

## SAFE TO DRINK?

*At a time when the principles of de-regulation, privatization, and downsizing have captured government agendas across the country, the tragic events taking place in Walkerton serve as important reminders of the human cost of such policies. We can avoid similar tragedies, but only if the governments we elect are willing to exercise their legislative power to protect health, our communities, and the ecology. We propose that BC take steps to reverse current trends by establishing a legal framework for protecting water quality by passing a **Safe Drinking Water Act**.*

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# SAFE TO DRINK?

## EXECUTIVE SUMMARY

The tragic events still unfolding in Walkerton, Ontario, should provide a wake-up call for BC – when it comes to water quality our problems are among the worst in Canada. Moreover, environmental funding cuts and inadequate regulatory protections that are root causes of the Walkerton disaster are just as much of a concern in this province.

Like Ontario, BC's water quality problems have also been well-documented. Several government studies and reports make it clear that BC residents have become increasingly vulnerable to waterborne disease. But years of study and consultation appear to have done little to persuade government that more, not less, needs to be done to protect water quality. Even last year's highly critical report by the Auditor General couldn't persuade government to commit adequate funding for water quality monitoring and watershed planning – or more importantly, to enact meaningful water protection legislation.

We believe that all BC residents should have a legal right to safe drinking water. We don't now, and as long as the status quo persists, the health of our communities and ecosystems will remain at the mercy of shifting government priorities and declining public expenditures. The long-term consequences of this neglect will severely damage our health, the ecology and ultimately our economy.

The following paper calls for a number of reforms that are essential if BC water quality is to be assured. However, the dynamics currently undermining government commitments to sustainable water management will, if ignored, continue to frustrate the progress we feel is so urgently needed. We believe the only way to break the current juggernaut is for government to summon the courage to exercise its most fundamental prerogative – to make law.

By establishing legally enforceable water quality standards and by empowering consumers with information about the quality of our drinking water and the right to compel action when standards are breached, the trend towards underfunding, deregulation and privatization can be reversed. Moreover, polling clearly indicates that public opinion strongly supports such determined action and will reward a government willing to take initiative.

In our opinion, this province needs a **Safe Drinking Water Act** if water quality objectives are to be achieved and maintained. The key features of this new law should be:

1. **Enforceable water quality standards** to replace voluntary guidelines. These must be based upon the **precautionary principle** and include a much more substantial list of contaminants than current guidelines now address.
2. BC residents should **have the right-to-know about the quality of our drinking water**. This information should be provided by **periodic water quality reports** delivered to every BC resident.
3. BC residents must have **the right to compel investigation and force remedial action** when drinking water is at risk or fails to meet water quality standards.
4. There should be a **rational and equitable allocation of the costs** associated with water protection and remediation based on the principle of **polluter pays**. Liability must be allocated to those causing damage to water quality or we will continue to subsidize the costs of unsustainable economic development at the expense of public natural and fiscal resources.

While elements of a legislative framework for water quality protection can now be found in BC's **Health Act**, neither the *Act* nor its regulations engender the four reforms we believe are critical to effective water quality protection. While the rights we advocate could be established within the existing legal framework of the *Health Act*, we believe that a better option is to establish safe drinking water legislation that would integrate both human health and other ecological concerns in a comprehensive framework for water quality protection.

The many causes of degraded water quality are fundamentally environmental problems of unsustainable land use and under-regulated industrial and resource development. These are problems that must be addressed before more of our surface and groundwater resources become so contaminated that we will be fighting the same losing battle that just overwhelmed Walkerton's defences.

Dealing with the problem of water pollution at its source – that is, preventing pollution before we despoil the environment – is obviously the responsibility of the Ministry of the Environment, Lands and Parks (MELP) not the Ministry of Health. We all know what they say about an ounce of prevention.

The Auditor General has recommended that the province appoint a lead agency to protect water quality. We agree, and believe that agency must be MELP. If its leadership is to be effective, however, the Ministry must have a clear statutory mandate and sufficient funding to do its job.

But ultimately the most fundamental safeguard of water quality will be enforceable water quality standards, and laws which empower citizens to act when these standards aren't met – that is, a **Safe Drinking Water Act** for BC.



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# 1. INTRODUCTION

There is no resource that is more essential to biodiversity, social and economic development, and indeed civilization itself, than water.<sup>1</sup> Growing scarcity and widespread misuse of water pose a serious and growing threat to sustainable development and all aspects of human health and welfare, food security, industrial development and the ecosystems on which these all depend. Worldwide, the consumption of water has increased over twice as much as the growth of the world's population in the last century. The United Nations has determined that with current water use patterns, by 2025 over two-thirds of the world's population, or 5.5 billion people, will suffer from water shortage.<sup>2</sup>

For much of this planet's human population potable water is already in critically short supply, and the lack of sufficient water resources to support food production is emerging as one of the most urgent crises of our time. The impact of climate change on water and hydrologic cycles, and the complex inter-relationship between degraded and depleted water resources and biodiversity loss, underscore the enormity and global dimensions of the problems we confront.

