



A Review of Drinking Water Legislation in British Columbia

South East Kelowna Irrigation District
Internal Report
Toby Pike

February 8, 2002.

Table of Contents

Introduction.....	3
Current roles and responsibilities	4
Water Purveyors.....	4
Local Health Authorities.....	5
Provincial Government.....	6
The <i>Drinking Water Protection Act</i> and source water protection	7
Drinking Water Coordinators	9
Drinking Water Officers	10
Water System Assessment Plans	12
Drinking Water Protection Plans	13
Local Government Authority.....	15
Implementation	15
Bibliography	17

Introduction

There is no question that the safety of the public water supply in British Columbia has been under scrutiny in recent years. The tragic events of Walkerton, Ontario seriously undermined public trust in the water supply and initiated reviews of the water regulations in provincial capitals across Canada.

B.C. is no exception. Provincial authority governing water resources consists of a matrix of ministries and regulations. There is no lead agency responsible for potable water from source to tap in the province. A number of ministries and agencies with overlapping jurisdictions and mandates regulate the local water purveyor. Current legislation and provincial government responsibility for drinking water is piecemeal and haphazard and the time has come for thoughtful review of public policy and the regulations pertaining to the protection and safety of the public water supply in B.C.

In the wake of a highly critical report on source water protection by the Auditor General in 1999 and the more recent Walkerton Tragedy in May of 2000, the former Minister of Environment, Lands and Parks presented the *Drinking Water Protection Act* to the legislature in the spring of 2001. The act received third reading in the legislature before the spring election, at which time the newly elected government chose to subject the act to a thorough review by an impartial panel of experts. The Drinking Water Review Panel issued an interim report on December 14, 2001 and will be producing a final report in February of 2002.

The following provides a review of the current status of water regulation in the province and a critique of the *Drinking Water Protection Act* from a local government perspective. The ultimate responsibility for potable water and public health has, and will continue to be, the local water authority. It is only reasonable to expect that effective and responsive legislation will not only regulate, but also enable the local water authority to fulfill that mandate.

Current roles and responsibilities

No fewer than ten provincial ministries and agencies have some level of authority over water in British Columbia. They do so by authority granted by 15 separate pieces of legislation¹. The provision of safe drinking water is a complex process. It involves the development of water sources, treatment facilities, distribution systems and on-going

Legislation Affecting B.C. Water

1. *Drainage, Ditch and Dyke Act*
2. *Environment Management Act*
3. *Environmental Assessment Act*
4. *Forest Land Reserve Act*
5. *Private Land Forest Practices Regulation*
6. *Forest Practices Code*
 - *Range Practices Regulation*
 - *Operational Planning Regulation*
 - *Forest Road Regulation*
 - *Timber Harvesting Practices Regulation*
 - *Silviculture Practices Regulation*
7. *Health Act*
 - *Sanitary Regulations*
 - *Sewage Disposal Regulation*
 - *Safe Drinking Water Regulation*
8. *Local Government Act*
9. *Mines Act*
 - *Mineral Exploration Code*
10. *Range Act*
11. *Waste Management Act*
12. *Water Act*
13. *Water Protection Act*
14. *Water Utility Act*
15. *Drinking Water Protection Act*

operations. Planning for growth and renewal of infrastructure is required to insure that future needs and evolving standards are met. Changes to water quality regulations can have a significant financial impact on water utilities. Enhanced water treatment processes can be very expensive and rate structures have to reflect the community's ability to pay.

Water Purveyors

Local water purveyors have the ultimate responsibility for providing safe drinking water to the end user. This is a statutory requirement of the Safe Drinking Water Regulation, which falls under the provincial Health Act.

