.2 billion people in 46 to 52 countries will be afflicted by on-going water shortages *(Engelman & LeRoy, 20)*. This means that over one-third of the world's population will be experiencing severe water crises.

These numbers do not take into account that 70 percent of water usage is to irrigate food crops *(Clarke)*. This means that water shortages escalate food shortages and the resultant starvation.

These numbers also do not include the predicted water shortages that are now occurring or will be occurring by 2025 in major parts of Asian countries such as China and Pakistan *(Hinrichsen, Robey & Upadhyay, 3)*.

In addition, these predictions of water shortages do not take into account the impacts that climate change will have. Climate change is predicted to raise ocean levels but decrease the fresh waters in lakes, rivers, and underground in aquifers.

Implications for Ontario

Reduced water supplies as a result of contamination, increased usage, and reduced water quantities will combine to create water stresses within Ontario. Conflicts are bound to rise among water users within Ontario. Confidential briefing notes to Ontario's Minister of the Environment in 1999 warned the Minister of potential conflict if the drought in southern Ontario continued: "Tributary flows have decreased and concern is developing that groundwater levels may be decreasing. If below average precipitation amounts persist, conflicts between competing uses for Ontario's inland water can be expected to occur" *(Mittelstaedt, October 15, 1999).* Ontario's Environmental Commissioner stressed this potential for conflicts over water in a report in January 2001 *(Environmental Commissioner of Ontario, 2001, 7)*. Recently, CELA has received increased public queries about how to address groundwater depletion problems, especially in the Bruce, Cambridge, and Grey areas.

Ontario could experience significant decreases in the waters of the Great Lakes as a result of diversions of Great Lakes waters to other parts of the continent. Generally the estimate of impacts on water levels across the Great Lakes from a 24,000 million litre per day diversion anywhere in the Great Lakes is a decrease of 0.15 metres *(Michigan House Marine Affairs and*

Port Development Committee, 30). A diversion of this size would be small in comparison with the thirst that major areas of the United States and Mexico may experience.

The premiers of Ontario and Québec and the governors of the Great Lakes states just spent a year and a half putting together an agreement to develop a new regime for controlling water diversions and uses. This agreement was signed as an annex to the Great Lakes Charter in June 2001. The debate that occurred while they were creating this annex showed the wide differences in views among the governments around the Great Lakes in their acceptance of the principles of ecosystem protection, restoration, and conservation. These debates are bound to continue and will have major implications for Ontario.

There is now talk of developing a continent-wide energy plan among Canada, Mexico and the U.S. *(Toulin).* It is feasible to think that such a continent-wide plan may some day be discussed for water, particularly because many of the international water companies have close ties with major energy companies. This would also have major implications for Ontario's ability to control water supplies within the province.

Ontario will not be able to stay aloof from the growing water crises in distant parts of the world. Calls for water from Ontario to be shipped to other parts of the world are likely to increase.

In 1998, a plan by a Sault Ste. Marie company, the NOVA Group, to ship water by tanker from Lake Superior to Asia received approval from the Ministry of the Environment. When knowledge of this came out, it set off alarm bells in Ontario and throughout Canada and the U.S. The Ministry quickly withdrew the water-taking permit. When NOVA appealed to the Environmental Appeal Board to retain its permit, CELA, Great Lakes United and many other organizations, including government agencies in the U.S., supported the Ministry. The company eventually withdrew its appeal.

Other such plans are likely to surface to sell water to distant places. The proponents in those cases may not be as easily stopped. Already companies are experimenting with methods to more cheaply ship water around the world through mechanisms such as bladders dragged along behind ships.

The problems with water supply have been presented thus far only from the perspective of human needs. What are the impacts of water shortages and contamination on wildlife, plant life and the planet's natural cycles? Human beings now use more than half of the Earth's accessible water supply *(Postel, 10).* This percentage will increase as water problems increase. No one knows the extent to which this will interfere with non-human users of the earth's waters and with biodiversity.

Findings

At the regional, continental, and international levels, water quantity and quality problems will become an increasingly serious issue that Ontario will be forced to address. This means that Ontario must be in a position to address these problems regionally and internationally in a way that protects the public interest.

One of the questions that must be confronted is: What are the structures that will put the Ontario government and the people of Ontario in the best position to make decisions on these matters? As will be discussed later in this paper, who owns and operates Ontario's water supplies and systems has serious implications for our ability to address these issues.

PART 3:
PRIVATE SECTOR OWNERSHIP AND OPERATION OF WATER SUPPLY SYSTEMS

The ways in which private companies can be involved in the water supply and delivery systems vary. The most common are for municipalities to contract with private companies to design and build water treatment plants, to clean out water mains or carry out other maintenance activities, and to buy technologies from private companies for water filtration and other kinds of water treatment methods. These types of private sector involvement in the municipal water supply and delivery system are not considered to be forms of privatization because the municipality simply purchases a clearly defined service and maintains total ownership and daily control over operations.

Forms of Privatization

The forms of privatization that are either in limited use or have been considered by municipalities in Ontario and Canada are:

Private Ownership:

In this form, a municipality sells its water system to a private company. This is what Ontario's SuperBuild program refers to as "divestiture" *(Ontario SuperBuild Corporation, 2001, 2)*. No municipality in Canada has sold or franchised its water supply or delivery system to a private company. Many small systems are, however, privately owned. These are systems that never had municipal involvement and serve only a small part of a municipality.

Public-Private Partnerships (3Ps):

The most common form of privatization in Canada is through public-private partnerships. These take three forms:

- **Private Financing**:
  In this system, private companies provide the financing for the construction of new water treatment and delivery systems or to upgrade the existing system. The private company then builds and operates the water system and makes money from it by operating the system for an extended number of years. Ultimately the ownership is transferred to the municipality. SuperBuild refers to these as "design-build-own-finance-operate-transfer concessions" *(Ontario SuperBuild Corporation, 2001, 2)*. Moncton, New Brunswick is a rare Canadian example of this approach. U.S. Filter Canada, a subsidiary of the French water giant Vivendi, has a twenty-year contract with Moncton to finance, build, and operate treatment plants.

- **Private Construction, Operation and Maintenance**:
  In this approach a private company designs, builds and operates the water treatment system for an-agreed-to number of years but does not finance the capital expenditures. These agreements usually extend for between ten and thirty years.

- **Private Operation and Maintenance**:
  In this model a private company has a contract to operate and maintain a water system for

a specified number of years (usually three to five) and under specified conditions. The then Regional Municipality of Hamilton-Wentworth[3] signed a contract for this kind of arrangement in December 1994 with Philip Utilities Management Corporation, which was bought out in 1999 by Texas-based Azurix Corporation. This ten-year contract is unusually long. In December 2000, Goderich made a similar kind of arrangement with U.S. Filter Canada.

Even though they do not result in a private company completely and permanently taking over a water system, public-private partnerships are forms of privatization because daily control over the operation is turned over to a private company and many of the decisions about the nature and operation of the system are made by a private sector company.

The Transnational Private Water Industry in North America

Large transnational corporations based mainly in Europe are targeting North America for business. The two largest, Suez (Suez Lyonnaise des Eaux), and Vivendi Environment SA, are based in France.

In 2000, Suez had 100 million non-industrial water customers in over 100 countries, including 10 million in North America. As with most of the other big water companies, Suez is diversified into other utilities businesses. Suez has four main business units: energy, water, waste services, and communications. Between 2000 and 2002, Suez expects its revenues from its water business to nearly triple. It states that the two most significant factors in its current and predicted growth are "deregulation" and "globalization" (*Suez, 2001*). In North America, its principal subsidiary is United Water Services (UWS).

Vivendi Environment SA operates water services in over 100 countries. It is involved in water delivery and treatment, energy, and waste management. In 1999 it made a major inroad into North America when it bought United States Filter (USF), the largest water company in the U.S. Through USF, Vivendi Environment's focus on municipal and industrial water services has been strengthened *(Deutsch)*. Europe's largest media company, Vivendi, owns more than two-thirds of Vivendi Environment SA *(Vivendi)*.

A relatively new entrant into the world water industry is Texas-based Enron. Until recently, Enron was mainly an energy company, but it expanded into water through Azurix, which became the owner of Wessex Water of England. A major focus of Azurix activities is buying, selling, storing, and transporting water in the western U.S. Azurix has its main presence in Canada through a contract with Hamilton. Enron is planning to get involved in Ontario's energy generation market as soon as the Province's plans for deregulating the electricity industry go into effect (*Anderson*).

Companies that own and operate gas pipelines in Canada have also been trying to get into the water business. They see their knowledge of pipeline installation and operation, and their control

[3] As of January 1 2000, the Regional Municipality of Hamilton-Wentworth and the other municipalities within the region were amalgamated to create the City of Hamilton. Therefore, throughout the rest of this paper, this agreement will be referred to as being between Hamilton and Azurix.

over pipeline right-of-ways as giving them strong potential to divert and deliver water over vast distances. For example, TransCanada Pipelines unsuccessfully tried to sell a plan to pipe water from Georgian Bay to Halton, Peel, Waterloo, Wellington, and York Regions *(TransCanada Pipelines)*. When York Region was developing its long-term water supply plan, one member of the industry consortium that they worked with was Consumers Gas.

The objective of these and other companies in the water business is to increase their share of the Canadian water services market. One strong indication of this is that for two consecutive years international summits of the water companies were held in Toronto. The Reason Foundation and the Center for Business Intelligence, both of which are major promoters of the privatization of water systems, sponsored these summits.

At these summits, the industry raised concerns about major hurdles that water companies must get over to play a stronger role in Ontario. These included the ability of municipalities to borrow at lower rates, to get breaks on GST, and to collect development charges *(Global Water Report, May 23, 1997).*

The major water companies want to transform the provision of water from a public service to a private business opportunity. Speaking at a conference on water and markets, John R. "Woody" Wodraska of Azurix lauded the growth of major private water companies and the movement to water privatization as a way to move "competition for water" from the "political arena" to the "market arena." He said that this means switching the decision-making factors from "votes and political influence" to "dollars and economic influence" (*Wodraska, 2000*).

Public Works Financing's fifth annual survey of the U.S. water and wastewater outsourcing industry shows a softening in the core municipal operations market during 2000. The 17 largest firms reported revenues 16 percent higher than in 1999, but much lower than the 74 percent and 26 percent growth in the previous two years. Most of the business for water corporations is in the form of short-term municipal operations and management contracts (*Public Works Financing, March 2001*).

The market share for private contract operation of municipal utility systems in the U.S. is still less than 5 percent. Clearly, municipalities are not rushing to turn over their water and wastewater facilities to private water corporations (*Public Works Financing, March 2001*).

The figures for Canada are not readily available, but it is probable that the water companies are further behind in terms of their penetration of the Canadian market. In Canada, Moncton (USF) and Hamilton (Azurix) have long-term public-private contracts for water and wastewater services. Fort Saskatchewan, Alberta (OMI), Haldimand-Norfolk, Ontario (USF), and Goderich, Ontario (USF) have signed short-term operation and management contracts (*Public Works Financing, October 2000*).

Increasingly water and water services are being treated as commodities to be traded. For example, the web site www.waterbank.com is an Internet site "dedicated to creating a broad marketplace for buying, selling, trading, and marketing of [among other items]: water rights, water utilities, property and water, bulk water, and spring water.

This ever increasing trading of water raises questions about the impacts of trade agreements such as the North American Free Trade Agreement (NAFTA) and the General Agreement on Trade and Services (GATS) on the ability of governments to place restrictions on the trading and movement of water. These agreements are aimed at facilitating the free flow of goods, resources, and investment monies across international boundaries. They raise questions about what actions governments can take to implement domestic goals to protect the environment. Canada has already been successfully challenged several times by private companies as it has tried to implement environmental objectives.

