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WHAT BC NEEDS IN SAFE DRINKING WATER LEGISLATION

**PROPOSED BILL 20/2001 – SUBMISSION TO
THE DRINKING WATER REVIEW PANEL ON
THE BC *DRINKING WATER PROTECTION ACT***



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PROPOSED BILL 20/2001 — WEST COAST ENVIRONMENTAL LAW'S SUBMISSION TO DRINKING WATER REVIEW PANEL ON BC **DRINKING WATER PROTECTION ACT**

The establishment of a law to protect drinking water is long overdue. The top three priorities for BC's proposed new drinking water protection legislation are:

1. **Legislated standards for tap and source water.** BC's current standards are minimal and should be improved. There should be a legislated required core set of standards that must be tested for at regular intervals.
2. **Protection of water sources and watersheds.** Once damage is done a watershed, the prevention opportunities are lost. Costs escalate for dealing with water contamination situations after the fact.
3. **Community Right to Know provisions.** The results from the water supplier's regular sampling and analysis of drinking water should be made available to the public both in electronic form at official Ministry websites and in print form at main libraries and other public offices.

How well does Bill 20, the *Drinking Water Protection Act*, together with the existing applicable regulation, the *Safe Drinking Water Regulation* under the *BC Health Act*, measure up to these three top priorities?

In West Coast's opinion, while the new law contains many improvements, it needs to be strengthened in relation to source protection, standards and community right to know.

In November 2001, the BC Provincial Health Officer (PHO) issued his annual report titled *Drinking Water Quality in British Columbia: The Public Health Perspective*.

Excerpts from this report are included with each section of this West Coast brief.

1. SOURCE PROTECTION

WHAT THE PROVINCIAL HEALTH OFFICER SAID ABOUT SOURCE PROTECTION

The PHO's first recommendation was to ensure that there is legislative authority (such as the *Drinking Water Protection Act*) that gives priority to the safety of drinking water and that covers management of the system from source to tap.



“The first way to keep contamination out of our water supply is to do our best to keep contamination out of the source. In general, water that is of good quality at the start will not require vast amounts of expensive treatments to make it potable to the consumer at the other end.”

The PHO agreed with many of the recommendations from the 1999 Auditor General’s report, particularly the need to improve the protection given to drinking water sources and the need to develop water quality objectives for all community watersheds as a matter of priority.

Rather than banning all activities in watersheds, the PHO stated that activities that feed drinking water supplies should be done carefully and with the protection of the drinking water source quality as one of its primary concerns. “Logging practices — and any other activity in watersheds — must be done so as not to increase the run-off and turbidity in the water.”

The PHO also stated that there must be greater force in the regulations to ensure that when forestry or mining companies or other groups use watershed land, the drinking water source is protected. If companies or groups degrade the source water quality, they must bear the responsibility and cost of returning the water to original state.

WEST COAST’S RECOMMENDATIONS ON HOW THE LAW CAN BETTER PROTECT DRINKING WATER AT SOURCE:

1 – GIVE PRIORITY FOR DRINKING WATER USES IN WATERSHEDS

The need for appropriate water protection measures should be applied to ensure that water sources, both surface and ground should be kept “clean”, in order to facilitate water supplies to meet the standards set for water quality. The proposed new law does not adequately address pressures on water quality from point sources such as sewage and industry “end-of-pipe” or diffuse non-point sources such as road runoff and agricultural impacts. The law should be strengthened to improve watershed management.

A good model to follow is the New Brunswick Watershed Protection Program designed to safeguard the quality of the water supply within municipal watersheds. The program is based on two integrated components: *Protected Areas*, and *Permitted Activities within those protected areas*.

In New Brunswick, each municipal watershed will now be designated as a Protected Area that encompasses three zones. *Zone A* consists of all lakes, rivers and streams (or watercourses) in the watershed. *Zone B* is a setback zone or buffer zone that comprises the entire area located within 75 m of the banks of the watercourses. *Zone C* defines the land area situated *outside* the setback zone but *inside* the watershed boundary.