Water systems are generally classified according to the number of connections they serve. These classifications include two to 14 connections, 15 to 300 connections and over 300 connections. There are over 3,000 water systems in the province. About 200 of these are large systems serving over 300 connections, 873 serve 15 to 300 connections and 1,934 serve between two and 14 connections. More than half the population of the

¹ Sidebar source: Ministry of Health Planning. *Provincial Health Officer's Annual Report 2000. Drinking Water Quality in British Columbia: The Public Health Perspective*. Victoria. Queen's Printer. 2001. page 13.

province get their water from two systems: the Greater Vancouver Regional District system, serving two million people and the Capital Regional District, serving a population of over 300,000.

The breakdown of water systems by type of administration is difficult to determine. The majority of small systems serving two to 14 connections would be either private systems or community water systems operating under the control and regulations of the Ministry of Water, Land and Air Protection. Municipalities and improvement districts administer most of the mid-size and larger water systems. There are about 277 improvement districts providing water services in the province.

Local Health Authorities

Local Health Authorities have the responsibility for monitoring public health and protecting the public from the spread of communicable disease. In this capacity they independently monitor local public and private water supplies and require monthly water quality reporting from water utilities.

The number and boundaries of the health regions has recently undergone considerable restructuring over the past few months, but the offices governing water and public health remain the same.

Medical Health Officers are medical doctors trained in public health. They have the legislative authority under the Health Act to protect public health. These are the people who order water utilities to issue boil water advisories if a water supply is suspected of causing a public health threat.

Environmental Health Officers, or Health Inspectors have the authority under the Health Act to carry out the requirement of the Safe Drinking Water Regulation. These are the people who inspect and monitor water systems and issue operating permits for all public water systems.

Public Health Engineers are professional engineers who issue permits for construction of public waterworks, ensure source water meets health standards and identify risks to public health in existing water systems.

Provincial Government

The provincial government has the overall legal responsibility for developing the legislation that regulates drinking water in the province.

The Ministries of Health Services and Health Planning determine and establish the public health standards that apply to drinking water. The ministries encourage consistency throughout the province, while recognizing the autonomy of the local health officials. The primary legislation for these ministries pertaining to public health and drinking water is the Safe Drinking Water Regulation under the *Health Act*.

The Ministry of Water, Lands and Air Protection have the primary role of protecting source water quality in the province. The key legislative tool the ministry uses to prevent pollution of drinking water is the *Waste Management Act*. WLAP has taken the lead role in coordinating the government's action on drinking water. Since the Auditor General's highly critical report in 1999, WLAP has overseen the development of the government's Drinking Water Protection Plan, which has led to the development of the *Drinking Water Protection Act*.

Briefly, other provincial ministries have responsibility for other regulatory functions pertaining to drinking water quality and regulation. The Ministry of Sustainable Resources looks after land use issues in watersheds, the issuing of water licenses and oversees community watersheds as defined under the *Forest Practices Code*. The Ministry of Forests has certain obligations under the *Forest Practices Code* as well. These include requirements for operational planning, as well as forest and range management, with a view to considering the protection of water sources. The Ministry of Community, Aboriginal and Women's Services looks after legislation pertaining to the administration of local governments and authorities under the *Local Government Act*. The Ministry of Agriculture is responsible for safe farm practices, the Ministry of Energy and

Mines oversees responsible underground development and the Ministry of Transportation has guidelines to minimize pollution of waterways during highway construction and maintenance.

The new *Drinking Water Protection Act* is an ambitious piece of legislation intended to elevate the importance of drinking water among the many affected and potentially conflicting interests in the province.