For example, Sun Belt Water Inc. of Santa Barbara, California, has launched a NAFTA Chapter 11 challenge seeking compensation of billions for loss in perpetuity of their right to profit from the sale of Canadian water. The company lost a contract to export water when British Columbia banned the export of bulk water. Because Sun Belt failed to settle their with the B.C. and federal governments their claim will be heard by a trade panel. More often than not, decisions of trade panels have been detrimental to Canadian environmental protection *(Swenarchuk, 9-16).* Maude Barlow of the Council of Canadians has stated that "governments are signing away their control over domestic water supplies by participating in trade treaties" *(Barlow, 3).*

Trade agreements raise questions about the possible effects of entering into a public-private partnership. For example, in a recent legal opinion, one expert in trade law concluded that "whatever claim to exempt status [from the provisions of GATS] water services might now enjoy would be compromised by entering into a private sector partnership to deliver such services. In this regard, the risks are substantially greater for a contract that involves the operation, rather than simply the design and construction, of a water treatment plant" *(Shrybman).*

The long-term plans for these worldwide water companies are not simply to be passive providers of a local water service. Their strategy is to capture as much of the municipal water market as possible, including water supplies. Once this is achieved, it is quite conceivable that they would connect up these supplies and move water beyond local communities to places where they can make the most profits. For example, Hamilton and Azurix are currently talking about building a pipeline 60 kilometres north so they can sell Hamilton's water to Waterloo Region and to Guelph. A spokesperson for Hamilton recently said, "We're going to cut a deal and someone's going to buy water from us or we're going to do a deal with someone on a bottling plant. It's let your mind think about the opportunities beyond the realm of merely day-to-day operations" *(Vallance-Jones).*

Findings

A few large transnational corporations are moving to develop business opportunities in the North American water services sector.

The big water companies are buying out smaller companies, increasing their control over the industry. These companies also often become conglomerates, simultaneously controlling a wide range of services, including energy and garbage as well as water.

These companies want to turn a previously publicly provided service into a private business opportunity.

These companies make decisions about the provision of water on the basis of private income and profit levels as with any other business, rather than on the basis of provincial and local public objectives.

PART 4:
THE ONTARIO GOVERNMENT'S PROMOTION OF WATER PRIVATIZATION

The Common Sense Revolution, the campaign platform for the Conservative Party during the 1995 election campaign, said, "History has shown that the private sector can use such assets [government assets] more efficiently and provide better services to the public." Since taking office in June 1995, the Conservative government has made legislative, policy, and funding changes to encourage the privatization of water services.

Legislative and Policy Changes

In January 1996, the government embarked on legislative changes to remove obstacles to privatization of water and sewer services through the passage of Bill 26, *The Savings and Restructuring Act*. This eliminated the need for governments, including municipalities, to hold public referendums before dissolving public utilities. One reason for dissolving public utilities is to sell the waterworks and sewage treatment plants or hydro facilities to the private sector *(Freeman)*. Through this provision, Bill 26 weakened the ability of the concerned public to use a referendum to block the privatization of municipal services. Since 1996, many municipal public utilities have been dissolved, primarily to sell off hydro facilities. In 1990, there were 124 public utility commissions and water works commissions. As of January 2001, only 15 public utilities remained in Ontario *(Sancton & Janik, 27)*.

Later in 1996, the government set up its Office of Privatization to review government businesses and services with a view to privatizing them. At the same time the government appointed a Minister for Privatization to head this office; this was the first such minister appointed in Canada.

In October 1996, then Minister of the Environment, Norm Sterling, stated that the government wanted to privatize the Ontario Clean Water Agency (OCWA), a provincial crown agency.

OCWA had been set up by the previous provincial government in 1993 to "finance, build and operate water and sewage facilities throughout the province and provide service and advice to communities on a cost recovery basis" *Ministry of Environment and Energy, 1993 5)*.

Environment Minister Sterling wanted to sell OCWA as "an operating and management corporation," not as the owner of water treatment plants. The Minister justified this as an industrial strategy for Ontario, saying it would create a company that could compete in the growing world-wide market of water treatment services. He also said it would be a lucrative sale for the province, although he did not specify the expected sale price *(Mittelstaedt, October 17, 1996)*.

A study conducted for the Office of Privatization in 1998 concluded, however, that selling OCWA was not the best way to generate funds:

> If the intention of privatizing actions is to maximize the NPV (net present value) of potential financial returns to the Province, then all things being

> equal, it will always be more financially attractive not to privatize. Of course, it is possible that privatization could accomplish important non-financial objectives, but qualifying these is beyond the scope of the purely financial analysis described in this section *(Fasken Campbell Godfrey et al., Schedule A).*

The Minister also stated that he intended to transfer ownership of all water and sewage plants to municipalities *(Mittelstaedt, December 4, 1996).*

At the end of 1996, *Global Water Report*, a *Financial Times* newsletter serving private water companies, summarized its feelings about privatization efforts in Canada:

> A measure of frustration is evident among the many companies that have trooped to Canada recently in the hope of sharing in public-private partnerships and other private-sector involvement in water projects. The frustration stems from the slow pace of decision-making among local governments, politicians' reluctance to take an uncompromising stand in favour of private enterprise, and the risk that much effort may yield little or no payback *(Global Water Report).*

But as a result of changes in Ontario during 1996, they were expressing some optimism for their situation in Ontario: "The moves will give municipalities greater freedom to attract private-sector involvement in water supply and distribution systems" *(Global Water Report).*

In January 1997 then Minister of the Environment, Norm Sterling, introduced Bill 107, the *Municipal Water and Sewage Transfer Act*. The Bill planned to transfer to municipalities the ownership of the 230 water and sewage treatment plants then owned by the OCWA, one-quarter of the plants in Ontario. The Bill also required that, if a municipality decided to sell all or part of one of the plants turned over to it, the municipality would have to pay back to the province "the face value (without interest) of any provincial capital grants it has received since 1978" *(Sterling, January 15, 1997).*

This Bill engendered considerable public debate, since many groups saw this as a step to facilitate and encourage the privatization of water and sewage treatment systems. Groups such as CELA and Great Lakes United appeared at legislative hearings calling for the Bill to be amended to include a prohibition against municipalities selling water works or sewage works to the private sector so that local autonomy over water systems could prevail *(Canadian Environmental Law Association & Great Lakes United).*

The Minister of the Environment repeatedly asserted that "continued public ownership of the transferred works will be encouraged" by the requirement to repay outstanding capital grants *(Sterling, January 15, 1997).*

Toronto's Medical Officer of Health, however, saw this requirement differently:

> In light of current provincial policy directions, the repayment provision contained in Bill 107 may be more a clarification of the terms of

> privatization, than a disincentive to privatization. In fact, the terms of privatization appear quite generous for the private sector; companies that buy public water and wastewater facilities will not be required to pay interest on provincial grants given to those facilities, nor will they be expected to repay monies received from the federal government, and they will have access to all of the properties associated with the water and sewage facilities. If the provincial government truly wants to prevent the privatization of the province's water system, Bill 107 should explicitly prohibit the privatization of water and wastewater works in Ontario *(David McKeown).*

The water industry stated that they saw the transfer of ownership, despite the repayment requirements, as a positive step towards privatization *(Global Water Report).*

Bill 107, the *Municipal Water and Sewage Transfer Act*, was passed, without substantive change, in May 1997.

In April 1997, Privatization Minister Rob Sampson unveiled the government's *Privatization Review Framework*. The privatization plans, however, turned out to be very modest proposals to review the Metro Convention Centre, Ortech, the Province of Ontario Savings Bank and three tree nurseries. In spite of previously announced intentions, OCWA was not on that first list.

OCWA was, however, on a list of agencies "under review for privatization" by the Office. The management options they were to consider included improving efficiency while retaining ownership, public-private partnerships, joint ventures, franchises, and divestiture *(Office of Privatization, 1997).*

In March 1998 the government referred OCWA to the Office of Privatization to review "whether or not the province needs to be in the business of running water and sewage treatment facilities when there are private sector companies and municipal employees currently providing these services" *(Office of Privatization, March 1998).*

In December 1999 Ontario replaced the Office of Privatization with the SuperBuild Corporation, which makes recommendations to the Cabinet Committee of Privatization and SuperBuild. SuperBuild's mission was to find "new ways of financing, developing and thinking about infrastructure." One of the ways it was to meet its goals was "by driving public-private partnerships and other innovative investment approaches that improve services for taxpayers" *(SuperBuild, 2000).*

SuperBuild also was set up as a funding agency. It set a five-year goal of investing $10 billion in a variety of infrastructure projects and using that investment "to lever an additional $10 billion or more in partnership investments from the private and broader public sectors" *(SuperBuild, December 2000).* Private sector funding is a more positive factor in determining whether to fund a project than partnership funding from municipalities or the federal government *(Province of Ontario, May 5, 2000).*

At this time, OCWA was referred to SuperBuild for further assessment. According to briefing notes to the Cabinet, "the continuing purpose of the review is to examine whether the province needs to be in the business of operating water and sewage treatment facilities when private sector operators already are active in the business" *(Province of Ontario, January 26, 2000)*.

The tragedy in Walkerton in May 2000 led to considerable challenging of the provincial government's activities around its role in water treatment systems and the responsibility that the province had for the breakdown of the water system in Walkerton.

Nevertheless, the government continued on its movement towards privatization. In June 2000 the Minister of Municipal Affairs, Tony Clement, went to Cabinet to push for the privatization of water and sewage treatment plants. He argued that municipalities, if they want to manage these services, had to prove that they could do it for "better value." The onus was on municipalities to show that the advantages of public control outweigh private control; if they couldn't, they were to privatize the service *(Gray, Mackie & Rusk)*.

The on-going pressure on the provincial government around the Walkerton issue led the government to announce Operation Clean Water in August of that year. One of the guiding principles for the long-term water and sewer infrastructure that this programme laid out was to "look at the appropriate roles for different levels of government and the private sector in providing, operating and/or financing water and sewer infrastructure" *(Province of Ontario, August 10, 2000)*. SuperBuild was given the responsibility to explore these roles.

In January 2001, the government made it clear that they were still on the path to privatization. *The Globe and Mail* quoted "a senior official in the government" as saying:

> When the dust settles and clearer heads prevail, it will be apparent that investment has not kept pace with the needs of water and wastewater infrastructure. It's also going to be pretty clear that major reform of how we handle infrastructure is needed. And the private sector is going to have to play a key role *(Ibbitson, January 20, 2001)*.

At the beginning of 2001, SuperBuild began looking for consultants to advise them on options for water and sewage treatment plants. The consultants were to look at a range of options including letting municipalities provide water services but with tighter controls and more contracting out; selling off all the infrastructure and regulating it; setting up a private non-profit corporation to be responsible for water and waste water; and forcing municipalities to amalgamate their water services under regional authorities that could contract out operations to private firms. SuperBuild expects to have recommendations on how to reorganize the provincial water system in the fall of 2002 *(Ibbitson, January 20, 2001)*.

In May 2001, the provincial government introduced Bill 46, *An Act Respecting the Accountability of Public Sector Organizations*. This Bill would require each public sector organization in Ontario to annually submit a detailed report to the Minister of Finance on their operations. One requirement in the annual report is "a description of the measures the organization will take to improve its services and its efficiency and the measures it will take to

identify alternative methods of delivering its services, including the delivery of those services by the private sector."

Financial Changes

At the same time as the government was supporting consideration of privatization of water services, the government was taking financial actions that put municipalities under pressure – pressure that fostered a crisis in water delivery service in Ontario and encouraged municipalities to look at privatization options.

This financial pressure on municipalities took three forms: increased responsibilities through downloading and reduced transfer payments; reduced capital funding; and reduced services from the Ministry of the Environment.

Downloading:

Bill 107 transferred the ownership and full responsibility for building, upgrading and operating water treatment systems onto municipalities. This was only one of numerous items that have been downloaded onto municipalities by the provincial government since 1995 without grants or shared funding commitments by the province. These downloaded services have included public transit, land ambulances, social housing, and highways with the exception of the 400-series roads.

The full financial impacts of these downloading actions have not been calculated. The Association of Municipalities of Ontario estimated that between 1999 and 2000 municipal costs increased by 7.7 percent while revenues rose by only 2.3 percent (before increasing property tax rates) *(Association of Municipalities of Ontario)*.

Capital Funding Reductions:

Since 1956, the province has invested approximately $4 billion in municipal water and sewer infrastructure.

In the early 1990s provincial governments began reducing grants for water services, with the intention of phasing them out. The intention was to move to a situation where user fees would cover infrastructure costs.