In 2001, the New Brunswick government passed the *Watershed Protected Area Designation Order* as part of its ongoing Watershed Protection Program. The Regulation defines what Permitted Activities may take place within each zone of a municipal watershed. Some land- and water-use activities are allowed in all three watershed zones, or in one or more of the zones, under certain conditions. Several activities are prohibited from occurring anywhere in the watershed.

This type of source protection program should be adopted in BC. There should be a presumption against other land-use activities in domestic use watersheds unless assessments demonstrate that the activities can be carried out without risk to water sources. Rather than the regulators proving that other uses could damage the water supplies, the proponent would have the onus to prove that their activities would not cause such damage.

In many areas of BC, Integrated Watershed Management Plans have been prepared after extensive community consultation. Where available, these Plans should be considered as models for source protection.

2 – ESTABLISH CLEAR LIABILITY RULES FOR THOSE WHO HARM DRINKING WATER

It is not appropriate to shift responsibility away from those who carry out potentially contaminating activities on to water suppliers for ensuring source protection (e.g., costs of assessments etc.), because often the suppliers have no control over potentially harmful activities such as logging. The law should emphasize water users' "right to clean water", and clarify the responsibility of other land users and the Province not to infringe this right.

Clear liability rules for diminishment of drinking water quality or quantity are an essential part of source protection, and should be included in this Act.

West Coast Recommendation 1: The Drinking Water Protection Act should be amended to include a Watershed Protection Program listing domestic drinking water supply watersheds, establishing certain specified areas around watersheds as Protected Areas, such as:

- **Zone A** consists of all lakes, rivers and streams (or watercourses) in the watershed;
- **Zone B** is a setback zone or buffer zone that comprises the entire area located within 75m of the banks of the watercourses;
- **Zone C** defines the land area situated *outside* the setback zone but *inside* the watershed boundary;



and listing Permitted Activities within those protected areas. Unless specifically permitted, any other activities within those boundaries would be prohibited.

West Coast Recommendation 2: The proponent of any activity in a watershed reserve other than domestic water supply would have the onus to prove that their activities would not cause damage to drinking water.

West Coast Recommendation 3: The Act requires a “Purposes” section which lists “Protection of water from source through to reintroduction into the water system” as one purpose.

West Coast Recommendation 4: The Act requires clear liability provisions for those who diminish drinking water quality or flow.

2. STRONG PROVINCIAL DRINKING WATER STANDARDS

WHAT THE PROVINCIAL HEALTH OFFICER SAID ABOUT STANDARDS

“A workable compromise can be reached in which some of the *Guidelines for Canadian Drinking Water Quality* parameters are enacted as provincial standards, and some are left to the discretion of the local medical health officers. Some new standards should be adopted, such as a test specific to *E. Coli* in addition to the total coliform and fecal coliform standards. Water systems should have an initial test for all relevant Guideline parameters at least once, and then focus subsequent testing only on those parameters that exceed Guideline values and are of health concern.

The PHO also recommended that the Ministry of Health Services, in conjunction with the Ministry of Water, Land and Air Protection and other ministries, should form a panel with representation from scientists, regulators, environmental groups, water suppliers, and public health officials to review the pros and cons on legislating standards and advise which parameters to legislate. The panel should conduct research into other jurisdictions, such as Alberta, Quebec, Ontario, and Nova Scotia, to find where they are hindered and where having regulated drinking water standards helps them improve water quality.

WEST COAST’S RECOMMENDATIONS ON HOW THE LAW CAN INCORPORATE STANDARDS FOR DRINKING WATER PROTECTION:

The primary responsibility for protecting quality of drinking water sources should lie with the Province, and the right to clean water should include strong provincial drinking water quality standards.

Currently in BC, regulation of drinking water standards is limited to two primary standards; the requirement that all surface water be disinfected and the requirement that all drinking water meets legally enforceable performance limits for total coliform

and faecal coliform bacteria. In BC, the *Guidelines for Canadian Drinking Water Quality* (GCDWQ) cannot be legally enforced and are applied at the discretion of local governments and regional health authorities.

The BC *Drinking Water Protection Act* proposes to add just one new drinking water standard for E-Coli. The Act proposes that specific standards for drinking water quality will be established and enforced at a local level. The *Safe Drinking Water Regulation* already allows the Ministry of Health (MoH) to set site-specific standards but this power is rarely used. Given that the current authority for MoH to establish site-specific standards is under-utilized, we do not understand how this proposal will alter or improve the current situation.