To many Canadians these problems may seem distant and of little relevance to a country so well-endowed with water resources. But while it is true that Canadians still have an abundance of riches when it comes to water, any notion that we can ignore the global and international dimensions of the problems that affect this resource simply ignores the inter-relatedness of global ecosystems and economies. Moreover scientists have warned Canadians that pollution, habitat destruction and global warming will so compromise our freshwater supplies that freshwater fisheries could disappear and drinking water supplies be put into a state of crisis. Unless we change course dramatically, they warn that fresh water will become Canada's foremost ecological crisis this century.<sup>3</sup>

In other words, we are squandering Canada's enormously rich water resource endowment through indifference and neglect. Indeed the consequences of our failure to act as responsible water stewards has already had very serious impacts in Canada – from the devastating effects of massive water diversion projects on regional ecosystems, to the impacts of waterborne disease outbreaks for local communities. The tragedy in Walkerton,

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<sup>1</sup> *The Freshwater Resources of the World – A Comprehensive Assessment*, report of the Secretary General of the United Nations, February 1997.

<sup>2</sup> See footnote 1 above.

<sup>3</sup> *National Water Crisis Forecast*, Globe and Mail, June 7, 2000.



Ontario, serves as a terrible reminder of just how immediate, human, and severe these impacts can be.

## BC'S DISCOURAGING RECORD ON WATER QUALITY

For British Columbia, the most pressing water-related problems concern the impact of the province's resource industries. Toxic effluents from pulp and paper mills, acid mine drainage, intensive agriculture and livestock operations, and the impacts of logging activities on water quality and fish habitat are among the most critical pressures. Moreover, the extent of water quality problems in this province represents an important indication of the failure of current policies and law to provide adequate protection for this vital resource.

The discouraging scope of water quality problems in BC is revealed by these statistics:

- BC has the highest per capita incidence of waterborne disease of any province in Canada.<sup>4</sup> A 1998 government study reported that 27 outbreaks of toxoplasmosis, cryptosporidium and giardia,<sup>5</sup> and other diseases had occurred in the preceding eighteen years.<sup>6</sup>
- The Greater Vancouver Regional District's (GVRD) water supply frequently exceeds the minimum federal guidelines for water turbidity. It is the only unfiltered Canadian water supply which often exceeds the standards on which Canada's safe drinking water guidelines are based. According to its own assessment, because "giardia and cryptosporidium cysts are found in Greater Vancouver Water District (GVWD) source waters" ... low levels of disease could be presently occurring."<sup>7</sup>
- Contamination is also a serious problem for some provincial groundwater sources. For example, drinking water guidelines for nitrate-nitrogen are not being met in certain aquifers because of agricultural contamination from manures and fertilizers.<sup>8</sup>
- The government's first Water Quality Status Report of April 1996 found that of 124 water bodies surveyed, only 60% had source waters which fell into the "good to excellent" category for drinking water purposes. Even for the 60% in that category, disinfection was still required.
- Some communities in the province are on permanent "boil-water" advisories, i.e. they cannot safely drink the water from their tap without boiling it first.<sup>9</sup>

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<sup>4</sup> Office of the Auditor General of British Columbia: *Protecting Drinking-Water Sources*, 1998/1999 Report, see introduction p. 7.

<sup>5</sup> See *A Water Conservation Strategy for British Columbia* – a Working Group Report to the Water Quality Branch, MELP, published September 1998. Cryptosporidium and giardia are microscopic parasites causing intestinal illness including diarrhoea, abdominal cramps, nausea, headaches and in the case of giardia, fever and vomiting. Symptoms can last from one to two weeks to as long as a month.

<sup>6</sup> According to a Ministry of Health report in 1995, there were 240 boil water advisories in effect in BC, usually in smaller water systems with unsatisfactory disinfection processes serving about 15,000 people.

<sup>7</sup> *Water Quality Risks of not Meeting Canadian and Provincial Drinking Water Guidelines*, Appendix A to Drinking Water Treatment Program – Financial Options and Risks for 1998 Budget Process, submitted to GVWD Water Committee, November 21, 1997.

<sup>8</sup> See note 4, see pp. 91-93 and pp. 103-112.

<sup>9</sup> See note 5.



In a disturbing parallel to the circumstances of the Walkerton disaster, the Auditor General's report warns about the groundwater impacts of intensive livestock operations which produce quantities of manure well in excess of the absorptive capacity of the land available to spread it on. One needn't read further than the table of contents to appreciate the nature of the challenges the Auditor identified:

Management of cattle grazing does not fully address threats from parasites;

Management of agricultural wastes is not yet successful in protecting groundwater sources; and

Controls over septic tank systems do not pay sufficient attention to maintenance or to nutrient release.

The Auditor's report also points to underfunding, inadequate monitoring and enforcement and what amounts to a profound failure of the regulatory framework for groundwater protection. There is in these BC warnings, a disturbing similarity to those sounded in Ontario. In the wake of the Walkerton tragedy, many are now asking why that government did so little to respond. BC's government must ensure that it never has to answer the same questions.

## ONE STEP FORWARD – TWO STEPS BACK

Not only have the stresses on water been well documented in British Columbia, but so have the actions needed to address them. For example, in the 1970s and again in the early 1990s, the province embarked upon extensive public consultation processes intended to establish policy and legal frameworks that would usher in a new era of water management. Those consultations identified dozens of actions that were needed to achieve this goal.<sup>10</sup>

But efforts to proceed with these initiatives foundered when certain proposals encountered resistance and government priorities shifted. Evidence of this neglect, particularly with respect to the failure of government to adequately protect drinking water sources, was most recently documented by a highly critical report by the Auditor General.<sup>11</sup> The Auditor also recommended a substantial list of actions to restore government capacity to meet the challenge of providing BC residents with secure and safe drinking water.