The Municipal Assistance Program (MAP) began in 1994 as a short-term programme to replace the former granting programme that had been phased out. This programme was administered through OCWA. Four hundred million dollars were allocated to this programme to be spent from 1994 to 1999. In recent years, the funding has been targeted towards smaller municipalities, "which often are not able, on their own, to afford large capital expenditures due to insufficient population base and/or sufficient density of development" *(Ontario Clean Water Agency, undated)*.

In December 1996, the government eliminated most new funding under this programme. The Ontario Municipal Water Association, whose members operate 220 water treatment plants, said that the offloading of services onto municipalities combined with reduced transfer payments mean that "the government is opening the floodgates to the irreversible deterioration of water

services in Ontario. It's a situation that is transforming Ontario's reliable and safe water service into one marked by chaos and fragmentation" *(Ontario Municipal Water Association, December 1996).* They warned that privatizing the OCWA would affect more Ontario residents than any other privatization.

Due to mounting public pressure after the breakdown of Walkerton's water system, in August 2000, the Minister of Municipal Affairs and Housing announced a $240 million programme to support health and safety infrastructure. The *Ontario Small Town and Rural Development (OSTAR)* initiative could be used to help municipalities upgrade their water systems *(Province of Ontario, August 10, 2000).* Later that year this initiative was expanded to $600 million.

Reduced Ministry of the Environment Services:

At the same time it was increasing the burden on municipalities through downloading and reduced funding, the province was dramatically reducing the ability of the Ministry of the Environment to provide support to municipalities and to protect the environment. For example, in September 1996, the province closed the Ministry of the Environment laboratories, resulting in the ending of its previous drinking water quality analysis service to municipalities. As has been shown at the Walkerton Inquiry, the fact that Walkerton was forced to seek water testing services from a private company directly contributed to the people of Walkerton not being given timely notice of problems with the water they were drinking.

The government reduced the budget of the Ministry of the Environment by approximately 60 percent between 1994 and 2001. In 1994, the Ministry had an operating budget of almost $400 million; by the fiscal year 2000-1, this had been reduced to $158 million. In 1994, the capital expenditures budget for the Ministry was $150 million; by 2000-1, this had been reduced to $65 million *(Clark & Yacoumidis, 7).*

Findings

The provincial government has taken many actions to explore and promote the privatization of government services, including water delivery.

The financial reductions at the Ministry of the Environment, the downloading of responsibilities to municipalities, and reduced financial support programmes for municipalities have combined to create a crisis mentality around water services.

One way out of this crisis that is being increasingly promoted is to turn to the private sector to provide the services and financial resources to provide water that the province used to provide.

Although these government initiatives have been furthered in many areas, no irrevocable decisions with respect to the privatization of water have yet been made. Ontario can continue towards a path in support of privatization of water or can take an alternative road of supporting and enhancing public ownership. The fact that Ontario is at the crossroads on this issue reinforces the importance of this issue for the Walkerton Inquiry.

PART 5: PUBLIC OR PRIVATE? WHICH SUITS OUR NEEDS?

At the beginning of this paper, we listed five criteria that we would use to assess the relative appropriateness of the options for ownership, financing and management of Ontario's water supply system. These criteria are: security of supply, ensuring quality, environmental protection, accountability to the public and public involvement, and full and fair pricing of water. In this part of the paper, we apply each of these criteria to bring us to a conclusion on the appropriateness of privatizing Ontario's water systems.

Security of Supply

Access to water is a basic need for all people. It is essential for a wide range of users: householders, industry, businesses, agriculture, and institutions.

Does privatization have any impact on the availability of adequate supplies of water? The best time to answer that question is during a period of crisis. Is the water supplier prepared for such situations?

Experience in the U.K. after the water systems were privatized raises alarm bells about the impact that privatization can have.

In 1988, the U.K. government passed legislation that put the water systems in England and Wales into the hands of private companies. In 1995, parts of the U.K. experienced a drought. In some parts of the country the shortage of water for drinking and sanitation needs was so severe that water had to be trucked in. This operation was so large that it took almost all of the food-grade trucks to provide enough water in northern England, especially in the Yorkshire area. Even at Christmas, long after the drought had ended, some consumers still had to collect water from standpipes.

The regulatory agency responsible for overseeing the water industry, the Office of Water (OFWAT), concluded that Yorkshire Water PLC's serious failure to ensure a reliable and continuous supply of water, as well as to control leakage and flooding from sewers, was related to the company's dividend policy (*Lobina & Hall, 22*). To make more profit, the company had failed to make adequate investment in the system.

In addition, "the companies were not trusted by the public, and were perceived as greedy. As a result, the public were less willing to make sacrifices to conserve water, when the companies had clearly made no sacrifice at all" (*Lobina & Hall, 22*). For example, Yorkshire Water imposed bans on watering gardens, while making 7.2 million pounds by selling off water in reservoirs that could have supplied the needed water (*Today*).

In Part 2 of this report, we described the emerging crises in water quantity and quality at the global, continental and Ontario levels. That assessment showed that we can expect increasing water crises in the future, including possible shortages. As the Ontario Ministry of the Environment and Ontario's Environmental Commissioner have noted, conflicts are already arising in Ontario over access to water supplies *(Mittelstaedt, October 15, 1999; Environmental*

Commissioner of Ontario, 2001, 7). These problems are expected to escalate dramatically as the impacts of climate change are increasingly felt.

Private companies are not the appropriate bodies to make the decisions that must be made in such situations of conflict.

In addition, as we undergo increasing stresses, long-term knowledge of the water supply system becomes even more critical to be able to make the appropriate adjustments to changes. Private companies rarely are stable in their ownership and management over the long or even short-term. For example, Hamilton made a public-private partnership with a local water company, Philips Utilities Management Corporation, in December 1994. In May 1999, the local company was bought out by the Texas-based company Azurix. In 2001, there are again discussions of the contract being sold to another company. It has been noted that "The RA (Regional Authority, the Regional Municipality of Hamilton-Wentworth) faced new types of financial and operating risks from the instability of its private partner which it would not have faced had it continued to operate the utility itself" *(Anderson and Loxley, 14).*

Private companies motivated by the need to make profit are much less likely to make the investments in infrastructure and to put into place conservation measures to reduce water use than is a public body whose motivations do not include having to make a profit. This is discussed further in *Accountability to the Public and Public Involvement* later in this part. If such actions are not taken, we will not be prepared for these crises.

In order to ensure access to water as the water supply situation goes through dramatic changes over the next fifty years, public policy will have to play a strong role. Would privatization affect the development and implementation of such policies?

To the extent that transnational water companies gain an interest in Ontario's water supply and delivery system (either through actual ownership of water systems or through long-term public-private agreements with municipalities), they will play a stronger role in affecting the content of those policies. Also, since many of these are also energy companies and have oil and gas pipeline corridors across North America, they may well try to develop similar continent-traversing networks of water pipelines.

The transnational companies are sure to lobby strongly for policies that encourage and facilitate the free movement of water to places where it will bring the biggest profits. They are sure to lobby for a weakening of Ontario's *Water Taking and Transfer Regulation*, which prohibits the transfer of water from the Great Lakes-St. Lawrence River, Nelson, and Hudson Bay basins. They are also sure to be major lobbyists for a continental water plan, which would result in the wholesale movement of water from Ontario to the southwestern U.S. (*Reguly; Diebel*).

Ensuring Quality

Neither a publicly nor a privately owned or operated water treatment utility can guarantee safe potable water. Things can go wrong and drinking water quality can be compromised. The question really is one of whether a public or private regime would provide more assurance of safe drinking water.

There are a number of reasons to suggest a public regime would provide a greater assurance to the Ontario public. First, as noted below, a public system provides better opportunity for financial resources to maintain and operate the facility. While public water treatment systems can be criticized for not spending sufficient resources, they certainly do not have the additional obligation of ensuring a profit margin for the shareholder.

As is also mentioned below, public systems tend to promote a greater security in the quality of the water because publicly owned and operated systems tend to be more accountable. Operators cannot hide behind a business contract; their actions and performance are directly linked to officials who must explain if there is a problem or poor quality. In addition, public systems are more likely to be familiar with the body of laws and regulations for protecting drinking water and have the ability to consult with regulators as needed.

There is also another context to the notion of accountability. Private utilities are not designed to protect the more general public interest; they are interested in a reasonable return on capital for their shareholders. Public facilities have a greater tendency to be more sensitive to public concerns and indeed may decide to take a more precautionary approach if it is deemed to be in the public interest. In other words, public facilities may make decisions that are proactive and responsive to the community even though they may not, at least ostensibly, be the most cost-effective business decision and be strictly required by regulations.

For example, Health Canada has been warning us about the dangerous health effects of chlorination by-products such as trihalomethanes *(Riedel, Tremblay & Tompkins, 282)*. Because of this concern, some municipalities have put in ozonation water treatment systems to reduce their use of chlorine. Water companies are highly unlikely to put in treatment systems such as this that go beyond the regulatory requirements.

Finally, public facilities tend to promote the security of quality because there is a greater potential for the development of a safety culture within the institution. This safety culture can arise because the operation is seen as delivering an essential resource (as opposed to a commercial product) and as such understands its mandate to be broader than a private enterprise. This safety culture affects the attitudes of the employees, expectations in terms of training, and the overall expectation of performance. Of course, this is not to say that all public facilities have achieved this goal of a safety culture, but certainly the opportunity to develop one is present.

Environmental Protection

The major environmental harms caused by our water supply system are the impacts from taking water out of the natural ecosystem to be used by people.

> Letting water flow wherever it belongs on the Water Planet is a key part of the wisdom of natural capitalism. For as Carol Franklin of the landscape architecture firm Andropogon puts it, water is not, as most civil engineers assume, mere gallons of H_2O, to be taken away as quickly as possible in large concrete pipes. Water is *habitat*. Water is life. *(Hawken, Lovins & Lovins, 233)*

Wasteful use of water may result in lowering of water levels – especially from groundwater sources. The WorldWatch Institute warns that we are already withdrawing water far faster than it can be recharged, "unsustainably mining what was once a renewable resource" (*Abramovitz, 31*). This means that the water needed by future generations and by wildlife may not be available.

We also often divert water from its natural path in order to allow on-going growth in areas that do not have access to enough water or that have contaminated their local water supplies. This has negative effects on all downstream users, including wildlife. For example, at one point TransCanada Pipelines was proposing to divert water from Georgian Bay to supply water to York, Peel, Halton, Wellington and Waterloo Regions (*TransCanada Pipelines*). Ontario Hydro objected to the proposal because they were concerned that it could lessen the flow of water over Niagara Falls and affect their ability to generate power. In addition, several environmental groups, including the Georgian Bay Association, the Safe Sewage Committee, the Canadian Environmental Law Association, and Great Lakes United, objected to the proposal on environmental grounds.

To lessen the negative environmental impacts of our water withdrawal and supply systems, we must reduce our use of water and learn to live within the means of our local water supplies. This means putting a major focus on water conservation programmes. As Hawken, Lovins and Lovins state,

> The answer to decreasing supplies of freshwater is not to try to supply more… At home and abroad, with water as with energy, the only practical, large-scale solution is to use what we have far more efficiently *(Hawken, Lovins & Lovins, 213 & 214).*

Many small private firms are involved in water conservation activities, such as selling low flow toilets, better irrigation systems, etc. But the transnational firms interested in owning, financing or operating a municipal water system are not involved in the water conservation field. A company that makes its income through the sale of water loses profits if water conservation increases. As a result, such companies will only pay lip service to promoting water conservation. For example, Suez does not even mention water conservation in its year-end report for 2000.

By contrast, OCWA, a provincial crown agency, stated in its first annual report after it was created:

> … well aware of the cost of producing clean water, OCWA actively promotes system efficiency and water conservation. Wise water use and efficient plant operation save municipal clients money and protect the environment (*Ontario Clean Water Agency, 1994*).

The experience in York Region provides an example of how the private sector approach does not result in the environmentally preferable solutions.