The Plan does not adopt the GCDWQ standards for water quality. According to provincial Ministry of Health officials, the GCDWQ standards would not be appropriate for provincial standards because all of those substances do not pose health risks and legislating all of them would put an undue burden on local water purveyors.

However, some MOH officials have unofficially acknowledged that substances in water such as nitrates, arsenic, lead and turbidity may lead to health problems and should be subject to provincial standards. Moreover, unnecessary costs can be avoided by having provincial standards with the frequency of testing dependant on the results of assessments and previous tests.

The other Ministry involved in safe drinking water, the Ministry of Water, Land and Air Protection (MWLAP), supports a wider range of provincially applicable drinking water standards, and has recommended establishing those standards by regulation, and amending the Act to allow for the establishment of provincially applicable tap water standards. See MWLAP Staff Submission to Drinking Water Review Panel, which states:

“The existence and application of water quality standards and associated testing and reporting is important in garnering public confidence in our water supplies. Most provinces have adopted these guidelines [the CDQG] as provincial standards in regulations and there is an expectation from many stakeholders that BC should as well.”

Other jurisdictions provide stronger regulations for drinking water, through the incorporation of more standards, providing more security to and protection for the public:

- in Alberta, Nova Scotia and Quebec, all the federal GCDWQ are enforced under provincial legislation;
- the US has 79 Primary Drinking Water Standards developed and enforced by the Environmental Protection Agency;



- in Ontario, a new safe drinking water regulation was passed in 2000, requiring drinking water to meet a number of provincial standards based on the Canadian Guidelines; and
- the European Union has much stronger legislation to protect drinking water.

A comparison of standards for drinking water quality from the US Environmental Protection Agency, European Union, the World health organization, Ontario and BC is attached as Appendix 1 to this Brief. The chart illustrates that BC's standards are lower than many comparable versions used by other provinces, countries and world experts.

There is a need for expert review into the choice of water quality parameters and water treatment to be prescribed by regulation in BC. For improved public health and environmental protection, more parameters should be mandated as legally binding drinking water quality standards in BC.

West Coast Recommendation 5: The Province should adopt a broader range of province wide tap water standards. Local standards should be permitted to supplement or add to province wide standards. The Act should be amended to allow for the establishment of provincially applicable tap water standards.

West Coast Recommendation 6: The province should establish an expert panel to determine which of the *Canadian Drinking Water Quality Guidelines* should be mandated as legally binding standards in BC.

West Coast Recommendation 7: At a minimum, each water system should be tested at least once for all the national Guidelines.

3. COMMUNITY RIGHT TO KNOW

What the Provincial health Officer Said About Community Right to Know

“The public has the right to know the results of monitoring their water supply. Dissemination of this information, a requirement for true public accountability for water management, has become the common practice in other jurisdictions. It is already being made available by some of the larger suppliers and health regions in BC (See Capital Region, Greater Vancouver and Fraser Valley web sites — Appendix B). The Safe Drinking Water Regulation requires public notification of test results on the regulated microbiological contaminants and of other monitoring results. Some water purveyors do this, however, only on a specific request by a member of the general public, if for example a citizen happens to call and ask for the results. Publicly available reports produced from this information would improve accountability.”

WEST COAST'S RECOMMENDATIONS ON HOW THE LAW SHOULD BE IMPROVED FOR COMMUNITY RIGHT TO KNOW:

Under the EU Directive on drinking water quality, consumers are to be promptly informed and given the necessary advice when the water constitutes potential danger/harm to human health. In contrast, under the proposed BC system, there is a lack of public accountability. The lack of prescribed reporting procedures and timeframes, particularly regarding a water supplier's failure to meet target standards, is a weakness of this legislation.

Members of the public should be able to access information regarding Drinking Water quality from their supplier. Sources could include:

- *Water Supplier's Public Record:* Records could be accessed at any of the water supplier's offices. Staff would be available to explain the results of the tests and advise the public what is being done to rectify failures. Members of the public should be entitled to a free copy of the record for the area in which they live. Alternatively, they can write to the water purveyor for details.
- *Local Authority:* Water suppliers should be obliged to provide local authorities information about the quality of water supply in their areas.

