

Troubled Waters: Comments on the new *Regulation respecting the quality of drinking water*¹ and the *Draft Regulation respecting groundwater catchment*²

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This bulletin was written to familiarize you with the obligations and liability arising from the Regulation respecting the quality of drinking water and the Draft Regulation respecting groundwater catchment.

The Regulation respecting the quality of drinking water

Who is subject to the Regulation?

Given that a large number of municipalities in Quebec own their waterworks systems, the new Regulation most certainly applies

to them. The operators of distribution systems as well as the owners or operators of tank trucks that supply water are subject to the Regulation. Enterprises that supply water for human consumption purposes to their employees and, in certain cases, to persons in the vicinity of their enterprises, are also subject to the new provisions. Several types of establishments, including educational institutions, health and social services institutions, houses of detention and tourist establishments, must also comply with a certain number of regulatory obligations.

Furthermore, contrary to what the media implied when the Regulation was published, the operators or owners of a drinking water distribution system serving 20 persons or less are generally subject to the Regulation and are exempted only from the section prescribing the methods of controlling the quality of drinking water.

However, the Regulation does not apply to water, the use or distribution of which is governed by the *Food Products Act*³ such as bottled water, tank trucks transporting

spring water or mineral water and water used in the composition or preparation of commercial foodstuffs.

What are the obligations pertaining to the quality of distributed drinking water?

Obligation to comply with the 77 parameters of Schedule 1 of the Regulation

The person in charge of the distribution system for supplying drinking water, namely the owner or operator of the distribution

¹ Order-in Council No. 647-2001 of May 30, 2001, (2001) 133 G.O. II 3561

² (2001) 133 G.O. II 3586

³ R.S.Q., c. P-29



system, or the owner or operator of a tank truck⁴, must now comply with standards of quality that are much stricter than those which applied under the old regulation. The 46 microbiological, organic, inorganic and radioactive substances that previously had to be analyzed have been increased to 77.

These substances are set forth in Schedule 1 of the Regulation, and drinking water, when it is distributed must comply with the prescribed standards of quality.

Obligation to ensure continuous filtration treatment and disinfection

This obligation does not apply to distribution systems that supply a single residence, one or several enterprises or a residence and one or several enterprises. Subject to the exception applicable to distribution systems supplied by raw water that meets certain criteria pertaining to turbidity, content in total organic carbon, quantity of fecal coliform bacteria and total quantity of coliforms, as well as the unlikelihood of contamination⁵, water supplied by a distribution system must from now on have undergone a continuous filtration and disinfection treatment if it comes in whole or in part from surface water.

Regarding water which is supplied by a distribution system and comes from groundwater, such treatment is not required unless the microbiological quality of the water is likely to be altered by the surface water because of the non-permeability of collection or storage facilities. However, continuous disinfection treatment is mandatory where analysis of the groundwater reveals the presence of fecal contamination.

Water distributed by tank trucks, must, prior to distribution, have undergone a chlorine disinfection treatment and must have a content of free residual chlorine of at least 0.2 mg/L.

Obligation to control water quality

First, it should be noted that the obligations relative to the quality control of drinking water do not apply to a distribution system that supplies 20 persons or less, nor to a system that supplies only one or several enterprises⁶.

If these quality control standards do not apply to certain owners and operators, the question then arises as to what barometer would apply, in the event of a contamination of drinking water, to determine if such owners or operators have complied with industry practice in order to ensure that the drinking water distributed by them complies at all times with the standards set forth in Schedule 1. For the courts, what would be the obligations of a reasonable person in the same circumstances? Will the sampling kit, to be distributed free of charge to owners or operators of systems supplying 20 persons or less, become the reference tool for determining whether the person in charge of a system has satisfactorily fulfilled his obligation designed to ensure compliance with Schedule 1 standards? Since these smaller systems tend to be, in many cases, the most at risk, one can only question the government's motivation in exempting them from the quality control standards.

⁴ The tank of a vehicle used to supply drinking water may not be used to transport other materials likely to contaminate that water.

⁵ Specifically, by wastewater or agricultural activities.

⁶ Where, in addition to one or more enterprises, a system also supplies persons in the vicinity thereof, the system is subject to these control measures.



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For all other owners and operators of a distribution system that is subject to the quality control standards, it should be noted that the frequency of bacteriological analysis has been increased to eight times a month from twice a month as it was in the past. Bacteriological, physical and chemical controls (organic and inorganic substances and turbidity control) as well as disinfection controls are now required.

It should also be noted that the accredited laboratory to which the samples are to be sent, must transmit its results to the Minister of the Environment within 10 days of the sampling in the case of samples used for the control of micro-organisms, free residual disinfectant or turbidity and, in the case of samples for the control of other parameters, within 60 days of the sampling.