However, while certain modest steps have been taken to advance some of the initiatives, in many ways we have been losing ground in the struggle to protect water. For example, substantial and disproportionately large cuts to the budget of the Ministry of Environment, Lands and Parks have not only undermined its capacity to move forward with its water agenda, and actually undermined its water quality monitoring activities.

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<sup>10</sup> *Stewardship of the Water – A Review of British Columbia's Water Management Policy and Legislation* – ISBN 0-7726-1842-9.

<sup>11</sup> See note 4.



Moreover, a legislative paralysis appears to have descended over government that has become so pervasive in the area of environmental protection that it is virtually impossible to engage either politicians or public officials in a serious conversation about progressive law reform. This is particularly problematic because most problems that currently affect water in BC are directly the result of an inadequate legislative framework for water protection.

For instance, BC has no safe drinking water legislation and neither it nor the federal government, has established enforceable safe drinking water standards. Decisions that adversely impact water resources in this province are routinely made by government ministries that are not accountable for the consequences of their decisions. In the area of groundwater protection, BC lags behind every other Canadian jurisdiction – it has none!

In fact, not only have law reform efforts been stymied, but ever increasingly the scarce resources of environmental groups are being diverted to defend the gains that were made during the first years of this decade – in regulating pulp mill effluents, forest practices, and the remediation of contaminated sites – all of which have obvious and far reaching impacts on water resources.

Now, after another long and discouraging hiatus, the province has released a *Fresh Water Strategy for British Columbia* which documents government “accomplishments” and priorities for the future direction of water management in BC. But while the Ministry has attempted to paint a pretty face on it, it is clear that it has made little meaningful progress towards implementing many of the most important recommendations for action that it first identified with the release of its earlier discussion paper *Sustaining the Water Resource* nearly a decade ago. Indeed, these recommendations were themselves the result of the government inaction in response to the 1970’s Task Force on Community Water Supplies *Community Watershed Reserves* policy.

With the important exception of water export controls, this is particularly true for those proposals that would have required new legislation or regulation. While some of these initiatives, such as groundwater protection legislation, remain on the government’s “to do” list, others such as proposals for a new **Water Act**<sup>12</sup> have apparently now been abandoned.

While the accomplishments of the past several years should not be overlooked, the incremental pace of this progress, viewed in light of significant funding cuts and a retreat from important regulatory commitments, falls far too short of any reasonable mark in terms of meeting the pressing challenges ahead. Moreover, without a much more determined effort to move forward, the combined pressures of population growth and BC industries will continue to overwhelm the modest efforts of government to address these challenges.

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<sup>12</sup> See note 10: Discussion paper # 7 – *Water Quality Management*.

## A WAY FORWARD

If the dynamics of this equation are to change, governments must first and foremost be persuaded of the need for new law and regulation. While investments in planning, data collection, intergovernmental coordination and pilot projects are helpful, they are no substitute for establishing an adequate legal framework for water protection. Unless water is accorded legal protection from overuse and degradation the future of this resource will be left to the often parochial political concerns of the day.

Given the determined resistance of some industries, if governments are to be persuaded of the need for law reform, BC residents will have to become much more vociferous in expressing their support for such initiatives.

This explains why, in responding to the government's freshwater strategy, we have concentrated on the need for law reform, particularly concerning the issue of water quality protection. We believe that no other dimension of the challenges confronting provincial water resources so clearly illustrates the need for new legislation, or has greater potential for engaging public support for the entire spectrum of initiatives that are urgently needed to place water management on a sustainable course.

We propose that the province move to establish a legal framework for protecting water quality – safe drinking water needs to become a legal right. Moreover, every resident of BC should have the right to know about the quality of the drinking water they rely on, as well as the right to ensure that quality standards are met.

If government can be persuaded to exercise its legislative muscles for this purpose, we believe that many of the other reforms needed to establish a truly sustainable water management regime in this province will readily follow.



## 2. AN INADEQUATE LEGAL FRAMEWORK FOR PROTECTING WATER

The following provides an overview of the existing framework of legislation that currently addresses the issue of water quality in BC, and describes the major gaps in the current regime. In Part III we suggest a way to give water the legal protection that it so clearly requires.

### JURISDICTION

Within Canada, all levels of government have significant jurisdiction for matters that impact water quality. Under the *Constitution Act*, the provinces own water resources, including both surface and groundwater while the federal government has jurisdiction over oceans, navigation, fisheries, and for water on federal lands. Shared federal-provincial responsibilities include inter-provincial water issues, agriculture, the environment, and health. In addition, local governments have responsibilities which impact water under municipal and health statutes.

BC's legislative framework for water is also complex. There are numerous statutes, regulations and guidelines concerning water, and the jurisdictions of several ministries come into play. The competing claims that often arise in this context (land use, forests, agriculture, environment, health, fisheries) are exacerbated by the lack of integration and coordination in government, as well as by the absence of any unifying policy objectives regarding water.

The fractured and incoherent character of provincial policy, law and administrative responsibility for water was a particular focus of critical comment by the Auditor General, who recommended that:

Government cannot achieve a leadership role in protection unless it has a focal point from within to coordinate these interests. We therefore believe that one agency should be assigned the role of the “voice of water” within government.

We concur with this assessment. Moreover, as noted, we believe this authority and responsibility should be reinvested in MELP. In our view no other ministry engenders a perspective broad enough to capture the diversity of issues that water management

engenders. Ultimately the importance of water to sustaining biodiversity – life in all of its forms – dictates that MELP must reassume the lead role, but this time with a legislative mandate and sufficient funding to meet its obligations.