The US *Safe Drinking Water Act* requires mandatory annual reports by water suppliers to the consumers about the water they provide. BC deserves the same level of public information.

A critical part of safe drinking water protection is the community's right to know of the state of their water, and the ability to take action to compel authorities to act to protect water quality. The public should be regularly supplied with the results of chemical, physical, and microbiological monitoring of their drinking water supply and with an interpretation of the health significance of these results, with the assistance of the medical health officer **as well as** regional information on water quality and water information on what to do during boil-water advisories.

West Coast Recommendation 8: Include community right to know provisions in the *Drinking Water Protection Act*. All drinking water assessments, protection plans, and orders issued by the Drinking Water officers should be publicly available. Information on water sources and water flows should also be part of the public record. The central publicly accessible database should include the results from all drinking water systems in BC, including tracking trends across time and across regions.



APPENDIX 1: COMPARISON OF DRINKING WATER QUALITY STANDARDS — BC, ONTARIO, EUROPEAN UNION, WORLD HEALTH ORGANIZATION, US ENVIRONMENTAL PROTECTION AGENCY

This comparative chart was prepared by researcher Gemma Dunn, a water quality expert from the UK. West Coast is very grateful for Gemma's assistance.

The table compares the drinking water quality standards set out in:

- * British Columbia's Health Act Safe Drinking Water Regulation — October 1992
- * Ontario' Water Resources Act Drinking Water Protection — Aug 2000
- * United States Environmental Protection Agency (US EPA) Drinking Water Standards and Health Advisories — Summer 2000
- * European Union (EU) Council Directive on the Quality of Water Intended for Human Consumption (98/83/EC) — 1998
- * World Health Organization (WHO) Guidelines for Drinking Water Quality
- * United Kingdom (UK) Drinking Water Quality Standards

Using the parameters listed in the BC Health Act, plus some additional parameters listed in the WHO guidelines, these parameters were divided into three basic categories; bacteria, chemical and pesticides. Where applicable the relative standard from each region was then listed in the table. All figures used are in mg/l.

BC and Ontario's standards virtually mirror one other throughout each of the three categories. Likewise, there are many similarities between the standards set by the US and those used in BC and Ontario.

When comparing BC's standards with those recommended by the WHO, it is evident that on the whole BC's standards are higher, i.e., less stringent. Generally speaking, these softer standards occur across the board in each of the three parameter categories listed in the table. There is consensus with some standards (e.g., Fluoride, Chloramines & Mercury) and in some cases, BC has standards which are more stringent than the WHO guidelines (e.g., Nitrate, Vinyl Chloride & Aldicarb). However, on the whole, BC's standards are much more lenient than those recommended by the WHO to achieve safe drinking water. (Compliance with drinking-water quality standards, based on [the WHO's] guidelines, should provide assurance that the supply is safe). Furthermore, WHO lists standards for significantly more parameters than are included in the BC Health Act.

Since European (including the UK) standards for drinking water quality closely follow those set by the World Health Organization, the findings were similar, in that European drinking water quality standards are more stringent than those used in BC.

It is also worth noting that, with the exception of British Columbia and the WHO guidelines, the standards listed from all the jurisdictions (i.e., Europe, UK, United States and Ontario) are enforced. Aside from total coliforms and E.coli standards, all the BC standards listed in the Health Act, are guideline values only and not enforceable. Although Ontario's standards virtually mirror those of British Columbia, Ontario's standards are enforced.