Control standards also apply to water distributed by tank trucks to more than 20 persons, subject to the fact that samples are collected at the outlet of the tank. Moreover, the owner or operator of the tank truck must, at least once a day,

measure the quantity of free residual chlorine in a sample collected at the outlet of the tank. He is also required to keep a register in which the date and results of the measurements are recorded along with the names of the persons who took them.

What are the consequences of distributing water that does not comply with the quality standards?

The Regulation provides that several measures must be taken when the results of the analysis of the water intended for human consumption indicate non-compliance with the standards of quality prescribed in Schedule 1. The obligation to inform users is undoubtedly the most important of the various measures prescribed.

Non-compliance with the bacteriological parameters

The laboratory that analyses a water sample must immediately inform the person in charge of the distribution system in question or, as the case may be, the owner or operator of the tank truck, where the results show that the water at the disposal of

a user does not comply with the quality standards defined in Schedule 1 of the Regulation or that it contains total coliform bacteria. The laboratory must also immediately inform the Minister of the Environment and the public health director of the relevant region of these results.

The person in charge of the distribution system or, as the case may be, the owner or operator of the tank truck must, as soon as he is informed of the results, notify the Minister of the Environment and the public health director of the region of the measures that he intends to take in order to remedy the situation and, where applicable, to protect the users from the risks involved⁷. Where another distribution system is connected to his system or a tank truck is supplied with drinking water from his system, he must immediately notify the person in charge of that other system or of the tank truck of the results of the laboratory analysis.⁸

Where the laboratory results indicate that the water contains fecal coliform bacteria or *Escherichia coli* bacteria, the person in charge of a distribution system or, as the case may be, the owner or operator of a tank truck has an additional obligation. In such a case, immediately upon being informed of the presence of such bacteria in

⁷ This obligation does not apply in the case of a distribution system supplying only one residence.

⁸ Ibid.

the water, he must advise the users, through the media or by forwarding individual letters, that the water at their disposal is unfit for consumption and indicate what precautions must be taken, for example, boiling the water for at least one minute before drinking it. If, among the users in question, there are health and social services institutions or educational institutions, they must also be notified. The Minister of Agriculture, Fisheries and Food must also be notified as soon as possible⁹.

The notice to be given to users when the water contains fecal coliform bacteria must be given at least once every two weeks until it is shown that the water supplied is free from total coliform bacteria and complies with the standards of quality determined in Schedule 1 of the Regulation with respect to other analyzed microorganisms. The Minister of the Environment and the public health director must also be advised that the required notices were given according to the methods prescribed. The

person in charge of the distribution system or, as the case may be, the owner or operator of the tank truck who is informed that his water does not comply with the quality standards determined in Schedule 1 must also immediately notify the person in charge of any other distribution system connected to his system or supplied by his system¹⁰.

It should also be noted that the person in charge of an educational institution, a health and social services institution or a tourist establishment supplied by a distribution system or by a tank truck that received a notice indicating that the water distributed contains fecal coliform bacteria must, immediately upon being informed of that fact, post a notice to that effect everywhere in the institution where the water is made available for consumption purposes and interrupt the water service from drinking fountains supplied with contaminated water. The person in charge of a house of detention or of an enterprise who has been advised of the contamination must, as soon as he becomes aware thereof, notify the users within the house of detention or the enterprise.

The Regulation also establishes how often the person in charge of the distribution system, or the owner or operator of a tank truck, must collect samples where the results of the laboratory analysis indicate that the water contains fecal coliform bacteria or that it does not comply with one of the parameters prescribed in Schedule 1 of the Regulation respecting other bacteria¹¹. The frequency of sampling may vary depending on whether or not the water supplied is disinfected.

Only when the analysis of the samples collected indicates a complete absence of total coliform bacteria and the compliance of the water with the parameters regarding other analyzed bacteria prescribed in Schedule 1 of the Regulation, may water supplied by the distribution system or tank truck be considered as once again complying with the bacteriological parameters prescribed in the Regulation. The person in charge of the distribution system or, as the case may be, the owner or operator of the tank truck, must, as soon as the water supplied is considered as once again complying with the Regulation, so advise all persons and establishments that he was required to notify¹².

⁹ Ibid.

¹⁰ Ibid.

¹¹ Ibid. Four samples per day where there are 5,000 persons or less, one sample per day per 1,000 persons where there are 5,001 to 20,000 persons and 20 samples per day where there are 20,001 persons or more.

¹² Ibid.

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Non-compliance with the parameters respecting organic substances, inorganic substances, radioactive substances, pH or turbidity

Where the results of the laboratory analysis show that the water does not comply with the parameters respecting organic substances (excluding trihalomethane), inorganic substances, radioactive substances or activities, pH or turbidity, the only obligation incumbent upon the person in charge of the distribution system or the owner or operator of the tank truck is to collect or to have collected at least one sample of the water supplied during two consecutive days. There is no obligation to inform users or to interrupt service similar to that which applies in the case of non-compliance with the bacteriological parameters. However, the obligation to supply water that complies with the requirements provided in Schedule 1 remains, and non-compliance renders a distributor liable to a fine. It should be noted that water that does not comply with the above-mentioned parameters (excluding bacteriological parameters) may not be considered to be once again in compliance with the Regulation until confirmed by an analysis of the samples collected.