Unfortunately, *A Freshwater Strategy for BC* doesn't directly address this issue, although it does describe MELP efforts to provide better coordination among government ministries. However, these initiatives fall far short of the Auditor's proposals and will not, for that reason, address the fundamental problems his report described.

## WATER ALLOCATION

BC's *Water Act* enables the issuance of water licences and defines how water rights are acquired and held. Most existing licences are for domestic, irrigation and waterworks purposes. Under the current licensing system, water is allocated on a first come, first served basis except where water has been reserved or is subject to the existence of other rights such as the rights of First Nations.<sup>13</sup> The *Water Regulation* to the *Act*, deals with acquisition of water rights, and was amended in 1997 to add certain requirements concerning changes in or about streams to protect water quality, habitat and other licensed water users.

There have been few other significant changes to the *Water Act* since it was first enacted in 1909. While the *Act* was amended in 1960 to provide for its application to groundwater, no implementing regulation has ever given effect to this amendment.

British Columbia is still the only province not to have enacted legislation governing groundwater. *A Freshwater Strategy for BC* undertakes to "pursue groundwater protection legislation" as one of its three year activities – but with no precise timeline or specific commitments. The status quo leaves local government as the most effective level at which to implement groundwater protection. But local governments often don't have the information, funding, resources or experience needed to adequately protect groundwater; nor do they have the jurisdiction to manage groundwater regions that span municipal, regional and even international borders.

On April 27, 1995, BC introduced the *Water Protection Act* which confirms provincial ownership of surface water and groundwater and prohibits large-scale diversions and the removal of BC's water in bulk supply to locations outside the province.

## WATER QUALITY

### WATERSHEDS

Ninety-four percent of BC's land base (including forest land) is Crown land managed by the provincial government. About two million hectares, or two percent, is private forest land, of which nearly half is in the Forest Land Reserve. Much of the remaining private land is subject to municipal or regional land use controls.

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<sup>13</sup> David R. Percy, *The Framework of Water Rights Legislation in Canada*, 1988. The Canadian Institute of Resources Law, Calgary, Alberta at 22.



The quality of drinking water for most BC residents depends upon the management of the surface waters upon which they rely. These watersheds can be grouped under five headings:

- fee simple ownership of watershed lands;
- long-term lease from the provincial government under the Land Act;
- watershed reserve status under the Land Act;
- community watershed designation under the Forest Practices Code; and,
- no designation, tenure or management regime at all.

Local Control is no Guarantee

Some communities, such as Greater Victoria, own the land within the catchment basin or watershed area from which they obtain their water supply. In Victoria, the lands are managed by the Capital Regional District. Outright ownership of watershed lands is the most secure way to have control over land use activities that may affect water supply.

At least four communities in the province have long-term leases from the provincial government for their water supply lands: Endersby, Fernie, Vernon and the GVRD. For example, the GVRD holds long-term (999 years) leases from the provincial government under the *Land Act* for the three watersheds from which Greater Vancouver obtains its water supply.

While these arrangements have served some municipal water users reasonably well, the situation in the GVRD is problematic because of its decision to allow logging activities to take place in its watersheds. The result of these activities have contributed to significant water quality problems because water supplies frequently exceed minimum federal guidelines for turbidity. Excessive turbidity often results from erosion and landslides caused by logging and road building activity and can mask pathogens and reduce the effectiveness of disinfection.

Historical records averaged over a nine year period show that the water supply from the Capilano and Seymour sources has exceeded 1 NTU<sup>14</sup> about 83% and 36% of the time respectively, and has been above 5 NTU as long as 73 and 41 days respectively. There are several large, unfiltered water supplies in North America; however, the GVRD supply is the only one to often exceed the 5 NTU standard.<sup>15</sup>

Moreover, the present GVRD chlorine disinfection process does not always have adequate strength and contact time to inactivate giardia and other cysts. According to its own

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<sup>14</sup> The maximum acceptable concentration for turbidity in the *Guidelines for Canadian Drinking Water Quality* is 1 nephelometric turbidity unit (NTU) for water entering a distribution system. A maximum of 5 NTU is permissible if disinfection is demonstrably not compromised by use of this value. 5 NTU is also the aesthetic objective.

<sup>15</sup> British Columbia Medical Association, Water Subcommittee, background material to resolutions supporting various water treatment and watershed management objectives, June 1998.

assessment, “giardia and cryptosporidium cysts are found in Greater Vancouver Water District (GVRD) source waters” ... low levels of disease could be presently occurring.”<sup>16</sup>

While municipal control of the watersheds upon which they rely is often seen as a solution to competing land uses that threaten water quality, the serious water quality problems that continue to exist in the GVRD reveal that municipal control is no guarantee of sound watershed management practices. Given the history of water-shed planning in the GVRD, neither does it assure that decisions will be made in an accountable or transparent manner.

### Community Watersheds

Several hundred community watersheds provide the primary water supply for hundreds of municipalities, regional districts and water districts.<sup>17</sup> Most were originally designated between 1973 and 1975.<sup>18</sup> Almost all have been subjected to multiple resource use – logging, road building, recreation, agriculture, etc. – which leads to increasing pressure on water quality and conflicts between users. None have been better documented than those conflicts concerning the impact of logging activities on water quality.<sup>19</sup>

Most watersheds are primarily on Crown land, but as noted, most water users (whether it be a municipality, improvement district, waterworks district, or water users’ community) usually have no ownership interest in that land. As a result, their input to land use decisions is often limited.