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COMPARATIVE STUDY OF WATER QUALITY STANDARDS

PARAMETER		STANDARDS					
		BC	ON	US EPA	EU	WHO	UK
Bacteria	E.coli	< 1 per 100 ml	not detected		0 per 100 ml	Must not be detectable in any 100ml sample	0 per 100 ml
	Fecal Coliforms	< 1 per 100 ml	not detected	not detected	0 per 100 ml		0 per 100 ml
	Total Coliforms	0 per 100 ml	not detected	No more than 5% samples total coliform-positive in a month	0 per 100 ml	Must not be detectable in any 100ml sample	0 per 100 ml
	Enterococci				0 per 100 ml		
Chemicals	Antimony	0.006 mg/l	- mg/l	0.006 mg/l	0.005 mg/l	0.005 mg/l	0.01 mg/l
	Arsenic	0.025 mg/l *	0.025 mg/l	0.005 mg/l	0.01 mg/l	0.01 mg/l	0.05 mg/l
	Benzene	0.005 mg/l	0.005 mg/l	0.005 mg/l	- mg/l	0.01 mg/l	- mg/l
	Benzo(a)pyrene (PAH)	0.00001 mg/l	0.00001 mg/l	0.0002 mg/l	0.00001 mg/l	0.0007 mg/l	- mg/l
	Boron	5 mg/l *	5 mg/l	- mg/l	1 mg/l	0.5 mg/l	2 mg/l
	Bromate (PAH)	0.01 mg/l	- mg/l	0.01 mg/l	0.01 mg/l	25 mg/l	- mg/l
	Carbon tetrachloride	0.005 mg/l	0.005 mg/l	0.005 mg/l	- mg/l	0.002 mg/l	- mg/l
	Chloramines (total)	3 mg/l	3 mg/l	4 mg/l	- mg/l	3 mg/l	- mg/l
	Cyanide	0.2 mg/l	0.2 mg/l	0.2 mg/l	0.05 mg/l	0.07 mg/l	0.05 mg/l
	1,2 - dichlorobenzene	0.2 mg/l	0.2 mg/l	0.6 mg/l	- mg/l	1 mg/l	- mg/l
	1,4 - dichlorobenzene	0.005 mg/l	0.005 mg/l	0.075 mg/l	- mg/l	0.3 mg/l	- mg/l
	1,2 - dichloroethane	0.005 mg/l *	0.005 mg/l	0.005 mg/l	0.003 mg/l	0.03 mg/l	- mg/l
	1,1 - dichloroethylene	0.014 mg/l	0.014 mg/l	0.007 mg/l	- mg/l	- mg/l	- mg/l
	Dichloromethane	0.05 mg/l	0.05 mg/l	0.005 mg/l	- mg/l	0.02 mg/l	- mg/l
	Dinoseb	0.01 mg/l	0.01 mg/l	0.007 mg/l	- mg/l	- mg/l	- mg/l
	Epichlorohydrine (ECH)	- mg/l	- mg/l	TT mg/l	0.0001 mg/l	- mg/l	- mg/l
	Flouride	1.5 mg/l	1.5 mg/l	4 mg/l	1.5 mg/l	1.5 mg/l	1.5 mg/l