Clearly, the bacteriological control of water supplied for human consumption is the overriding concern at the present time.

Who should be entrusted with responsibility for the operation of a distribution system?¹³

We commend the government's initiative aimed at ensuring that only competent persons are in charge of the operation of a distribution system, a facility for the collection of water supplied by that system or a filtration or disinfection treatment facility of that water. This means that such persons must hold a diploma, certificate or other attestation issued in matters of drinking water purification or treatment, and which is recognized by the Minister of Education or by Emploi-Québec, which attestations must be renewed every five years. This obligation also applies to a distribution system that supplies 20 persons or less. Does this mean that from now on, all small operators must be skilled or engage the services of a skilled person? How will the

compliance with this obligation be ensured? It should be borne in mind that, as mentioned earlier, these provisions do not come into force until June 28, 2002. Between now and then, the government may issue a plan which applies exclusively to smaller operators; otherwise, the municipalities will have to bear an increase in their responsibility.

What tools does the Minister have to monitor developments pertaining to the quality of drinking water?

It should be noted that this laudable government initiative imposes upon the Minister of the Environment the obligation to report to the government, by June 15, 2006, and every five years thereafter, on the implementation of the Regulation, in particular on the advisability of amending the standards of quality of water intended for human consumption, in light of scientific and technical knowledge available at the time. This report must be made available to the public within 15 days of being submitted to the government.

¹³ The provisions relating to the required abilities do not apply to the distribution system nor do they apply to tank truck which only supplies a residence or one or several enterprises or a residence and one or several enterprises.

Penal provisions

The non-performance of the obligations imposed by the Regulation renders the offending party liable to penal sanctions, including fines that will vary, in most cases, between \$1,000 and \$20,000 for individuals and between \$2,000 and \$40,000 for companies. For repeat offenders, the fines are doubled.

It should be emphasized that the existence of this Regulation does not operate so as to preclude the civil liability of the distributor.

A note on the Draft Regulation respecting groundwater catchment

On June 13, 2001, the Government of Québec published a *Draft Regulation respecting groundwater catchment*, and members of the public are invited to submit comments thereon to the Minister of the Environment before August 12, 2001 (i.e., 60 days after the June 13, 2001 publication date).

The Draft Regulation is aimed at prescribing construction standards for groundwater catchment works so as to promote the protection of groundwater destined for human consumption but also to control the catchment of such water so as to prevent drops in water levels or reductions in artesian pressure. The Draft Regulation also prescribes installation standards for tube wells, shallow wells or well points, which may, under certain conditions, be installed on lands whose dimensions do not allow for compliance with the distances prescribed for a catchment work, but the construction of which has been authorized by the municipality concerned. The Draft Regulation formulates mandatory standards for distances from wastewater treatment systems. It also indicates analyses of water quality are mandatory new catchment work is installed. All catchment projects are covered, including individual wells and industrial wells.

Although the municipalities will oversee the application of many of these provisions, the Minister of the Environment continues to exercise control over the larger catchment projects by making them subject to ministerial authorization.

The Draft Regulation intends to render mandatory the determination of a perimeter of protection for owners and operators of catchment sites of spring water, mineral water or groundwater supplying more than 20 persons. Owners and operators must also obtain a report from a professional assessing matters such as the supply area, the vulnerability of the groundwater, and the environmental activities that are likely to alter the microbiological quality of the groundwater. A copy of the report must be given to the local municipality concerned, which must allow the report to be consulted.

Groundwater may be used for heating or air conditioning purposes only where the water is returned to its original aquifer. Accordingly, the current owner of a groundwater catchment site intended for heating or air conditioning purposes shall, within four years of the coming into force of the Regulation, allow the water to return to the original aquifer.

It will also be prohibited to undertake or to continue to draw groundwater on the territory of Îles-de-la-Madeleine without ministerial authorization. The application for authorization must be made in writing and submitted no later than one year after the coming into force of the Regulation.

Lastly, it should be noted that the Minister requires to be informed of the location of all catchment sites capable of providing a volume of at least 75 m³ of groundwater per day regardless of whether such sites actually use that volume. The owner of such a site must send to the Minister, within one year of the date of the coming into force of the regulation, a notice indicating the location of the catchment work, the use of that water, the volume of water drawn daily and the number of days per year when water is drawn.

It will be interesting to read the final version of the Regulation. Interested parties have until August 10, 2001 to send their comments to the Minister.

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