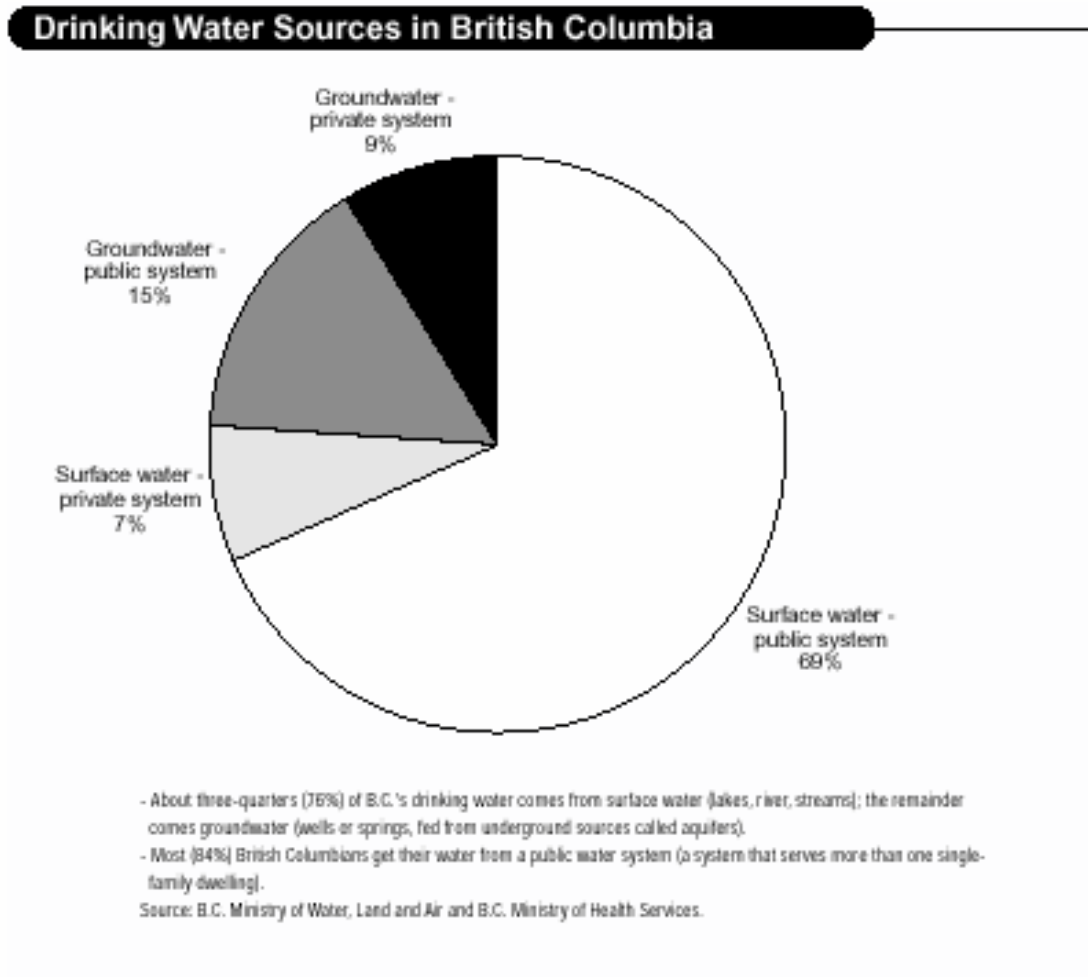
The *Drinking Water Protection Act* and source water protection

The *Drinking Water Protection Act* would appear to be a balanced piece of enabling legislation that touches on most of the key areas of concern to the water purveyors in B.C. As such, it is an inherently complex piece of legislation with over fifty amendments to other water related acts and regulations. It is beyond the scope of this paper to provide a thorough review of the entire act. Rather, the following provides one view of the fundamental issues related to providing the public with an affordable supply of potable water.

As the Auditor General stated in his report in 1999, water quality is inextricably linked to land use. Rainfall can pick up contaminants from the atmosphere, from natural sources, and from a whole range of human land uses before entering streams and lakes or seeping underground into aquifers. Water source management is not integrated in B.C. As already noted, no less than ten ministries and agencies in this province have interests and responsibilities for the regulation and management of water in the province, often at cross-purposes.

Currently, outside the major urban centres of Victoria and the lower mainland², the impact of land use proposals on drinking water quality is typically a secondary consideration for those making land use decisions. There is no formal process to refer land use proposals to local water purveyors for comment. When referrals are forwarded, a

² The Capital Regional District and the GVRD have closed watersheds with restricted land use.