PARAMETER		STANDARDS					
		BC	ON	US EPA	EU	WHO	UK
Chemicals	Monochlorobenzene	0.08 mg/l	0.08 mg/l	0.1 mg/l	- mg/l	0.3 mg/l	- mg/l
	Nitrate	45 mg/l	10 mg/l	10 mg/l	50 mg/l	50 mg/l	50 mg/l
	Nitrite	- mg/l	1 mg/l	1 mg/l	0.5 mg/l	3 mg/l	0.1 mg/l
	Nitrilotriacetic acid (NTA)	0.4 mg/l	0.4 mg/l	- mg/l	- mg/l	0.2 mg/l	- mg/l
	Polycyclic Aromatic Hydrocarbons	- mg/l	- mg/l	- mg/l	0.0001 mg/l	- mg/l	0.0002 mg/l
	Selenium	0.01mg/l mg/l	0.01 mg/l	0.05 mg/l	0.01 mg/l	0.01 mg/l	0.01 mg/l
	Tetrachloroethene	- mg/l	- mg/l	- mg/l	0.01 mg/l	0.04 mg/l	0.01 mg/l
	Tetrachloroethylene	0.03 mg/l	0.03 mg/l	0.005 mg/l	- mg/l	- mg/l	- mg/l
	Trichloroethene	- mg/l	- mg/l	- mg/l	0.01 mg/l	0.07 mg/l	0.03 mg/l
	Trichloroethylene	0.05 mg/l	0.05 mg/l	0.005 mg/l	- mg/l	- mg/l	- mg/l
	Trihalomethanes (Total)	0.1 mg/l	0.1 mg/l	- mg/l	0.1 mg/l	see comment mg/l	0.1 mg/l
	Vinyl Chloride	0.002 mg/l	0.002 mg/l	0.002 mg/l	0.0005 mg/l	0.005 mg/l	- mg/l
Pesticides	Aldicarb	0.009 mg/l	0.009 mg/l	0.007 mg/l	- mg/l	0.01 mg/l	- mg/l
	Aldrin & Dieldrin	0.0007 mg/l	0.0007 mg/l	- mg/l	0.00003 mg/l	0.00003 mg/l	- mg/l
	Atrazine & Metabolites	0.005 mg/l *	0.005 mg/l	0.003 mg/l	- mg/l	0.002 mg/l	- mg/l
	Azinphos-methyl	0.02 mg/l	0.02 mg/l	- mg/l	- mg/l	- mg/l	- mg/l
	Bendiocarb	0.04 mg/l	0.04 mg/l	- mg/l	- mg/l	- mg/l	- mg/l
	Bromoxynil	0.005 mg/l *	0.005 mg/l	- mg/l	- mg/l	- mg/l	- mg/l
	Carbaryl	0.09 mg/l	0.09 mg/l	- mg/l	- mg/l	- mg/l	- mg/l
	Carbofuran	0.09 mg/l	0.09 mg/l	0.04 mg/l	- mg/l	0.007 mg/l	- mg/l
	Chlorpyrifos	0.09 mg/l	0.09 mg/l	- mg/l	- mg/l	- mg/l	- mg/l
	Cyanazine	0.01 mg/l *	0.01 mg/l	- mg/l	- mg/l	0.0006 mg/l	- mg/l
	Diazinon	0.02 mg/l	0.02 mg/l	- mg/l	- mg/l	- mg/l	- mg/l
Dicamba	0.12 mg/l	0.12 mg/l	- mg/l	- mg/l	- mg/l	- mg/l	

PARAMETER		STANDARDS					
		BC	ON	US EPA	EU	WHO	UK
Pesticides	2,4 - dichlorophenol	0.9 mg/l	0.9 mg/l	- mg/l	- mg/l	NAD mg/l	- mg/l
	2,4 - (2,4-D) dichlorophenoxyacetic acid	0.1 mg/l	0.1 mg/l	0.07 mg/l	- mg/l	0.03 mg/l	- mg/l
	Diclofop - methyl	0.009 mg/l	0.009 mg/l	- mg/l	- mg/l	- mg/l	- mg/l
	Dimethoate	0.02 mg/l	* 0.02 mg/l	mg/l	- mg/l	- mg/l	- mg/l
	Diquat	0.07 mg/l	0.07 mg/l	0.02 mg/l	- mg/l	0.01 mg/l	- mg/l
	Diuron	0.15 mg/l	0.15 mg/l	- mg/l	- mg/l	- mg/l	- mg/l
	Glyphosate	0.28 mg/l	* 0.28 mg/l	0.7 mg/l	- mg/l	U mg/l	- mg/l
	Heptachlor & Heptachlor Epoxide	- mg/l	0.003 mg/l	0.0004 0.0002 mg/l	0.00003 mg/l	0.00003 mg/l	- mg/l
	Malathion	0.19 mg/l	0.19 mg/l	- mg/l	- mg/l	- mg/l	- mg/l
	Methoxychlor	0.9 mg/l	0.9 mg/l	0.04 mg/l	- mg/l	0.02 mg/l	- mg/l
	Metolachlor	0.05 mg/l	* 0.05 mg/l	- mg/l	- mg/l	0.01 mg/l	- mg/l
	Metribuzin	0.08 mg/l	0.08 mg/l	- mg/l	- mg/l	- mg/l	- mg/l
	Paraquat (as dichloride)	0.01 mg/l	* 0.01 mg/l	- mg/l	- mg/l	- mg/l	- mg/l
	Parathion	0.05 mg/l	0.05 mg/l	- mg/l	- mg/l	- mg/l	- mg/l
	Pentachlorophenol	0.06 mg/l	0.06 mg/l	0.001 mg/l	- mg/l	0.009 mg/l	- mg/l
	Pesticides	- mg/l	- mg/l	- mg/l	0.0001 mg/l	- mg/l	0.0001 mg/l
	Pesticides (Total)	- mg/l	- mg/l	- mg/l	0.0005 mg/l	- mg/l	- mg/l
	Phorate	0.002 mg/l	* 0.002 mg/l	- mg/l	- mg/l	- mg/l	- mg/l
	Picloram	0.19 mg/l	* 0.19 mg/l	0.5 mg/l	- mg/l	- mg/l	- mg/l
	Simazine	0.01 mg/l	* 0.01 mg/l	0.004 mg/l	- mg/l	0.002 mg/l	- mg/l
Terbufos	0.001 mg/l	* 0.001 mg/l	- mg/l	- mg/l	- mg/l	- mg/l	
2,3,4,6 - Tetrachlorophenol	0.1 mg/l	0.1 mg/l	- mg/l	- mg/l	- mg/l	- mg/l	