In 1996, York Region placed responsibility for developing its long-range water supply plan in the hands of a consortium of private water companies called Consumers Utilities (Enbridge,

formerly Consumers Gas, and NWW Canada, a subsidiary of the major British water company North West Water). The first plan that they presented to York Region reflected the tendency of water companies to look for the major engineering solution, which is most disruptive to the environment. They proposed to build a pipeline from Georgian Bay to supply water and then discharge sewage through another pipe into Lake Ontario. After considerable public opposition, York Region rejected the plan. Natural Resources Canada criticized the proposal because it rejected environmentally preferable local solutions such as use of groundwater supplies *(Natural Resources Canada).*

York Region later developed a long-range plan that put much more emphasis on water conservation and rejected the big pipe solution. York Region included a role for Consumers Utility in the water conservation or water-use efficiency part of its programme. This was a contract to carry out specific tasks for the delivery of which the company would be responsible *(Regional Municipality of York).* It is important to note that Consumers Utilities was not to own the water delivery system and, therefore, its income would not be based on the amount of water sold.

Pricing is one of the tools in an effective conservation strategy. A system in which residential and non-residential water users are charged at a higher rate per unit as they use more water known as increased or inverted block rates is a major incentive to conserve water. But private water companies use the opposite kind of system for setting water prices: charging water users a lower rate per unit as their water use increases (declining block rates). They prefer this approach because it encourages water users – especially industry – to use more water.

Accountability to the Public and Public Involvement

Access to water is a crucial service that householders, industries, business, and agricultural operations must be able to count on being available to them at all times and in high quality. It is not a commodity that we can choose to use or not, but a vital life-giving force. Therefore, its supply and delivery must be carried out in a manner that is accountable to the public and that allows for public involvement in decision-making affecting its availability and quality.

Henry Mintzberg, a management professor at McGill University, contrasts the expectation he has in the delivery of services such as this with the items he purchases from private businesses:

> Business is in the business of selling us as much as it possibly can, maintaining an arm's-length relationship controlled by the forces of supply and demand… Sellers inevitably know a great deal more than buyers, who can find out only with great difficulty. In other words, the private ownership model, much as it provides "customers" with a wonderfully eclectic marketplace, does have its limits.
>
> I am not a mere customer of my government, thank you. I expect something more than arms-length trading and something less than the encouragement to consume. When I receive a professional

> service from government – education, for example – the label *client* seems more appropriate to my role.
>
> But, most important, I am a *citizen*, with rights that go far beyond those of customers or even clients (*Mintzberg, 77*).

Can private companies have their primary accountability to the public? Two public administration professors at the University of Southern California, Stephen Morgan and Jeffrey Chapman, reviewed more than 45 studies on the privatization of public utilities. They concluded that private companies work well in competitive environments, but their performance diminishes in services such as water, which is a natural monopoly. They conclude that private water utilities …

> … are accountable to two groups, neither of which directly represents their customers. First, they are accountable to shareholders, whose interest is in maximizing profit and who likely do not live in the communities served. Second, they are accountable to a public regulatory body whose purpose is to represent the interests of the citizens, but may be hundreds of miles away … and often provides a poor substitute for marketplace discipline or ballot box accountability (*Morgan & Chapman*).

A prime example of this approach came out in testimony at the Walkerton Inquiry. The private lab that was testing the water saw the Public Utilities Commission rather than the public as its customer. After all it was the PUC that paid its bills. Therefore, it did not notify the Ministry of the Environment when it found problems with the water supply.

> In its submission to the Walkerton Inquiry, the Region of Waterloo rejected more private involvement in water services, saying that "privatization would lead to:
>
> loss of municipal accountability, control, and influence over the critical water supply function;
>
> more difficult integration of water supply with other municipal services;
>
> the need for complex, new institutional and regulatory frameworks, and;
>
> an emphasis on 'private' rather than 'public' interests in the management of our local water resources" (*Region of Waterloo, 9*).

Public accountability and public involvement cannot be effective unless there is a transparent decision-making process and unless the public can easily gain access to information. When there is private ownership of a water system or even a public-private partnership, this sort of openness is inevitably diminished.

The public does not have access to the private boardrooms where decisions are made that affect the operation of the water system and future plans for the water system. Indeed, the boardroom where those decisions are made is highly unlikely to even be in the community because the company is transnational.

Likewise private companies are used to operating in an atmosphere where they do not release all of their information. Therefore, gaining access to reports can be a major struggle for a citizen.

The experience in Hamilton since 1995 illustrates the difficulties in having public accountability, public input into decision-making, transparency, and access to information when a public-private partnership has been set up.

Since 1995, the public in Hamilton has had extreme frustration and difficulty with the public-private partnership between Hamilton and Philip Utilities Management Corporation, which is now owned by Azurix. It has been almost impossible for the public to get access to testing results for drinking water quality; there is no consultation with the public by the company operating the plant; the annual performance review required by the contract is not made available to the public. When there have been spills of raw sewage into Hamilton Harbour or when sewage has backed up into people's homes as a result of failings at the sewage treatment plant, alarmed citizens have had great difficulty holding anyone responsible because the municipality and the company have simply pointed fingers at each other. *(Anderson & Loxley)*

New South Wales, the most populous state in Australia, had a separate water corporation for Sydney. After problems with water contamination, the New South Wales government changed the legislation to turn the Sydney Water Corporation into a statutory state-owned corporation with more accountability to a Minister. The amendments also provided the Minister with greater powers to access information and to direct the corporation on the grounds of urgency, public health and safety *(Concerned Walkerton Citizens & Canadian Environmental Law Association, 83).*

Full and Fair Pricing of Water

Recovering all of the costs of the system:

The principle here is that the users of water should pay all of the costs of the system. This means, for example, that we should move away from situations were the users pay less than the total cost because of grants and subsidies that municipalities often receive from provincial and federal governments to support their systems. Water users in municipally owned and operated systems frequently pay less than the full cost.

By contrast, in private sector operations, users pay more than the full costs of the system because profits are added onto the costs charged to water users. These usually are about ten percent of the costs charged to users *(C.N. Watson and Associates Ltd., 7-11).*

Full cycle funding:

Full cost pricing of water ensures that water is priced in a way that all the costs of the system are

recovered, including collecting money to invest in continually renewing and upgrading the system.

When water systems are turned over to private ownership, the experience has been that there is no guarantee that the long-term investments needed to maintain and upgrade the system and plan for the future will be made – even if these costs are put into the pricing structure.

For example, in the U.K. the OFWAT, which regulates water rates, allows a water company to include predicted capital expenditures in justifying its water rates. But OFWAT discovered that the companies were routinely overestimating how much they would actually put back into the system and using the shortfall in expenditures to increase profits (*Lobina & Hall, 10 & 11*).

One of the reasons that Pekin, Illinois, decided to buy back its water system from the private company it had sold it to was this failure to make the proper investment in the system. Richard Hierstein, the city manager of Pekin, said, "The system is not in good condition and they have not invested as they should have done, but have raised the rates as if they have."

In the case of public-private partnerships, the municipality may be able to keep more control over rate structures and over the use of the money to ensure that long-term needs are being planned. However, some of the money that water users pay in this situation that could have gone towards a reserve fund for future infrastructure expenditures will instead go to the private company's profits.

Reasonable Cost:

In Part 6 of this paper, we analyze the capital financing and operating costs of water systems. Gary Scandlan of C.N. Watson and Associates Ltd., who conducted a background study for us on these topics, concluded:

> Capitalization of the assets, higher overall interest costs and return on investment may cause the overall costs to be considerably higher [when the water system is financed or operated by the private sector] than the present costs paid by consumers (*C.N. Watson and Associates Ltd., 9-5*).

The experiences in other countries where water systems have been privatized confirm this conclusion.

A 1995 study compared the costs of water provision between Swedish and U.K. cities of comparable size. On average, the municipally-owned Swedish water systems had operating costs that were just under half the operating costs of the privately-owned U.K. systems. The capital maintenance costs for the municipally-owned systems were only 20 percent of the costs of the privately-owned systems *(Lobina & Hall, 16)*.

In France, home of the largest private water companies, municipalities own the water infrastructure, but many of them contract out management to private companies through long-term franchises. Average water charges in those systems managed by private companies are 30 percent higher than the charges in the systems that are publicly managed *(Bedard, 19)*.

Equitable Access to Water:
All people must have access to water in order to survive. This means that no one should be denied access to water because they cannot afford it.

Privatization has consistently resulted in increased water prices. It is for this reason that several Canadian municipalities, including York and Halton Regions, Thunder Bay, Montreal, Edmonton, and Nanaimo, dropped thoughts of privatizing their water systems or of entering into public-private partnerships.

Several municipalities in the U.S. that had privatized their systems are now trying to get out of the agreements or to buy back their system, primarily because of concerns about increased water rates. These include Pekin and Peoria in Illinois, Chattanooga in Tennessee, Lexington in Kentucky, Huber Heights in Ohio, and Joplin in Missouri. Recently, voters in Birmingham in Alabama, Nashville in Tennessee, and Orange County in California have refused bids by water companies to buy their water systems (*Canadian Union of Public Employees, 2001, 59&60*).

The increases in water rates that usually accompany privatization may threaten the ability of poorer people to have access to sufficient water for drinking and for hygiene.

After privatization of the water systems in England and Wales, water prices doubled between 1989 and 1993. In some cases water prices rose 77 percent over that period while company profits rose by 70 percent (*Daily Mirror*). The number of people whose water was cut off because of non-payment of their water bills increased from 480 in 1989 to 21,282 in 1993 (*Harper*). The British Medical Association expressed alarm at the health effects on children in families forced to cut water usage to save money. Due to reduced hygiene, they saw increased incidents of dysentery, hepatitis A, and clothing (body) lice (*Save the Children*).

In reaction to this crisis for the poor, the government curtailed the right of companies to disconnect people from their water supply. The companies then started using pre-payment meters for customers unable to pay their bills. In 1998, new legislation made disconnections and pre-payment meters illegal (*Lobina & Hall, 21 & 22*).

The U.K. experience is a particularly dramatic example of how increased prices to support the profits of private companies can severely affect the poor and reduce equity in access to needed water supplies.

Promotion of conservation:
As was pointed out earlier in this part of the report under “Environmental Protection,” private companies usually do not institute pricing structures that promote conservation because this does not support the private company’s interest in making more money by selling more water.

Conclusion
Our criterion-by-criterion analysis in this part has shown that there are no criteria for which the private sector has an advantage over the public sector in providing water services. The analysis has also shown that in most of the criteria the public ownership and management option has a clear advantage. This has applied both to outright private ownership of the entire system and public-private partnerships.

Public opinion polls have consistently found that the Ontario and Canadian public overwhelmingly prefer public ownership and control of water systems over private ownership. For example, a poll of Ontario residents in 1996 asked "Who should control water systems?" Seventy-six percent said municipal officials; 19 percent said private agencies, and 6 percent gave no response (*Insight Canada Research*).

An Ekos poll in January 2001 asked: "Overall, do you think the public ownership and operation of water services is generally a good thing or generally a bad thing?" Seventy-six percent said it was "a good thing"; 11 percent said "a bad thing"; 10 percent had no opinion (*Canadian Union of Public Employees, 2001, 61*).

Despite this strong public support for public ownership and operation of water systems, the Ontario government has taken actions since 1996 to make it easier to privatize municipal water systems. These changes were detailed in Part 4 of this report.

Findings and Recommendations

Public ownership and management of water systems are preferable to private ownership or public-private partnerships when compared with each other from the perspectives of security of supply, ensuring quality, environmental protection, accountability to the public and public involvement, and full and fair pricing of water.

At least three-quarters of the public want their water systems to be publicly owned and managed.

Recommendation 1: Water systems should remain in public ownership and public-private partnerships that involve financing or management contracts should not be pursued.

Recommendation 2: The Provincial Government should stop its plans to facilitate and actively promote the privatization of water systems. The Provincial Government should:

- **repeal the provision in *The Savings and Restructuring Act* that eliminated the need for municipalities to hold public referendums on proposals to dissolve public utilities;**
- **remove its instructions to the SuperBuild Corporation to look at privatization options for water and sewage treatment plants; and**
- **not pass the section in Bill 46, *An Act Respecting the Accountability of Public Sector Organizations* that would require each public sector organization to each year look at how it might deliver its services through the private sector.**

PART 6: PRIVATIZATION: WHY IS IT CONSIDERED?