Under the *Forest Practices Code* certain water catchment areas are now designated “community watersheds.”<sup>20</sup> Community watershed status triggers certain forest and range practices and operational planning requirements that do not apply to other provincial forest land. These include:

- greater streamside buffers around streams without fish,
- obligations to maintain water quality,
- special rules for use and storage of pesticides and use of fertilizers,
- special rules for road location, design, and notification of licensed water users prior to construction, modification and deactivation,
- restrictions on clearcutting and excavated or bladed skid trails,
- requirements for terrain stability and surface soil erosion mapping,
- requirement for watershed assessment, and

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<sup>16</sup> *Water Quality Risks of not Meeting Canadian and Provincial Drinking Water Guidelines*, Appendix A to Drinking Water Treatment Program – Financial Options and Risks for 1998 Budget Process, submitted to GVWD Water Committee, November 21, 1997.

<sup>17</sup> Domestic Watershed Committee, *Final Report: Issues and Recommendations*, June 16, 1997.

<sup>18</sup> Guidelines for Watershed Management of Crown Lands Used as Community Water Supplies – Definitions: community watershed. Appendix G, September 1, 1979 contains a listing of 283 community watersheds.

<sup>19</sup> See for example an excellent report recently published by the Sierra Legal Defence Fund, *Muddied Waters: The Case for Protecting Water Sources in BC*.

<sup>20</sup> The FPC “community watershed” definition is exactly the same as the definition used in Guidelines for Watershed Management of Crown Lands Used as Community Water Supplies, 1983.



- restrictions on range development and cattle grazing near streams.

However, the new designation does not include the option of reserving sensitive and/or critical community watersheds from resource development. Other important gaps exist in the current framework, several of which were identified by the Auditor General which include:

- Rules about what information is to be gathered and assessed, and who is qualified to do so.
- Current information systems make it difficult to determine whether government field inspections are carried out sufficiently often to ensure that plans are being followed.
- There are no regulations assigning responsibility for carrying out water quality monitoring.
- Rules about what kind of water quality monitoring is needed do not address all the variables that would ensure drinking water quality is being protected.<sup>21</sup>

Nevertheless, it is clear that designation as a community watershed under the current regime represents an advance over the modest protections that were implemented prior to the advent of the Code, or for watersheds without this status. This explains why a growing number of communities are applying for designation.<sup>22</sup>

To qualify as a community watershed under the *Code*, a watershed must either meet the legal definition in subsection 41(8) of the Act as of June 15, 1995, or be formally designated as such by a regional manager of the Ministry of Forests under subsection 41(10). The problem with the former, is that the Ministry of Forests acquires administrative authority under the Code for Land Act watershed reserves under the jurisdiction of the Ministry of Environment. As well, the current criteria for automatic designation exclude many areas. With the latter - formal designation under subsection 41(b) - too much discretion is left in the hands of MOF regional managers. As is true for so many decisions affecting water quality in the province, this leaves final decision-making authority with officials who must first and foremost serve the goal of meeting timber harvesting objectives.

Also problematic is the fact that when, as the ultimate arbiter of land use on most crown land, the Ministry of Forests approves activities that adversely impact water quality, it has no responsibility for the costs of remediation and treatment. To illustrate how substantial these costs can be: the Auditor General estimated that it would cost \$700 million to provide such protection to 100 municipalities outside Victoria and Vancouver, now relying upon unfiltered water with new treatment plants; and annual operating expenses

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<sup>21</sup> See note 4, at p. 17

<sup>22</sup> Under s. 41(10), the Ministry of Forests (MOF) regional manager may designate an area as a community watershed, if in the manager's opinion and that of a designated environmental official (who is normally the Regional Water Manager from MELP in consultation with the Ministry of Health), it should be so designated.



would add \$30 million per year to these capital costs.<sup>23</sup> The costs of filtering GVRD's water have been estimated to be in excess of \$500 million.

To these should be added the costs of waterborne disease outbreaks which include loss of income from illness, medical costs, bottled water, and losses to businesses that require water for human consumption, such as hotel and tourist facilities.

This disassociation of authority and responsibility that occurs when the Ministry of Forest (MOF) makes decisions about land use in watersheds, fundamentally undermines one of the first principles of sound business practice – making decisions that limit risk and minimize future liabilities. Conversely, those that must ultimately pay the costs of poor watershed management, either through increased municipal taxes or with their health have no formal right to participate in MOF decision making processes, or to appeal those decisions to an impartial arbiter. Finally, there is no effective way to hold MOF accountable for mismanagement.

### Small Water Systems

Approximately 500,000 BC residents rely upon individual or small community systems for their drinking water. The Auditor General identified these as being particularly vulnerable to a variety of threats including a lack of adequate resources for protecting sources and the limited consideration they are accorded in development approvals. These small systems are prevalent in southern British Columbia and present a special challenge because of their scattered locations and lack of organization among water users.