PARAMETER		STANDARDS					
		BC	ON	US EPA	EU	WHO	UK
	2,4,6 - Trichlorophenol	0.005 mg/l	0.005 mg/l	- mg/l	- mg/l	200 mg/l	- mg/l
	Trifluralin	0.045 mg/l	* 0.045 mg/l	- mg/l	- mg/l	0.02 mg/l	- mg/l
Metals	Aluminium	- mg/l	- mg/l	- mg/l	0.2 mg/l	< 0.2 mg/l	0.2 mg/l
	Barium	1 mg/l	1 mg/l	2 mg/l	- mg/l	0.7 mg/l	1 mg/l
	Cadmium	0.005 mg/l	0.005 mg/l	0.005 mg/l	0.005 mg/l	0.003 mg/l	- mg/l
	Chromium	0.05 mg/l	0.05 mg/l	0.1 mg/l	0.05 mg/l	0.05 mg/l	0.05 mg/l
	Copper	- mg/l	- mg/l	- mg/l	2 mg/l	1 mg/l	3 mg/l
	Iron	- mg/l	- mg/l	- mg/l	0.2 mg/l	0.3 mg/l	0.2 mg/l
	Lead	0.01 mg/l	0.01 mg/l	TT mg/l	0.01 mg/l	0.01 mg/l	0.05 mg/l
	Manganese	- mg/l	- mg/l	- mg/l	0.05 mg/l	0.5 mg/l	0.05 mg/l
	Mercury	0.001 mg/l	0.001 mg/l	0.002 mg/l	0.001 mg/l	0.001 mg/l	0.001 mg/l
	Molybdenum	- mg/l	- mg/l	- mg/l	- mg/l	0.07 mg/l	- mg/l
	Nickle	- mg/l	- mg/l	- mg/l	0.02 mg/l	0.02 mg/l	0.05 mg/l
Uranium	0.1 mg/l	0.1 mg/l	0.02 mg/l	- mg/l	0.002 mg/l	- mg/l	
Zinc	- mg/l	- mg/l	- mg/l	- mg/l	3 mg/l	5 mg/l	
Appearance & Taste	Chlorine	- mg/l	-	4 mg/l	- mg/l	5 mg/l	No standard
	Color	No more than 15 TCU		15 color units	Acceptable to consumers and no abnormal change	15 TCU	20 mg/lPt/Co scale
	PH	6.5 - 8.5		6.5 - 8.5		No health-based guideline set	5.5 - 9.5
	Hardness					No health-based guideline set	No standard req'd
	Taste & Odour	Inoffensive		3 threshold odor numbers	Acceptable to consumers and no abnormal change	No health-based guideline set	Dilution No of 3 at 25+G7°C
	Turbidity	No more than 1 NTU	1.0 NTU	5 NTU	Acceptable to consumers and no abnormal change	5 NTU	4 Formazin Turbidity Units

Notes: * = IMAC: Interim Maximum Allowable Concentration
TT = Treatment Technique (a required process intended to reduce the level of a contaminant in drinking water)
mg/l = milligrams per litre
NAD = No adequate data (see comment)
NTU = Nephelometric Turbidity Unit
TCU = True Colour Unit
U = Unnecessary (see comment)