Four main reasons are given for privatizing water systems:

- Municipalities cannot afford to make the substantial financial investments needed to upgrade Ontario's water supply system and, therefore, we should turn to the private sector for financing;
- The private sector can bring efficiencies to water system construction and operation, which will result in savings for water consumers;
- Private companies have access to expertise and technologies that municipalities lack; and
- This arrangement would provide for a clearer distinction between the operator and the regulator and thus remove potential conflicts of interest.

Financing Water Systems

Municipalities are frequently frightened into considering privatization by the huge estimates given for the capital costs required to upgrade and expand water systems. In this section we assess the reality of this situation and the financing options open to municipalities. The economist Gary Scandlan of C.N. Watson and Associates Ltd. conducted a study on this topic to assist us in addressing this issue.

The most detailed study undertaken on estimating financial needs is a 1998 study by the Canadian Water and Wastewater Association. This study estimated investment needs for the period from 1997 through 2012.

For Ontario, the study identified $12.6 billion in water supply, storage and delivery infrastructure needs. The cost breakdown of this total is provided below.

Summary of Water Investment Need in Ontario (in billions of dollars)

Water Infrastructure Type	Existing Needs	Expanded System	Growth-Related	Total
Watermains	1,163.7	1,495.5	2,884.8	5,544.0
Storage	315.9	36.6	137.4	489.9
Supply	384.0	1,024.1	5,120.6	6,528.7
Total	1,863.6	2,556.2	8,142.8	12,562.6

Source: *C.N. Watson and Associates Ltd.*

"Existing Needs" represents improvements needed in the existing systems to overcome existing problems. $1.9 billion or 14.8 percent of the total needs are for this category. The study does not provide an indication of the nature of the problem (water quality, pressure, main breaks, fire protection, etc.).

The “Expanded System” costs are $2.5 billion, which represents 20 percent of the total needs identified. These costs are required to bring the entire population onto municipal water systems.

The “Growth-Related” costs represent the largest share of the needs identified, totalling $8.1 billion or 65 percent of the total. These are future costs needed to service new development over the 15-year forecast period. This estimate was based on a predicted 30 percent population increase in Ontario.

Municipalities can address these cost issues in varying ways depending on the type of expenditure.

1. Financing “Existing Needs” Capital Costs

“Existing Needs” costs reflect needs to maintain or improve an existing system and, hence, are paid for by existing users. Municipalities in Ontario usually raise capital through debenturing to cover these costs.

Ontario’s Ministry of Municipal Affairs regulates the level of debt incurred by municipalities. The Province currently caps a municipality’s debt at a level where no more than 25 percent of a municipality’s annual expenditures are required to pay the debt charges.

Based on 1997 financial data, the debt capacity of Ontario municipalities providing water services is $13.1 billion for a ten-year debt term and $19.7 billion for a twenty-year debt term (*C.N. Watson and Associates Ltd., Appendix A*). The estimated total capital costs to address existing needs until 2012 is $1.9 billion. The analysis carried out for us by C.N. Watson and Associates Ltd. found that the capital costs for financing existing needs would take between 9 percent and 14 percent of the debt capacity of individual municipality’s in Ontario. This would leave substantial debt capacity for municipalities other capital needs.

2. Financing “Expanded System” Capital Costs

Municipalities frequently have areas that have houses and businesses that are not serviced by the municipal water system. Municipalities usually recover the costs of extending water services into these areas in ways that do not affect the overall municipal water rates.

Under section 221 of the *Municipal Act*, the municipality can recover costs of extending the water mains and costs for expansion to water supply and storage facilities directly from the owners of houses and businesses to which the service is being extended. Neither the Ontario Municipal Board nor any other provincial body has to approve such charges.

In addition, the *Local Improvement Act* allows municipalities to recover the cost of local mains extended into unserviced areas. The entire cost of the extension is charged directly to the owners of those properties abutting directly on the new water mains. The Ontario Municipal Board must approve this method of recovering money.

3. Financing “Growth Related” Capital Costs

Almost two-thirds of the projected capital costs for water systems are for “growth related” costs. Municipalities can recover costs related to providing water services for growth by charges collected under the *Development Charges Act*. Under this legislation, municipalities can impose

charges against residential and non-residential growth to finance development-related expenditures. Private sector companies do not have this power.

The *Development Charges Act* was amended in 1997. These amendments limited the types of development charges that can be levied on developers, but water service continues to be an eligible service for which developers can be charged. Another amendment made in 1997 was a requirement that municipalities contribute 10 percent of the costs of many services for new developments. But this requirement does not apply to water services. This means that municipalities can charge developers 100 percent of the costs of extending water services to new areas.

The costs that can be recovered under the *Development Charges Act* include both water mains and any needed additions to the water supply system, such as expansion of a water treatment plant. Despite these provisions in the *Development Charges Act*, municipalities sometimes have trouble recouping all of their growth-related costs. Conflicts may arise between the municipality and the developed over the apportionment of water system costs, such as treatment capacity expansion and resizing of existing mains. In addition, many so-called "soft costs", such as policing, fire, and library services, related to development are not covered by the Act. These latter costs were not covered in the $8.1 billion "growth related" costs.

As well, under the *Planning Act*, local water mains and connections to the water systems are direct costs borne by the land developer. This means that 100 percent of these costs are paid for by the land developer.

If municipalities use the powers given to them by the Province and if the Ontario Municipal Board does not interfere with the use of these powers, they will only need to borrow money to cover approximately $2 billion out of the $12 billion required until 2012 for existing needs, expanding systems, and growth-related expenditures required for the water supply and delivery infrastructure. The rest can all be directly recovered from the people for whom the water system is being expanded. As has been shown in this section, raising that required $2 billion through debentures is feasible within the current financial situation of municipalities in Ontario.

Therefore, municipalities do not need to sell their water systems or get involved in a public-private partnership in order to raise the money to upgrade or expand their water systems.

The Cost of Capital Financing

The question that then arises is whether the private sector can raise the money needed for these upgrades and expansions more cheaply than municipalities can. The answer is "no."

Private companies usually finance major projects such as those involved in upgrading or expanding water supply systems through a mix of debt and equity financing.

Debt financing involves borrowing money. This is the main mechanism that municipalities use to obtain capital financing, unless they take money out of reserves that they have built up. Municipalities usually debenture these costs over a 10 to 20 year period and repay them through their operating budgets. This process minimizes interest costs.

Charges on the debt (interest rates) are related to the credit rating of the borrower. Almost all regional municipalities in Ontario have a AAA rating (*C.N. Watson and Associates Ltd., 7-7*). Currently this is a better credit rating than the provincial government has. Most other municipalities have a lower rating, but even these lower ratings are usually as good as, if not better than, the best private companies can obtain.

The second mechanism that private companies use to get capital funds is through equity financing. Municipalities do not use this financing method.

Equity financing involves raising money by issuing and selling new shares in the company. These investors expect a higher rate of return on their money than expected on money borrowed through debentures because the risk level is higher.

C.N. Watson and Associates Ltd. concluded that private sector financing through the debenture route is approximately one to two percent more costly than the borrowing rates for municipalities. The expected return to people who invested in the company through the equity financing mechanism is approximately six to eight percent higher than the rate at which municipalities can borrow money for capital purposes.

York Region is a prime example of how a municipality came to realize that it could provide financing more cheaply than the private sector and, therefore, decided to drop its plans to include a private water company in the financing of the expansion of its water system. (see next page).

Financing York Region's Water Expansion

In the early 1990s, York Region began to plan a major expansion of its water supply system because of concerns about the water needs for the major growth projected for the region. York was convinced that private sector involvement would provide it with access to more sources of financing and would do it more quickly and efficiently. In 1996, three consortia of water companies responded to York Region's request for qualifications to do the work. York Region chose Consumers Utilities from these three proposals. Consumers Utilities was a consortium of Enbridge, formerly Consumers Gas, and NWW Canada, a subsidiary of the major British water company North West Water.

Consumers Utilities developed a long-term water plan for York Region and the intention was that the private water company would play a major role in the financing, building and possibly ownership of the Region's new water system.

A year later, however, after looking at the costs involved and financing options, York Region retreated from the expected public-private partnership. It decided that it would only use private companies for a limited number of services on a fee-for-service basis, rather than having private sector financing. In April 1997, York Regional Council voted to reverse its earlier position and retain control over the project.

According to the Region's Chief Administrative Officer, the key factors in recommending this reversal were financial *(Regional Municipality of York).* They included:

- The Region's ability to finance up to 100% debt with a high credit rating at a better rate than a private company could achieve;
- The Region's ability to collect development charges, which a private company would not be able to do;
- The Region's exempt status respecting certain taxes such as the GST, which compares favourably with the tax advantages afforded private corporations through capital cost allowance. [*Note: Municipalities no longer have this advantage, since they no longer are GST exempt.*]

Operating Water Systems Efficiently

A prime reason given for privatizing water system operations is that private companies will run the system more efficiently and will, as a result, save money for water consumers.

C.N. Watson and Associates analyzed the operating costs of water systems for us to determine where and if private companies might be able to be more efficient. To do this analysis, the consultants detailed the operating expenditures of two municipal water systems: Halton Region, a large municipality with 366,000 people served, and St. Thomas, a medium-sized municipality with 34,000 people in its service area (*C.N. Watson and Associates Ltd., 7-8 to 7-13*).

C.N. Watson and Associates Ltd. determined that the operating expenditures for these municipal water systems broke down as shown in the following table.

% Breakdown of Operating Expenditures:		
Expenditure Component	***Halton Region***	***St. Thomas***
Personnel	19.6%	20.2%
Chemicals	1.0%	2.5%
Utilities	6.8%	6.4%
Services and Overhead	8.9%	10.9%
Maintenance	8.1%	10.8%
Capital/Debt/Reserves	55.7%	49.2%
Total	100.0%	100.0%

Our consultants then assessed the relative efficiencies of the public and private sectors for each type of expenditure:

1. Personnel:

Discussion with municipal staff from the sample municipalities led our consultants to conclude that the wage rate for staffing is lower on average in municipalities than comparable jobs in the private sector. Municipalities have had difficulty maintaining or hiring staff because of the lower wage scale, especially in good economic times. However, benefit packages (e.g. pension, medical, disability, etc.) tend to be higher for municipal staff than the private sector.

Some people say that the private sector achieves efficiencies by reducing the number of staff. This is not, however, a private versus public sector issue. The variation in staffing is primarily dependent on the technologies used and varies as much among municipalities as it does between public and private sector operations.

In addition, staff reductions are an issue related to how the operator of the system defines acceptable service quality and the corresponding staffing levels needed to achieve that service level.

2. Chemicals:

The private sector often says that it is able to buy chemicals more cheaply because of the bulk buying they can do by serving more than one water system. Municipalities usually overcome this possible advantage by using competitive tendering for materials on a quantity basis. In addition,

increasingly, municipalities are doing joint purchasing with each other to be able to buy larger quantities of chemicals and thus gain bulk quantity discounts. As a result, private sector water companies do not achieve reductions in the costs of chemicals.

3. Utilities:

As do all power users, municipalities purchase energy at prevailing rates. Municipalities used to have an advantage here because of their GST exemption, but recent changes have removed this area of cost advantage for municipalities. Utility costs are essentially the same for public and private operators.

4. Services and Overhead:

Overhead and service includes items such as taxes, purchased services, supplies, etc. As most items are purchased via a tendering process, any cost savings through privatization would be limited.

5. Maintenance:

This category includes purchase of services and maintenance replacement items. Most of these services are purchased via tendering and, hence, limited opportunities are available for cost savings in the private sector.

6. Capital / Debt / Reserves:

Approximately half of the operating costs for water supply systems goes to servicing the debt involved in building the system or goes into reserve funds to be used for future capital expenditures. For the private sector, capital financing is normally higher than the municipal rate and may extend for a longer period of time. The private sector's higher financing combined with depreciation costs would boost this category of expenditure, which in the municipal case is approximately half of the operating costs. This would "cause [water] rates to increase significantly" (*C.N. Watson and Associates Ltd., 7-11*).