The Kootenay-Boundary Land Use Plan (KBLUP) attempted to address the issue of the impacts of other resource uses on these small water supplies by committing government to apply community watershed guidelines to them. Subsequently, a committee from various ministries (Forests, Environment, Health) was struck to produce an internal report on managing these watersheds. Some of the concerns identified – which also may apply to designated community watersheds – were:

- existing provisions for managing domestic watersheds are scattered through various regulations, guidebooks and policies,
- private land use activities which may have greater impact on water quality than those on Crown land,
- public desire for participation in watershed planning and management exceeding government capacity,
- lack of Ministry of Health resources to participate in land use planning to the extent the public would like and diversion of limited resources from community (serving much greater populations) to small watersheds,
- lack of clarity on how domestic watershed management ties into forest planning and lack of public understanding of where and when they can get involved, and
- domestic and community watersheds having been logged around for so long that in some districts, 60% of remaining timber is in these areas.<sup>24</sup>

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<sup>23</sup> See Auditor General's report at p. 13.



Most of these problems are still outstanding.

## GROUNDWATER

Long-term trends of observation wells indicate that groundwater levels are declining in some areas of BC and over one-third of our aquifers are vulnerable to contamination.<sup>25</sup>

The largest use of groundwater in the province is by industry (55%), followed by agricultural (20%), municipal (18%) and rural domestic (7%). Over 600,000 people in BC rely on aquifers for their source of water and among the 153 aquifers classified and mapped in BC, fifteen were identified as having associated health-related concerns due to water quality, four have quantity concerns and fourteen aquifers warrant concern on both counts. If water supplies for Greater Victoria and Vancouver are excluded, groundwater sources supply approximately 25% of the total municipal water demand.

Groundwater contamination can come from both point and non-point sources and can render groundwater unsuitable for domestic and other use. In many cases, contamination is recognized only after groundwater users have been exposed to potential health risks. It is always difficult, and sometimes impossible, to clean up contaminated aquifers and the cost of doing so is usually extremely high.

Depletion of groundwater supplies, conflicts between groundwater users and surface water users, and potential for groundwater contamination are problems that will become increasingly important as further aquifer development takes place in the province. Already in some areas there are serious well interference problems and impacts on surface water resources. Conversely, further well drilling and surface water allocations threaten the integrity of the entire hydrologic regimes, and the human and biological communities which depend upon them.

Provincial legislation and guidelines provide some control for concentrations of substances discharged to the ground or watercourses.<sup>26</sup> These provide restrictions on the location of discharges, quality of waste discharged, design and operation of treatment and disposal facilities and toxic and special substances transport. The *Water Utilities Act* provides for provincial approval of the adequacy of sources of water supply including groundwater for community water systems. The *Health Act* provides for checks on potability of public water supplies and special minimum distances between wells and potential sources of contamination (s. 42, *Sanitary Regulations*). Municipal and Regional Districts pass bylaws to control land use which may either damage or preserve groundwater resources. However, even when taken together, this legislative framework falls far short of providing an adequate structure for protecting groundwater.

The deficiencies of the current regulatory regime were aptly summed up by the Auditor General this way:

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<sup>24</sup> Domestic Watershed Committee, *Final Report: Issues and Recommendations*, June 16, 1997.

<sup>25</sup> *A Water Conservation Strategy for British Columbia*, 1993 Interagency Working Group Report to the Water Management Branch, Ministry of Environment, Lands and Parks.

<sup>26</sup> See for example the requirements of the *Waste Management Act*, the *Environment Management Act*, *Pollution Control Objectives for Municipal Effluents and Industrial Waste Discharges* and the *Health Act*.

The components of an effective program to protect groundwater quality [include] controls over potentially harmful activities, ongoing monitoring, requirements for polluters to remediate damage, and enforceable means of seeking compensation and preventing further damage. Most of these elements are missing in British Columbia's regulatory framework for groundwater.<sup>27</sup>

Moreover, the inadequacies of the current framework have been understood for some time and were documented by the government itself in a 1993 report *Groundwater Resources of British Columbia* by the Water Management Branch.

### The Government's Response

In responding to these challenges, the *Freshwater Strategy* notes the establishment of *Forest Practices Code* regulations which have improved the rigor and accountability of planning processes with respect to community watersheds. However, it is apparent that funding constraints have prevented the completion of watershed assessments, or the development of a monitoring strategy to determine compliance with regulatory requirements – these remain on the government's "to do" list.

This is a pattern that has repeated itself over the past three decades with respect to watershed planning processes when well documented problems receive little ongoing attention once public concern subsides. Moreover, the *Freshwater Strategy* represents a significant retreat from the proposals tabled by the government more than seven years ago – the centerpiece of which was to have been a new Water Act to establish a comprehensive and systematic approach to water resource management.

Other deficiencies of present proposals are failures to address the many issues surrounding domestic watersheds, the need to establish accountability mechanisms that will not only ensure that proper planning is carried out, but ongoing monitoring and remediation work are as well. Similarly, the Strategy steers clear of even mentioning the prospect of binding water quality standards, opting instead for non-binding "objectives" and then only for priority designated community watersheds. These also remain on the government's "to do" list, but again with few details and no precise timeline.

## HEALTH

When British Columbia suffered through a number of outbreaks of waterborne disease in the 1980s, the issue of water quality became a major public concern. Between 1985 and 1992, the government worked on developing legislation which it hoped would resolve these problems. These included enactment of the *Water Amendment Act, 1992* and promulgation of the *Safe Drinking Water Regulation* to the *Health Act* in 1992.

In 1994, the *Health Authorities Act* was brought into force devolving considerable authority from the Ministry of Health to regional health boards and community health councils. The boards and councils develop and implement health plans and deliver health services to regions (in the case of a board) or communities (in the case of a council).

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<sup>27</sup> See Auditors report, note 3, at p. 107.