³water supplier's comments are only given equal weight with comments from local interest groups, clubs and other non-provincial agencies. Yet, it is the same water supplier that is given the responsibility and is held accountable for providing potable water to their customers. There must be a procedure developed in the act that would require land use applications to be referred to local water purveyors for review, comment and approval.

The *Drinking Water Protection Act* must clearly define the priority of source water protection in relation to land use that compromises water quality. Any economic impact arising from restricting land use in the interests of water quality must be measured against

³ Source of graphic: Ministry of Health Planning. *Provincial Health Officer's Annual Report 2000. Drinking Water Quality in British Columbia: The Public Health Perspective*. Victoria. Queen's Printer. 2001. page 38.

the added downstream costs of treating poor quality water and the long-term environmental impact to the watershed in general. Clearly, without the means to protect our water supply in the watersheds, water quality will suffer. If water quality and public health are truly a government priority, then the *Drinking Water Protection Act* will strike a balance between the regulation of water suppliers and the ability of suppliers to protect water sources.

The primary focus of the DWPA is on drinking water from a public health perspective. As referenced above, it includes amendments to a number of existing acts. As these amendments are brought into force through regulation, they will become the responsibility of the ministry responsible for administering the specific act. This approach to public health protection is piecemeal and will unlikely result in meaningful actions taken by affected ministries, which currently have difficulty fulfilling existing mandates.

As the Attorney General reported in 1999, the time has come to appoint a lead agency with the responsibility for looking after the province's drinking water resources. To that end the DWPA does present a reasonable base from which effective legislation can be forged to promote the interests of drinking water and lay the legislative foundation for a lead agency.

The proposed offices of Drinking Water Coordinators and Drinking Water Officers represent a logical step in this process.

Drinking Water Coordinators

The *Drinking Water Protection Act* calls for the appointment of two Drinking Water Coordinators, one each from of the Ministries of Water Land and Air Protection and Health Services. It will be the responsibility of the appointed Drinking Water Coordinators, in consultation with the Provincial Health Officer, to determine what guidelines will be carried out and what directives will be enforced. The determination of drinking water regulations and standards will flow from this office.

The DWC's are required to present the Minister of Water, Lands and Air Protection with an annual report that must be forwarded to the legislative assembly or, if the house is not in session, presented to the clerk of the legislative assembly. The minister has the discretion to establish an advisory committee to provide advice and recommendations in regard to drinking water matters referred to the committee by the minister.

Drinking Water Coordinators will have a tremendous amount of power and responsibility under the act. To effectively fulfill this mandate, Drinking Water Coordinators will have to ensure all affected ministries recognize and assign drinking water and public health the priority granted by the DWPA.

The most contentious issues that will arise out of the DWPA, in terms of impacts on other crown jurisdictions, will be land use conflicts in community watersheds. Drinking Water Coordinators will only be effective if they have the authority in law, are strong advocates and can motivate all affected ministries of the importance of the DWPA.

Clearly, the appointment of qualified Drinking Water Coordinators will be key in providing effective results. It is questionable whether this type of hierarchy will be able to provide strong leadership and advocacy to advance drinking water issues. The appointed officers could advance directives on the basis of what is good for their ministries and not necessarily good for drinking water. This could lead to a kind of regulation by negotiation and have less than optimal results.

Drinking Water Officers

The *Drinking Water Protection Act* calls for the creation of the office of Drinking Water Officer in each of the provincial health regions. It is the duty of the DWO's to carry out the directives of the Drinking Water Coordinators. The establishment of the office of Drinking Water Officer for each health region in the province is a positive step⁴. The effectiveness of the office will depend on a number of issues. The first issue is one of

⁴ The recent reorganization of the provincial health regions makes it unclear how the DWO's would be appointed if the act is to proceed. Presumably, each Medical Health Officer in the province will appoint one Drinking Water Officer.

resources. Each health region covers a large area of the province and it is questionable whether one position can effectively fulfill the mandate.