7. Profit and Income Taxes:

The private sector must include two items in its operating costs that municipalities do not have: profits and income taxes. Our economics consultants concluded that these costs would normally add 10 to 15 percent to a private company's operating costs for this type of operation (*C.N. Watson and Associates Ltd.*).

An analysis of the three main components of customers' bills in the United Kingdom shows that almost all of the increase in customers' bills since the water system was privatized is the result of operating profits taken by the private companies (*Lobina, Emanuele & David Hall, 10*).

The analysis by C.N. Watson and Associates Ltd. shows that public companies can run water systems as efficiently and effectively as private companies. Indeed, the operating costs for a private company running a water system are usually higher than for a municipality running the same facility.

In its submission to the *Walkerton Inquiry*, the Regional Municipality of Waterloo said:

> To date, we can see little, if any, benefit in additional private sector involvement. Our long-term water supply strategy is in place along with

> adequate financing. We have considerable technical expertise on staff, well-trained operations and maintenance staff, an efficient operation moving actively to adopt industry best practices, long-range capital programs and financing plans, and active involvement in local, national, and international industry associations and research programs (*The Regional Municipality of Waterloo, 7*).

In public-private partnerships, the body that provides the funding that leads to improved efficiencies in the system may not be the one who financially gains from the savings that result from those efficiencies. For example, in Hamilton, the city has paid to upgrade and automate many of the operations. This has resulted in savings as a result of increased efficiencies. As a result, Azurix will be "able to claim the profits from running an upgraded system, for which the taxpayers have paid" *(Anderson & Loxley, 11)*.

In addition, in public-private partnerships, the private water company is often able to protect its profits by unburdening certain costs and risks onto the municipal partner. The contract between the municipality and the private company does not necessarily leave the private facility with all of the obligations that one would expect of such a facility. For example, the contract may ensure that full managerial responsibility lies with the private facility, but significant aspects of the liability remains with the municipality is problems arise. This is the case in Hamilton.

Accessing Expertise and Technologies

Sometimes it is argued that private companies can run better water systems because they have access to more skilled staff and own and control special technologies for vital components, such as treatment and filtration. There is no evidence to support these contentions.

The public sector has highly skilled expert staff. Evidence of this is the fact that private companies frequently hire public sector employees to work for them. In Hamilton, after it won that municipality's water contract, Philip Utilities Management Corporation recruited five high-level people who had worked for Hamilton's water services (*Loxley & Loxley, 25-26*).

In terms of using the best technologies, private companies are always willing to sell access to the technologies that they have developed. Zenon Environmental Inc. is a prime example of such a company. This Oakville-based firm provides advanced technology products and services in water purification, process separation, and wastewater treatment and recycling throughout the world. Its technologies were used by the Town of Collingwood to combat an outbreak of *Cryptosporidium* in its drinking water. Zenon's sales have increased dramatically since concerns with water quality increased after the Walkerton disaster (*Smith, Graham*).

Conflict of Interest of the Regulator

It is often said that privatization "gets government and industry out of bed with each other and government can become an honest regulator" (*Cooly*).

The argument is that when governments own, operate and finance utilities, they are hesitant to regulate and enforce laws since they are, in effect, enacting and enforcing laws "against

themselves." Proponents of privatization suggest that the only remedy for resolving this conflict is to privatize water services to avoid this conflict.

There is no doubt that the record of enforcement with respect to water treatment facilities in Ontario is unsatisfactory. Numerous reports have outlined the lack of rigorous enforcement with respect to water utilities *(Office of the Provincial Auditor of Ontario, 80-85)*. Evidence in Part I of the Walkerton Inquiry confirms these findings.

Without this potential conflict where government is asked to enforce rules against itself, would the enforcement record be better?

The Enforcement Issue

One submission to the Walkerton Inquiry said that those who use the conflict of interest argument are in effect saying that government should stop providing any services:

> The necessity for privatization would only follow from the assertion that government cannot simultaneously regulate an industry and run operations in the same industry. If this assertion is upheld, then there can be no role for government in operating hospitals, schools, nursing homes, energy companies, court rooms, housing developments, colleges, universities, police forces, firefighting forces, ambulance response, casinos or liquor stores. Indeed, there can be virtually no room for operation of any enterprise by government *(Ontario Public Services Employees Union).*

The issue with enforcement is not who regulates and who owns and operates facilities. The issue relates to the mandate and clarity of the roles of the government agencies. I.e., the separation of the level of the government regulating a service from the government agency providing the service, the compliance policies, the resources available to the inspection and enforcement branches of government, and the adequacy of the regulatory framework.

Mandate and Clarity of Roles of Government Agencies:

Enforcement will be more effective if the enforcement role is separate from other government roles.

Prior to 1985, local environmental officers had enforcement responsibility. This put these officers in an awkward situation since they dealt with both public and private facilities within their geographical area on a routine basis, attempting to assist in improving the operations of these facilities through abatement actions. This made it difficult for them to suddenly switch to a more harsh enforcement style on the same people.

To overcome this problem, the Ministry established a specialized branch at the ministry, the Investigation and Enforcement Branch (IEB). The mandate of the IEB is exactly the opposite of the abatement officer. A former manager of the IEB put the issue in this way:

> …So now [the separation of responsibility] has become very clear to both the ministry people and to the companies. When an IEB investigator comes to your factory, he is there only for one reason: to gather evidence for the Crown prosecutor and to lay charges. He is not there to force the company to put in new anti-pollution equipment. And even if the company has gone ahead and put in [new equipment], the most the investigator will offer is 'I think it would be a good idea if you mentioned that to the judge when it comes time for sentencing' *(Kramer).*

Historically, one of the key elements missing in the institutions dealing with enforcement is accountability and transparency. Public release of data illustrating the number of inspections, investigations, crown briefs, prosecutions and convictions is a starting point to ensure that the enforcement branches of governments are performing their roles and not subject to political interference or ignoring any one industrial or public sector.

The distinction and the need for clarity of roles between different arms of government is especially important when one branch of government is enforcing laws against another branch of government within the same ministry. With respect to drinking water, when Bill 107 transferred water utilities to municipalities, the clarity of roles become more evident since the province became the regulator and the municipality dealt with the supply and distribution of drinking water. At this point in time, there is little, if any, evidence that suggests those laws were not enforced because the utilities were municipally owned and operated.

The suggestion that the province is not as strong in its enforcement activities on public bodies because of funds it puts into municipal programmes is also difficult to accept. Governments hand out substantial sums of monies for both public and private sector investment.

Compliance Policies:

Perhaps the most important factor with respect to enforcement relates to the government's enforcement directions and commitments.

Throughout most of the 1980s and 1990s (and arguably still today), the Ministry of the Environment has had a compliance policy that favours voluntary compliance over court-based enforcement actions. Voluntary compliance focuses on cooperative, non-litigious approaches. One issue is whether the Ministry of the Environment has relied much too heavily on voluntary compliance in many areas, particularly municipal drinking water systems. Too often enforcement actions are not taken except in certain serious or persistent non-compliance situations.

The environmental community has long criticized voluntary abatement strategies. Historically, voluntary abatement has been the approach used for private industry for waste, air and other environmental controls. When compliance is manadatory, a discernable increase in prosecutions can be expected.

At the Walkerton Inquiry, testimony from environmental officers and others outlined the nature

and the application of the voluntary compliance approach.[4] The goal was to work with the utility in a cooperative, supportive manner as opposed to taking aggressive enforcement actions. Immediately after the Walkerton tragedy, the Ministry started taking a more aggressive enforcement approach. In the summer of 2000, 645 inspections were conducted on municipal water systems leading to the issuance of 311 field or directors orders (*Brennan and McAndrew*).

Regardless of who is the regulated community, it is the rigour of the compliance policy that directly affects the enforcement record. There is no evidence that governments have different enforcement and compliance policies and records for the public and private sectors.

Resources Available:

The enforcement task cannot be undertaken unless there are sufficient resources. At the federal level, a 1998 report outlines the importance of funding and resources in order to carry out an enforcement mandate *(Standing Committee on Environment and Sustainable Development, 9-12).*

Seldom have sufficient resources been allocated to enforcement in Ontario. When more resources were allocated with the establishment of the Investigations and Enforcement Branch, the results were evident. Within five years, the number of charges laid, the number of prosecutions and the number of convictions all doubled *(Kramer).* From the mid-1990s, however, resources for enforcement either remained static or decreased over time *(Canadian Institute for Environmental Law and Policy, 1-7 and 1-8).* Since drinking water utilities had seldom been the focus of attention, it can be expected that resources to provide comprehensive and rigorous enforcement of those utilities became an even lower priority.

Without adequate enforcement resources, one can expect less then robust enforcement practices, regardless of whether it is the government or a private company that is owner or operator of the utility.

Inadequacy of Regulatory Framework:

Enforcement will not be effective if the laws that are to be enforced are not sufficiently clear, comprehensive and relevant.

Walkerton provides an excellent example of this problem. An important issue in the Inquiry pertained to the enforceability of the Ontario Drinking Water Objectives. These Objectives were not legally enforceable in and of themselves; they were guidelines and the only way for them to be enforced was if they were incorporated into an operating approval (certificate of approval). Hence, although one could argue there was non-conformance with the guidelines, enforcement actions were difficult to take because there was not non-compliance with a regulation or a statute. Regulations that are difficult to enforce are also a problem at times *(Standing Committee on Environment and Sustainable Development, 21-22).*

[4] For example, see: Walkerton Inquiry, Transcript, vol. IX, pages 86-100; 241-245 (Willlard Page); vol. VII, pp. 50-60 (Larry Struthers); vol. XVII, pp. 98-105 (Phillip Bye).

Summary:
The fact that government has some stake in the ownership or operation of utilities does not create a conflict requiring the government to divest itself of such activities. Moreover, this conflict is adequately mitigated when the province enforces at another level of government, such as a municipality or an independent agency like the OCWA. The important issue is whether there is an arms length distance between the regulator and the regulated.

There are a variety of factors to improve compliance. The mandate and roles of the government agencies must be clear. Improved compliance policies, increased resources available to the inspection and enforcement branches of government, and stronger regulations and laws should be given priority as ways to improve compliance. Irrespective of whether the utility is privately or publicly operated, it is these factors that better account for enforcement records.

Findings

There is no validity to the arguments commonly raised to argue for privatization of the water systems. Municipalities are more capable of financing the water system infrastructure and at better rates than the private sector. Municipalities are just as capable of running an efficient operation as are private companies – if not more capable because they do not have to add in profit margins. Municipalities can obtain just as much access to expertise and technologies as can private companies. There is no evidence of a conflict of interest or reduced enforcement with municipal ownership within an appropriate regulatory framework.

PART 7: IMPROVING THE PUBLIC PROVISION OF WATER

As a result of our analyses thus far, we have concluded that the ownership, management, and operation of Ontario's water supply and delivery systems should be in the public sector.

In this part of the report, we consider how best to arrange that ownership and management. We address three areas:

- the appropriate level and unit of government to provide the service,
- the role of the Ontario Clean Water Agency; and
- the appropriate pricing and financing mechanisms to support the service.

Our recommendations are based on the assumption that the Provincial Government will play a strong role through its regulations and other programmes to protect Ontario's drinking water and its sources. One way in which the Province could do this effectively is by adopting and implementing the recommendations submitted to the Walkerton Inquiry by the Concerned Walkerton Citizens and the Canadian Environmental Law Association on May 15, 2001, in *Tragedy on Tap: Why Ontario Needs a Safe Drinking Water Act*.

Who Should Provide the Service?

Our criteria for making judgements include accountability to the public and public involvement. These criteria are more likely to be achieved the nearer the decisions are made to the point of the delivery of the service, and to the citizens who receive that service and who may wish to be involved in the decision-making around it. Therefore, in the case of the water supply, treatment and delivery, it is preferable to have the service provided by the municipality rather than the provincial government.

However, the criterion of accountability and public involvement must be balanced with other criteria such as security of supply, ensuring quality, and full and fair pricing.

The larger municipalities and the regional governments that are responsible for water supply and delivery certainly have the capacity to achieve these latter criteria. But concerns have been raised that many of Ontario's small municipalities that are now responsible for providing water to their people may not be able to meet these criteria. This is one reason sometimes given for considering privatizing these small systems by selling the system or engaging in a public-private partnership.