The *Health Act* provides the essential legal framework for water quality protection in the province. Unfortunately there appears to be little public awareness of the important legal framework for water protection established by this legislation. The following provides an overview of its key provisions.

The *Act* creates a structure for health protection at the community level. It provides for the appointment of medical health officers (MHO) in each municipality by the local council. Each MHO has the same powers as a public health inspector. The council of a municipality is automatically the “local board of health” (s. 37). In rural areas, a health district may be established by the government which can also establish a health board, failing which, the government agent will exercise those powers. Among other responsibilities, the local board of health must have its district inspected in order to prevent health hazards.

A “health hazard” is defined to include “a condition or thing that does or is likely to . . . endanger the public health, or prevent or hinder the prevention or suppression of disease.”

The *Act* also establishes a complaint and inspection process that may be invoked under s. 56 and 57, by any person “aggrieved” by a health hazard or condition, any two inhabitant householders, or police and public health officers – any of whom can report the health hazard or condition to the board, which then “must” investigate the cause of the complaint. Boards have considerable authority to carry out investigations including the power to compel the attendance of witnesses and the giving of evidence. The *Act* also grants wide-ranging powers to the boards to deal with any health hazards their investigation may reveal (s. 59 to 63). Section 63, for example, allows a health officer to issue orders requiring owners to remediate health hazards.

A health board may also require cabinet to appoint someone to investigate the hazard. If the investigative report recommends removal or termination of the hazard, the local board or “any person aggrieved” may apply to the Supreme Court for an order for its removal or termination. In general, all “reasonable” costs and expenses incurred in terminating a health hazard are deemed to be money paid for the use and at the request of the person responsible for the health hazard (s. 75).

Where local boards or health officers issue orders, the person against whom the order is made, or any one aggrieved by it, may appeal to the Supreme Court. The *Act* in s. 110 provides for private prosecutions of violations of the *Act* or its regulations.

Regulations under the *Act* add teeth to its general provisions. A medical health officer or public health inspector has authority through s. 3 of the *Safe Drinking Water Regulation* to require notification of the public of any health hazard in water quality:

- 3(1) Where in the opinion of a medical health officer or public health inspector, the quality of water in a waterworks system is, or may become, a health hazard,
  - (a) the water purveyor must notify all users served by the waterworks system of the existing of potential health hazard, and . . .

- (d) where a risk of a waterborne disease has been identified by a medical health officer or a public health inspector, a water purveyor must take immediate action to minimize the risk to the satisfaction of a medical health officer or public health inspector.

A “water purveyor” is a person, corporation, or municipality that supplies water for domestic purposes and under the *Safe Drinking Water Regulation* must:

1. provide potable water to all users served by the waterworks system.
2. notify the medical health officer or public health inspector of any situation or condition which renders or could render the water unfit to drink.

“Potable water” means water which meets the requirements of a Schedule to the *Regulation* and is safe to drink and fit for domestic purposes without further treatment. However, the requirements of Schedule deal only with coliform levels and the Canadian Drinking Water Guidelines are not directly incorporated.

Water purveyors have certain sampling and reporting obligations and must provide test results to water users at their request or to all water users if directed by the MHO or public health inspector to do so. If those samples fail to meet required standards, subsection (6) states:

“where the water being provided fails to meet the standards for potability, the medical health officer or public health inspector must immediately notify the water purveyor of that failure, and may

- (a) require more frequent monitoring,
- (b) require the purveyor to obtain an independent report or assessment of the waterworks system with recommendations for meeting the standards, or
- (c) require the purveyor to make improvements to the waterworks system.”

The *Sanitary Regulation* sets out the duties of local boards of health and public health officials. These include the requirement that the local health authority provide its district with a wholesome supply of water, if one can be acquired at “reasonable” cost, and enables it to make “reasonable” rules for supply and pricing of water. Section 43 forbids contamination of wells or public supplies of domestic water.

Under the heading “water quality” and “drinking water strategy” the *Freshwater Strategy* describes various reporting, monitoring and guideline setting initiatives. Among future priorities is the potential for annual drinking water reporting and the development of a Well Protection Toolkit. Again the government’s agenda is lacking in timelines and specifics. Again resource constraints appear to be dictating an incremental rate of progress. For example, the setting of quality objectives for five water bodies is listed as an accomplishment of the government’s water quality program. This apparently increases the number of water bodies for which such objectives have been established to 25 bodies. At this pace it would take the government much of the next millennium to establish guidelines for the tens of thousands of water bodies that exist in the province. Admittedly



the number of significant water bodies is much smaller, but by no measure can current progress be considered adequate.

While the broad scope of the *Health Act* and its regulations embody significant water protection measures, it appears to have been rarely used to address the underlying threats to water quality in BC. This also appears to be a situation where an effective legal framework is underutilized because public health officials are under-resourced and unfamiliar with land use planning processes. In addition, very little public information exists to alert water users to the potential effectiveness of the rights and remedies provided by the *Health Act* and its regulations.

Moreover, the *Safe Drinking Water Regulation* includes only one binding water quality parameter, no routine water quality reporting requirements, and a complex and cumbersome regime for remedying problems once they are identified. The government's current distaste for regulatory initiatives probably explains why there is no mention of even tabling these issues for future action.