Much will depend on the resources afforded the position and the specifics of the delegation authority specified in the act. If Drinking Water Officers do not have adequate resources or are unable to delegate authority, they will be reduced to collecting and reviewing water quality data from the numerous water systems in their region. This would effectively be a continuation of the status quo and would not be an improvement on the current system.

The health regions are too large for one person to effectively deal with the many issues faced by each purveyor in the region. Without adequate resources, the DWO will be unable to support and assist local water suppliers. In addition, sections of the *Health Act* and *Waste Management Act* have been amended so that certain events under those acts require reporting to the Drinking Water Officer, which will further burden the resources of the office.

Ideally, where appropriate, the DWO will be able to delegate authority to the local water supplier to address threats within the watershed. This could be in the form of land use application referrals, where the comments of the local water supplier were endorsed by the DWO, or where authority were delegated by the DWO to the water supplier as provided for in the act. From a practical point of view this could mean closing access to sensitive watershed areas or prescribing rehabilitation of damage due to poor land use practices.

Finally, the act provides that the Medical Health Officer has the discretion to take on the role of the Drinking Water Officer. In fact, in the absence of an appointment, the Medical Health Officer is the DWO by default. This option should be taken out of the act. The Medical Health Officer should not have the authority to assume the Drinking Water Officer position. As noted, the appointment of one full-time DWO will likely be insufficient to properly fulfill the duties of the position; the assumption of these duties by the Medical Health Officer would be inadequate and is not acceptable.

Water System Assessment Plans

Part 3 of the *Drinking Water Protection Act* outlines the procedure for the development of a Water System Assessment Plan. The purpose of the assessment is to identify any threats to water quality and determine the measures that may “be reasonably taken” to address these threats.

The need for the assessment of water systems from source through to the end user could be a useful tool in identifying threats to the safety of the water supply. What are needed, however, are clearly defined guidelines detailing what constitutes a threat to a water system. This would assist water suppliers to quickly and economically identify potential problems. The legislation as it is now is too vague and open to interpretation.

The responsibility for remediation of threats to the water system under this part of the act needs to be addressed. No one would argue that threats to the safety of drinking water must be identified and dealt with to protect public health. Under the proposed procedure (s.18-22), however, the water supplier has to identify, inventory and assess “the drinking water source for the water supply system, including land use and other activities and conditions that may affect that source.” (S.18 (2)(a)). This approach does not consider or take into account the fact that the water supplier has had little, if any, input, authority or consultation in the land use in the watershed. Now, the DWPA requires that same water supplier assess the threats that various stakeholders in the watershed are posing to drinking water.

Once the water supplier has identified the threats to the water supply, the Drinking Water Officer has the authority to order the water supplier to develop a response plan detailing how the water supplier will respond to the identified threat. Clearly, this will be difficult for the water supplier to do because it currently has no statutory authority over land use in the watershed.

There needs to be a fundamental shift in a number of areas in the approach of the DWPA in dealing with land use in the watershed:

1. The interests of drinking water quality must be given priority in land use decision-making in the watershed;
2. The funding mechanism for watershed assessments must be clearly defined and the resources should come from all the stakeholders in the watershed, not just the water supplier;
3. Future land use applications must undergo a thorough review and address the impacts on drinking water quality;
4. Existing land uses tenures that are found to adversely affect drinking water quality must either be stopped or a fee levied on the activity to offset water treatment costs;
5. Resources must be provided to the water supplier to fund the watershed portion of the water system assessment.

The other aspects of the water system assessment requirement make sense. The water distribution system, water treatment and system operations are all under the control of the water supplier. Monitoring water quality and identifying threats to public safety are within the means and authority of the water supplier.

The unknown at this point is what impact changes to the Safe Drinking Water Regulation may have on water suppliers. If the regulations are changed significantly, then many water suppliers will have to provide significant investment in upgrading water treatment systems. If this were the case, clearly, the province would be obligated to provide funding for these upgrades.