Experience has shown, however, that other preferable options are available to small municipalities to address this problem. These include:

- putting the responsibility for providing water at the regional government or county government level;
- making a cooperative arrangement with other municipalities in the area; or

- relying on the Crown water agency OCWA, which pools operations and costs across systems through its "hub and cluster" operational model. This is discussed in the next section entitled "What Role Should the Ontario Clean Water Agency Have?"

To facilitate public accountability and involvement, arrangements where municipalities work together should be structured in such a way that the boundaries of the area serviced correspond with municipal boundaries. In addition, they should ensure that there is a clearly visible governing body made up of elected people.

One reason for keeping the responsibility for the control of water in the hands of elected bodies is to facilitate the invaluable work of the numerous local citizens' groups who work to protect Ontario's waters. Most of these groups are focussed on a local surface water body or on the groundwater in a particular area. These groups are making a major difference in protecting water quality and quantity in their area, at restoring water quality, or in pioneering watershed management. This work is essential to the well-being of the ecosystem and of the waters upon which we are dependent. If decisions around the water taking and delivery system go into private hands or into the hands of bodies that are not easily visible and responsible to the public, the work of these groups will be made much more difficult.

County Arrangements

A successful example of this kind of arrangement is found in Chatham and Kent County. In 1997, the water systems of 22 former municipalities and 13 public utilities in Kent County were amalgamated and placed under the jurisdiction of the Chatham-Kent Public Utilities Commission. These systems included a wide range of types of systems and operators.

Our consultant Gary Scandlan of C.N. Watson and Associates Ltd. made the following findings about Chatham-Kent when he examined the new water arrangement four years after the amalgamation occurred (*C.N. Watson and Associates Ltd., 8-1 to 8-4*):

- Staff levels remained the same, even though the operation was upgraded through increased maintenance of facilities and distribution systems.

- Increased contracts to build new infrastructure and to upgrade existing infrastructure resulted.

- Service expanded to include a population increase of approximately 20 percent.

- Several facilities had not been maintained at standards now imposed by the new PUC. Major equipment overhauls and replacements were carried out to bring these facilities up to standard.

- The ability to implement policies, practices and approve capital works has been greatly enhanced. Now there is one decision-making point whereas some previous systems needed several councils' approvals for undertakings.

- The PUC is now better able to address problems with private well facilities and water quality. The new arrangements allowed for extension of servicing to rural areas because of increased ability to extend loans to landowners for constructing new works.

- The PUC retains a very good cross-section of knowledge across its workers, which allows for cross-training and knowledgeable back-up staff. The ability to hire outside expertise when needed has been enhanced.

- Economies of scale have decreased costs per cubic metre of water due to operational efficiencies.

- Since the amalgamation, all of their debt has been paid. They are now implementing life cycle reserves and have a twenty-year plan for replacement of aging infrastructure and upgrading of all facilities.

- It is estimated that approximately $2.5 million (out of a $17 million budget) has been saved through staff realignment, operating efficiencies and economies of scale. All of these savings have been reinvested in increasing service delivery and infrastructure replacement/maintenance.

- The new utility is prepared for any regulatory changes that may be implemented over the next few years. The water service is operating above provincially mandated standards.

Co-operative Arrangements

In some cases, municipalities that are not formally linked through a county or regional government have developed co-operative arrangements to improve the supply and delivery of water. The prime Canadian example is the Pembina Water Co-operative in Manitoba.

The Pembina Water Co-operative is an incorporated cooperative owned by 17 municipal governments in the Altona area south of Winnipeg. The area is a mix of rural and urban people and has a combined population of approximately 40,000.

Municipalities in the area formed the Pembina Water Co-operative in 1988 because there were major concerns about water quantity and quality problems. They had found that their small operations were not effective or cost efficient. Also major parts of the area were not serviced by municipal water systems.

The Co-operative built three new water treatment plants and extended pipes to areas wanting service. Eight smaller plants were taken out of service.

The Co-operative is a not-for-profit organization. Therefore, any “profits” from the sale of water are put into a reserve to be used to upgrade the system.

In Italy, a co-operative arrangement has been operating in one area for almost 30 years. In 1974, 42 municipalities in the Emilia Romagna region established an inter-municipal gas and water

consortium called AGAC. It has since been expanded to include the delivery of wastewater treatment and heat production services.

This arrangement has allowed for more effective management and has ensured consistent standards in a geographically diverse area. The more remote and isolated areas now "benefit from service that might otherwise remain the 'exclusive privilege of urban concentrations'" (*AGAC*).

An Assembly made up of one representative from each municipality in the consortium governs AGAC.

These two cases show that the co-operative model is worth exploring for public water management.

Recommendation 3: Municipalities should investigate improving service quality and efficiency by working together through regional or county government, through other municipal co-operative arrangements, or by becoming part of OCWA's Hub system.

What Role Should the Ontario Clean Water Agency Have?

The Ontario Clean Water Agency (OCWA) is a provincial crown corporation set up in 1993. As of January 2001, it operated 429 water and wastewater services for Ontario municipalities. It is the largest operator of water and wastewater facilities in Canada.

The visions and mandate for OCWA have gone through substantial change in the past eight years.

When the provincial government formed OCWA in 1993, the stated aims were:

- The establishment of a financially self-sustaining water and wastewater agency operating on a cost-recovery basis as a "stand-alone commercial entity";
- Reduction of the consolidated revenue fund deficit through divestment of the ownership and operation of 346 water and wastewater facilities to OCWA;
- Creation of an arms-length relationship between provision of water and wastewater services and its regulation through the Ministry of the Environment; and
- Independence of decision-making through a Board of Directors (*Ontario Clean Water Agency, 1994*).

At its inception, OCWA assumed responsibility for:

- The operation of 230 water and wastewater treatment facilities owned by the province and 116 municipally-owned facilities, previously operated by the Ministry of the Environment;

- Financial assets valued at $629.9 million in interest-bearing loans to the municipalities, representing the remaining balance of the provincial capital provided to municipalities to build facilities;

- Over 220 agreements to assist municipalities to build or expand treatment facilities; and

- Administration of the Municipal Assistance Program, funding capital infrastructure requirements.

In its first annual report OCWA described its mission as to "be the best in the business of producing clean water and promoting its wise use." OCWA pools the cost of operations through a "Hub" system. Ontario-wide, OCWA currently operates approximately 30 Hub offices, each of which manages staff and resources dedicated to serving between six to 12 facilities in an area proximate to the Hub. The Hub model has allowed OCWA to achieve the local operational scale required to bring employee training, advanced SCADA technologies and an ISO 14001 designation to smaller systems.

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The original vision for OCWA foresaw the Agency assisting municipalities with the operation, maintenance, and building of water and wastewater services on a cost-recovery basis and in ways to protect human and environmental health. Over the past eight years, however, many of these objectives have been neglected.

In 1996, the Government indicated its intention to divest itself of OCWA and transfer all its municipal services to a private company. Functions of the organization that did not contribute to the establishment of a sellable bundle of water management contracts were phased out. In 1997, the province transferred all OCWA-owned water and wastewater facilities to the municipalities. That same year, OCWA's role as the administrator of the MOE's Municipal Assistance Program was eliminated. In 1998, a report for the Office Privatization that evaluated various privatization options was completed.

However, in 2000, OCWA showed its value as a public agency by stepping in to correct the water problems in Walkerton. It was able to go into immediate action to restore the water system. Any attempt to make arrangements with a private company for such an elaborate and changing water restoration project would have resulted in major negotiating and periodic renegotiating to agree to contracts. This would have inevitably resulted in repeated delays.

Much of the original vision for OCWA was promising. But OCWA was not given the chance to achieve its mandate because of changes that the provincial government made. The use of a revitalized OCWA as a centre of excellence could go a long way towards restoring public confidence in Ontario's water system.

A revitalized OCWA could take an integrated approach to developing a safe water supply for Ontarians. Without a window into the world of waterworks operations, regulators and policy-makers with the MOE will become increasingly isolated and will have a far less complete understanding of the new technologies, tests and best practices that need to be promoted for a complete safe water regime. Without OCWA, the Crown will lose the power to undertake emergency remediation or a direct operating role when required to safeguard quality. A new OCWA, with a public Board of Directors and an updated Memorandum of Understanding with the Government, could become the leader in continuous public reporting of water quality and a centre of expert advice for all others working to provide safe water to the public.

Recommendation 4: The Ontario Clean Water Agency (OCWA) should be retained as a provincial crown corporation. Its role should be enhanced to become a centre of excellence to assist municipalities, especially small ones, in the building, and operation of water and wastewater treatment plants in ways that will help them achieve self-sufficiency and improve service.

It could also play a partnership role with the waterworks industry in providing information on state of the art facilities and best practices to municipal operators. In addition, OCWA should be available to step in if another water emergency occurs, as it did in Walkerton.

What are the Appropriate Pricing and Financing Mechanisms?

At the beginning of this paper, we laid out "full and fair pricing of water" as a guiding criterion when making decisions about the water system. Under this we set as sub-goals: recouping all of the costs of the system, full cycle funding, reasonable cost, equitable access to water, and promotion of conservation.

Recouping all the Costs of the System and Life Cycle Costing

A basic way to address the problem of arriving at an appropriate costing and to address costs of future infrastructure needs is by putting into place a life cycle costing system. The information contained in this section is based on research that Gary Scandlan of C.N. Watson and Associates Ltd. did for us (*C.N. Watson and Associates Ltd., 5-1 to 5-9*).

Life cycle costs are all the costs incurred during the life cycle of a physical asset, from the time its acquisition is first considered, to the time it is taken out of service for disposal or redeployment. The costs include investment costs, operating costs, maintenance costs, monitoring costs, and disposal or redeployment costs. The costs should also include costs involved in protecting the water source from potential contamination. For example, this could involve putting in place land use planning policies that restrict certain kinds of industrial and agricultural operations above the groundwater recharge area or within a certain distance of a lake or other waterway that the municipality takes its water from.

In Part 6 of this report, we discussed the mechanisms to obtain funds to cover capital expenditures. As was shown there, municipalities have access to special funding mechanisms to

extend service to unserviced areas or to accommodate growth in the community. However, the costs to upgrade the existing system or to replace it must come out of reserves that have been saved up, by borrowing money through debentures, or by taking it from increased operating contributions. Most municipalities use a combination of these mechanisms.

In a life cycle costing system, the money for replacing or upgrading the existing system is collected over the years of operation of the plant before the expenditures are needed by including a calculation of these costs in current water rates. This is referred to as a "sinking fund." Each year, as the water system is used, a contribution is made towards its replacement at the time when the water treatment plant, for example, will no longer be functional or will need a major upgrade.

A number of municipalities in Ontario are now addressing lifecycle costs for their systems:

Aurora: In 1989, this municipality implemented life cycle reserves (based on the sinking fund method). It provides an annual amount that is set aside in reserves for long-term infrastructure replacement. The Town updates this valuation approximately every 5 years. Today, all their life cycle replacement of water and sewer services are funded through this system. Life cycle costs represent about 10 percent of their rates.

Chatham-Kent: This newly amalgamated municipality is phasing in a life cycle costing system similar to Aurora's. Life cycle costs will represent about 12 percent of their rates once fully implemented.

St. Thomas: St. Thomas is presently finalizing a new rate study and, as part of this process, a detailed review of the condition and replacement needs of their entire water system. The City has developed a 20-year capital replacement plan and will be financing these costs by a combination of operating contributions, reserves and debt. This financing plan will amount to 30 percent of their rates. They are planning to implement sufficient financing from current rates to provide for full replacement of assets in the future, when required.

Lincoln: Lincoln is presently undertaking a water rate study. As part of that study, they are reviewing life cycle replacement of their water system. Their system is relatively young dating back to only 1969. Upon implementation of a life cycle reserve (sinking fund), this cost will equate to approximately 9 percent of their rates.

Halton Region: This Region has valued their water and wastewater infrastructure at about $2.7 billion. The Region has identified an annual asset replacement budget of $40 to $50 million. For 2001, they are financing approximately $30 million through the use of debt, transfers from the operating budget and reserves. It is anticipated that this amount will be increased over the period as annual budgets are approved.