### 3. A PROACTIVE AGENDA TO PROTECT WATER

A comparison of present government policy concerning water management with proposals by this government from earlier this decade reveals a significant retreat from commitments to move forward with a proactive agenda to protect BC water. While significant progress has been made in certain areas – health legislation, and water export controls are noteworthy – funding cuts, and a growing distaste for environmental legislation of any kind, has derailed key legislative initiatives to establish comprehensive water and environmental protection statutes (a new *Water Act*, and the *BC Environmental Protection Act*).

Watershed planning under the *Forest Practices Code* unfortunately does not offer a significant improvement over *Land Act* community watershed reserves policy and Integrated Watershed Management Plan process developed in the 1970s. Indeed that legislation and policy was also derailed by a government policy of “sympathetic administration” offered in response to a cyclical down-turn for the forest industry.

By comparison, significant progress has been made recently in the US to strengthen the *Safe Drinking Water Act*, and this notwithstanding a Republican Congress known for its antipathy towards environmental initiatives. The cornerstones of the US approach are legally binding water quality standards and right-to-know provisions that entitle consumers to be informed about the quality of the water they drink. We believe these principles are essential to any effective regime to protect water quality.

By establishing legally enforceable water quality standards and by empowering consumers with information about the quality of our drinking water and the right to compel action when standards are breached, the trend towards deregulation and privatization can be reversed. Moreover, we believe the public opinion is fully aligned with such an initiative and will reward a government that takes such action.

While much of the legislative framework for water quality protection can be found in the *Health Act* and its regulations, there are four fundamental elements that are missing. These are:



## ENFORCEABLE WATER QUALITY STANDARDS

Current guidelines for Canadian drinking water should be adopted as legally binding water quality standards. The ineffectiveness of voluntary guidelines and non-binding objectives has been demonstrated repeatedly in a variety of public policy contexts. If the protection of drinking water is to be taken seriously, failure to do so must have consequences. To be effective, government will also need to develop compliance strategies to address situations where standards are not met.

The list of standards established under US safe drinking water legislation is very similar to those developed by the Federal-Provincial Committee on Drinking Water but with several exceptions. Two of these are particularly relevant to BC, because under the US *National Primary Drinking Water Regulations*, standards for giardia, and turbidity are established which require that water be filtered where these risks are present. We believe that a similar approach is needed in BC.

Finally, we believe that it is vital to give legislative expression to the *precautionary principle* as the guiding criterion for establishing and updating water quality standards.

## RIGHT-TO-KNOW

The *Safe Drinking Water Regulation* under the *Health Act*, provides water users with certain rights to be informed about the quality of water we drink. But this right is entirely *ad hoc* and will often depend upon the initiative of water users and the discretion of local health officials. While the *Freshwater Strategy* identifies annual drinking water reports as one of its three year priorities, the commitment is vague and like so many others, entirely vulnerable to funding, policy and other constraints.

Again, US safe drinking water legislation provides a useful prototype. Pursuant to amendments that were made in 1996, "consumer confidence reports" became a legal requirement. Under US law, water system customers must be told annually about what contaminants, both regulated and unregulated, are in their drinking water. They have the right to be notified by mail and by publication in local papers. We believe that the same right should be provided BC water users. Finding out about the quality of our drinking water should not require hiring a lawyer to sort out the complexities of *Health Act* regulations, neither should it depend upon the discretion of public officials.

Effective monitoring regimes are an obvious and necessary complement to such reporting requirements, the costs of which should ideally be incorporated as part of explicit water charges.



## THE RIGHT TO COMPEL INVESTIGATION AND REMEDIAL ACTION

Under the provisions the *Health Act*, any person “aggrieved” by a health hazard or condition, or any two householders can report the hazard or condition to the local health board, which must then investigate the cause of the complaint. We believe this approach is sound but should be strengthened with mandatory reporting provisions, and the right for complainants to have the actions of local officials reviewed.

The lack of resources for local health officials has significantly limited the effectiveness of current *Health Act* regulations. We believe that providing better public information about local water quality and the right of users to have problems addressed will compel governments to commit the resources needed to effectively administer safe drinking water programs.

## POLLUTERS PAY

Polluter pays is one of the first principles of sound environmental policy. The principles of fairness and economic efficiency both strongly support the need to fix those responsible for degrading water quality with the responsibility of paying for the damages their actions cause. Unless liability is allocated to those causing damage to water quality, we will continue to subsidize the costs of unsustainable economic development at the expense of public natural and fiscal resources.

Current provisions of the *Health Act* allow the recovery of certain remediation costs where water quality has been adversely affected, but the process for doing so is cumbersome and often will involve cabinet approval. It should not require the intervention of cabinet to recover damages from those who have damaged this vital public resource.



## 4. CONCLUSIONS

There is obviously a great deal more that might have been said about the complex challenges of managing BC water resources on a sustainable basis. Rather than try to canvass the full diversity of these issues, we have decided to focus on what we consider to be the single most important initiative the province can take to protect the safety of BC's drinking water – the enactment of a Safe Drinking Water Act.

At a time when the principles of deregulation, privatization, and government downsizing have captured government agendas across the country, events like Walkerton serve as important reminders of human costs of such policies. While the loss of lives in Walkerton could not be more tragic, over the long term the impacts of indifferent environmental policies and law will be far more widespread and devastating, even though less immediate. We can avoid that outcome, but only if the governments we elect are willing to establish the legal measures essential to protecting health, our communities, and the environment.

On behalf of the West Coast Environmental Law Association and the British Columbia Environment Network's Water Caucus.

Steven Shrybman  
Executive Director  
West Coast Environmental Law Association

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