Drinking Water Protection Plans

Part 5 of the DWPA deals with a land use planning process called a Drinking Water Protection Plan. The wording of this part of the act is somewhat vague and open to interpretation. The main purpose of a drinking Water Protection Plan would be a higher-

level land use plan encompassing one or more watersheds. The minister is responsible for determining all aspects of the plan including:

32 (1) The minister may, by order made after consultation with the environment minister, establish the process by which a proposed drinking water protection plan for a designated area is to be developed.

(2) Without limiting subsection (1), an order under that subsection may

(a) establish who is to be responsible for preparing the proposed plan,

(b) establish the terms of reference for the plan, or authorize the preparation of some or all of the terms of reference subject to approval by the minister, and

(c) require the establishment of a technical advisory committee in relation to development of the plan.

(3) The terms of reference for a proposed drinking water protection plan must include

(a) the purpose of the plan,

(b) the issues to be addressed in the plan,

(c) a process for public and stakeholder consultation, and

(d) a time limit for completing the plan.⁵

The purpose of a Drinking Water Protection Plan would be to provide a long-range land use plan for the watershed(s) that took into account water quality and quantity issues. It would likely be a complex process, possibly on the level of a Land Resource Management Plan.

The DWPA currently provides that the minister must consider whether to order a plan if requested by a Drinking Water Officer, a local authority or a water supplier. A more responsive and balanced approach would be for the minister to be required to order a plan

⁵ Source: British Columbia. *Drinking Water Protection Act*. Victoria. Queen's Printer. 2001. Section 32.

if any two of the Drinking Water Officer, Local Authority or Water Supplier request it. Additionally, the minister should provide some or all of the cost of preparing the Drinking Water Protection Plan.

The act should also provide for punitive charges to be levied against land use tenures that are detrimental to drinking water quality. These monies would be payable to a fund to be used to compensate local water suppliers for water treatment costs.

Local Government Authority

As noted earlier, a large number of water suppliers in the province are incorporated as improvement districts. Section 38 of the DWPA provides for local government to request the assistance of the Lieutenant Governor in Council for implementing all or part of a drinking water protection plan. Improvements districts are defined as Local Authorities in Section 1 of the act and the powers granted by this provision should also apply to improvement districts. Section 38 should be amended to include “Local Authority” as defined in Section 1.

The failure to extend the powers granted under Section 38 to improvement districts would result in a considerable number (277) of water purveyors being unable to enforce the provisions of a Drinking Water Protection Plan.

Implementation

The successful implementation of the Drinking Water Protection Act will depend on two key areas.

The first is resources. Without adequate resources Drinking Water Officers will become little more than collectors of water quality monitoring data and have no real impact on protecting the drinking water supply. The resources required include funding, the authority to delegate and a sound legislative foundation.

The second critical issue is the getting all affected ministries to buy-in to the authority of the Drinking Water Officers. In the absence of a single lead agency to look after the

drinking water resources in the province, the successful implementation of the DWPA will rely on all affected ministries buying in to the program. Without this buy-in, very little progress will be possible, particularly in land use and source water protection issues.

It is important that changes to drinking water regulations and legislation be designed to strike a balance among all stakeholders who affect water quality in the province. This approach will ensure water suppliers will be able to provide the public with safe, affordable, drinking water.

Bibliography

British Columbia. *Drinking Water Protection Act*. Victoria. Queen's Printer. 2001.

British Columbia. *Safe Drinking Water Regulation*. Victoria. Queen's Printer. 1992.

British Columbia. Office of the Auditor General. *Protecting Drinking Water Sources Report 5*. Victoria. Queen's Printer. 1999.

Ministry of Health Planning. *Provincial Health Officer's Annual Report 2000. Drinking Water Quality in British Columbia: The Public Health Perspective*. Victoria. Queen's Printer. 2001.

Ministry of Water, Lands and Air Protection. *Drinking Water review Panel Interim Report*. Fraser Basin Council. December 14, 2001.