Reasonable Cost

The goal of reasonable cost will be achieved if a combination of our earlier recommendations are implemented. These are to keep the water system's ownership and operation in public hands, to

develop co-operative arrangements among municipalities in the development and delivery of this service, and/or to have assistance from OCWA.

The recommendations we have made around full cost and life cycle pricing mechanisms will have little or no impact on water rates in many municipalities because they are already using these tools. For some (usually smaller) municipalities, however, implementation of these changes may result in substantial increases in water rates because they have not moved in this direction. Nevertheless, these municipalities should proceed to implement full cost and life cycle costing.

The Economic Services Branch of the Ministry of the Environment has calculated the impact that going to full life cycle costing would have on household water rates. Their estimates are based on including in the water rates "all costs of constructing, operating and maintaining necessary infrastructure" for both water and sewer systems *(Economic Services Branch, 1)*. They found that monthly residential water bills would have to increase by between 54 and 135 percent to achieve full cost, life cycle pricing *(Economic Services Branch, 14)*. This billing is based on the assumption that people will continue to consume water at the same rate even if prices go up. Experience shows that increased water prices result in some reductions in use *(Organization for Economic Co-operation and Development, 129)*.

Water rates in Canada are currently among the lowest in the world. According to a survey by the OECD, even if Canada's water prices rose by 135 percent, they would be virtually the same as in the U.S. and still lower than in most other OECD countries *(Organization for Economic Co-operation and Development, 79 & 80)*.

To achieve our goals of reasonable prices, mechanisms should be put in place to make the transition easier for water users who are most substantially affected.

Rate Structure

Municipalities can recover the costs of delivering water to users either by taking the costs out of the general property tax revenues or by charging a specific water rate to consumers. Most municipalities are now charging special water rates.

As the following table shows, four types of rate structure are used in Ontario.

Rate Structure	*Cost Per Unit As Volume Consumption Increases*	*Impact On Customer Bill As Volume Consumption Increases*
Flat Rate	Cost per unit decreases as more volume consumed	Bill remains the same no matter how much volume is consumed
Constant Rate	Cost per unit remains the same	Bill increases in direct proportion to consumption
Declining Block	Cost per unit decreases as threshold targets are achieved	Bill increases at a slower rate as volumes increase
Increasing (Inverted) Block	Cost per unit increases as threshold targets are achieved	Bill increases at a faster rate as volumes increase

Source: *C.N. Watson and Associates Ltd.*

One of our evaluation criteria is environmental protection. As we found in Part 5, the main way to protect the environment through our water systems is to maximize water conservation programmes since reducing water use lessens disruption of the natural environment and conflict with other human and non-human users of the water.

It is widely accepted that the water rate structure that does most to encourage water conservation actions by the user is the increasing (inverted) block system. In this system, the water bill increases at a faster rate as the industry, farmer, or residential user consumes a larger volume of water. The constant rate structure also encourages conservation, but in a less aggressive way. Some prefer the latter approach because it is more acceptable to new industries that are considering coming into a community.

One other component of our full and fair pricing criterion is equitable access to water. This means that no one should be denied access to the water necessary for their well-being because they lack financial resources. In a study of water pricing in the member countries of the Organization for Economic Co-operation and Development (OECD), the OECD found that many countries take special action to address this problem:

> Another dimension of access is affordability. In this context, however, water services providers are increasingly realising the inefficiencies (both economic and environmental) associated with offering "across-the-board" low water prices to domestic consumers in order to ensure that affordable water is available for those in need. Instead of this type of "blanket" subsidy, the increasing tendency is to either support general income levels directly (for example, through direct payments, rather than via alterations to water tariff or pricing structures), or to better target tariff reforms to ensure that reduced water prices reach those most in need *(Organisation for Economic Co-operation and Development, 139-141).*

Municipalities should assess the appropriate ways to address this issue and adopt the appropriate mechanism.

Recommendation 5: Municipalities should adopt life cycle costing systems to include in the current rate structure the long-term costs of infrastructure replacement and upgrading programs.

Recommendation 6: The Province and municipalities should work together to ease the transition to life cycle costing and increasing block rate or flat rate pricing. Two mechanisms should be used:

- **Phase rate increases in so that water prices do not increase dramatically in any one year, e.g., by putting a cap on how much prices can increase in a year;**

- **Provide provincial and federal grants or low interest loans on an interim basis to ease the transition. In the long run, municipal water systems should become self-supporting and should not be reliant on grants or low cost loans from the provincial or federal governments.**

Recommendation 7: Municipalities should adopt an increasing (inverted) block rate system or a flat rate system for pricing water. Municipalities should assess mechanisms to ensure that all can afford water and adopt the appropriate mechanisms.

Findings and Recommendations

We have explored reforms that should be implemented to improve the public management of Ontario's water systems. These recommendations are based on the assumption that the provincial government has implemented an appropriately strong regulatory regime.

Recommendation 3: Municipalities should investigate improving service quality and efficiency by working together through regional or county government, through other municipal co-operative arrangements, or by relying on OCWA's hub system.

Recommendation 4: The Ontario Clean Water Agency (OCWA) should be retained as a provincial crown corporation. Its role should be enhanced to become a centre of excellence to assist municipalities, especially small ones, in the building, and operation of water and wastewater treatment plants in ways that will help them achieve self-sufficiency and improve service.

It could also play a partnership role with the waterworks industry in providing information on state of the art facilities and best practices to municipal operators. In addition, OCWA should be available to step in if another water emergency occurs, as it did in Walkerton.

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PART 8: SUMMARY OF FINDINGS AND RECOMMENDATIONS

In 2000, the Walkerton tragedy catapulted water into the public eye as a very serious issue in Ontario. All indications are that regional, continental, and global problems will continue to demand public attention. This means that Ontario must have the ability to address these problems regionally and internationally in a way that protects the public interest.

One of the questions that must be confronted is: What are the structures that will put the Ontario government and the people of Ontario in the best position to make decisions on these matters? Who owns and operates Ontario's water supplies and systems has serious implications for our ability to address these issues.

A few large transnational corporations are moving to develop business opportunities in the North American water services sector. The big water companies are buying out smaller companies, increasing their control over the industry. These companies also often become conglomerates, simultaneously controlling a wide range of services, including energy and garbage as well as water.

These companies want to turn a previously publicly provided service into a private business opportunity. These companies make decisions about the provision of water on the basis of private income and profit levels as with any other business, rather than on the basis of provincial and local public objectives.

The provincial government has taken many actions to explore and promote the privatization of government services, including water delivery.

The financial reductions at the Ministry of the Environment, the downloading of responsibilities to municipalities, and reduced financial support programmes for municipalities have combined to create a crisis mentality around water services.

Although these government initiatives have been furthered in many areas, no irrevocable decisions with respect to the privatization of water have yet been made. Ontario can continue towards a path in support of privatization of water or can take an alternative road of supporting and enhancing public ownership. The fact that Ontario is at the crossroads on this issue reinforces the importance of this issue for the Walkerton Inquiry.

Public ownership and management of water systems are preferable to private ownership or public-private partnerships when compared with each other from the perspectives of security of supply, ensuring quality, environmental protection, accountability to the public and public involvement, and full and fair pricing of water.

There is no validity to the arguments commonly raised to argue for privatization of the water systems. Municipalities are more capable of financing the water system infrastructure and at better rates than the private sector. Municipalities are just as capable of running an efficient operation as are private companies – if not more capable because they do not have to add in profit margins. Municipalities can obtain just as much access to expertise and technologies as

can private companies. There is no evidence of a conflict of interest or reduced enforcement with municipal ownership within an appropriate regulatory framework.

At least three-quarters of the public want their water systems to be publicly owned and managed.

Recommendation 1: Water systems should remain in public ownership and public-private partnerships that involve financing or management contracts should not be pursued.

Recommendation 2: The Provincial Government should stop its plans to facilitate and actively promote the privatization of water systems. The Provincial Government should:

- **repeal the provision in *The Savings and Restructuring Act* that eliminated the need for municipalities to hold public referendums on proposals to dissolve public utilities;**

- **remove its instructions to the SuperBuild Corp. to look at privatization options for water and sewage treatment plants; and**

- **not pass the section in Bill 46 *An Act Respecting the Accountability of Public Sector Organizations* that would require each public sector organization to each year look at how it might deliver its services through the private sector.**

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APPENDIX 1: DESCRIPTION OF SUBMITTING GROUPS

CELA 's Involvement in Water Issues

The Canadian Environmental Law Association, a public interest legal aid clinic, has been very involved in water issues since it began in 1970. As well as providing legal advice and representation to hundreds of Ontario clients with water concerns, CELA has also been active in international, federal and Ontario water law reform efforts. CELA has written many articles, submissions, and reports on water protection, including submissions to the Ontario government on most of their water law reforms over the last 30 years. One of the first campaigns of the organization in the 1970s was for a *Safe Drinking Water Act*.

In the 1980s, CELA was involved in the Great Lakes Remedial Action Plans, and in a zero discharge campaign that strengthened the Great Lakes Water Quality Agreement and pioneered the use of ecosystem management. During this decade, CELA was also involved in the Advisory Committee for the Municipal-Industrial Strategy for Abatement (MISA) water discharge regulations, and was one of the first groups to warn of the negative environmental impact of evolving international trade agreements

In the 1990s, the environmental climate changed in Ontario. Public consultation dwindled, and CELA and others expressed concern about the impact of deregulation, devolution and downsizing on environmental protection. In 1994, when the Ontario government began to actively consider the privatization of public services, CELA held a public forum on the privatization of Ontario's water resources. The forum heard of the profound and chilling impact that British water privatization had had on public health, water quality and management, and resulted in the formation of a coalition called Save Ontario Water to pursue the goal of keeping water public in Ontario. This coalition actively opposed Bill 107 that devolved all Ontario-owned water and wastewater plants to cash-strapped municipalities. CELA was also active in successfully opposing water privatization proposals in Ontario, for example in York Region.

CELA received numerous requests to represent citizens regarding the granting of water-taking permits to private users that were threatening public supplies of groundwater. CELA was also active in opposing export of water in bulk from the Great Lakes to China by the NOVA Group. This proposal caused international concern and was eventually withdrawn. To better respond to the increasing number of proposals for privatizing water and for global water export schemes, CELA, CUPE and the Council of Canadians formed Waterwatch. This coalition held Canada's first public water summit in Ottawa in 1999.

In 2001, CELA released a *Model Water Conservation Act* to offer an alternative framework to current unsustainable water wasting practices in Ontario. During 2000-2001, CELA has also been involved in efforts to improve the Great Lakes Charter through a new Annex that prevents large and harmful withdrawals through the development of ecosystem protection regulations. Since the summer of 2000, CELA has represented the Concerned Walkerton Citizens in the Walkerton Inquiry.

CUPE's Involvement in Water Issues

The Canadian Union of Public Employees (CUPE) represents almost 500,000 public and private sector employees across Canada. They are employed in municipalities, hospitals, schools, universities, social service agencies, electrical and water utilities, airlines and nursing retirement homes.

CUPE represents over 100,000 employees in Canada's municipal sector and more than 40,000 in the Ontario municipal sector, including many water and wastewater operators. CUPE locals, with the support of their Provincial Divisions and the National Union, have launched or participated in many campaigns against the privatization of water and wastewater services. Maintaining the public operation and ownership of water and wastewater services while advocating for better-funded and higher quality water services has become a major focus of the union over the last five years.

CUPE has participated in many national and international meetings on water privatization over the past several years. It also has been active with other organizations in forming community-based water watch committees whose primary objective is to promote better public water services and prevent the privatization of those services. CUPE has also been active in raising awareness about the implications of trade and investment agreements such as NAFTA and the GATS as they relate to water services and water privatization.

OPSEU's Involvement in Water Issues

The Ontario Public Service Employees Union represents approximately 50,000 Ontario Public Service employees, including employees of the Ministry of the Environment and the Ontario Clean Water Agency, an Operational Enterprise of the Crown.

OPSEU is a full party to the Walkerton Inquiry.