

- “(d) a child has been born of their union,  
 (e) they have adopted a child together, or  
 (f) one of them has adopted the other’s child;”.

2. This Regulation comes into force on 1 November 2000.

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## Draft Regulation

Environment Quality Act  
 (R.S.Q., c. Q-2)

### Quality of drinking water

Notice is hereby given, in accordance with sections 10 and 11 of the Regulations Act (R.S.Q., c. R-18.1) and section 124 of the Environment Quality Act, that the Regulation respecting the quality of drinking water, the text of which appears below, may be made by the Gouvernement du Québec upon the expiry of 60 days following this publication.

The draft Regulation replaces the Drinking Water Regulation made in 1984 and its purpose is to update the standards of quality of drinking water. To that end, it proposes standards mainly based on the most recent Canadian recommendations on the quality of drinking water, as published by Health Canada. It is necessary to point out that both enterprises and municipalities will be governed by the updated standards of quality of drinking water.

Moreover, the regulatory mechanisms intended to ensure the quality of drinking water supplied by the distribution systems or delivered by tank truck are reinforced; thus, the draft Regulation provides for the obligation to disinfect the water supplied where it comes from surface water or ground water whose microbiological quality may be altered by surface water. In addition, all municipal or private drinking water distribution systems will be subject to increased controls on the quality of that water and to the obligation of having qualified personnel for their operation. In case of non-compliance with the standards of quality, the laboratory that will have carried out the water samples analysis will have to quickly notify thereof the person in charge of the distribution system in question as well as the Minister of the Environment and the public health director of the region in question; the person in charge of the distribution system will also be bound to inform immediately the Minister and the public health director of the measures taken to remedy the situation and, where applicable, to protect the users.

This draft Regulation replaces the draft Regulation published in the *Gazette officielle du Québec* of 28 June 2000.

Further information may be obtained by contacting:

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Any interested person having comments to make on the draft Regulation respecting the quality of drinking water is asked to send them in writing, before the expiry of the 60-day period, to the Ministère de l'Environnement at the above-mentioned address.

PAUL BÉGIN,  
*Minister of the Environment*

## Regulation respecting the quality of drinking water

Environment Quality Act  
 (R.S.Q., c. Q-2, s. 31, pars. e, h.1 and h.2, ss. 45, 45.2, par. a, s. 46, pars. a, b, d, m, o, o.1 and o.2, ss. 109.1 and 124.1; 1999, c. 40, s. 239; 1999, c. 75, s. 3)

### CHAPTER I GENERAL

1. For the purposes of this Regulation,

(1) “enterprise” means any establishment where a commercial, industrial, agricultural, professional or institutional activity is carried on as well as any establishment or immovable where another activity is carried on and to which the public has access or that is governed by the Public Buildings Safety Act (R.S.Q., c. S-3), excluding educational institutions, houses of detention and health and social services institutions; (*entreprise*)

(2) “educational institution” means any institution providing elementary and secondary education and governed by the Education Act (R.S.Q., c. I-13.3) or by the Education Act for Cree, Inuit and Naskapi Native Persons (R.S.Q., c. I-14), a private educational institution governed by the Act respecting private education (R.S.Q., c. E-9.1), a general and vocational college or a university. For the purposes of this Regulation, childcare centres, day care centres, stop-over centres and nursery

schools governed by the Act respecting childcare centres and childcare services (R.S.Q., c. C-8.2) are deemed to be educational institutions; (*établissement d'enseignement*)

(3) “house of detention” means any establishment used for the detention of persons and governed by the Act respecting correctional services (R.S.Q., c. S-4.01); (*établissement de détention*)

(4) “health and social services institution” means any health and social services institution governed by the Act respecting health services and social services (R.S.Q., c. S-4.2) or by the Act respecting health services and social services for Cree Native persons (R.S.Q., c. S-5); (*établissement de santé et de services sociaux*)

(5) “person in charge of a distribution system” means the owner or operator of a system; (*responsable d'un système de distribution*) and

(6) “distribution system” means mains or a system of mains used for supplying drinking water to human beings. In the case of an immovable connected to a water-works system, any mains supplying that immovable and located downstream from the stop valve serving the immovable shall be excluded.

2. The provisions of this Regulation do not apply to water whose use or distribution is governed by the Agricultural Products, Marine Products and Food Act (R.S.Q., c. P-29).

3. Drinking water must, where it is put at the disposal of a user, comply with the standards of quality defined in the Schedule.

## CHAPTER II DISINFECTION

4. Water supplied by a distribution system must have undergone, before being distributed, a disinfection treatment if it comes in whole or in part from surface water or from ground water whose microbiological quality is likely to be altered by surface water because of the vulnerability of the aquifer environment (permeability of unconsolidated deposits, rock fracture, etc) or the state of the collection or storage facilities.

5. Any distribution system that supplies disinfected water must be equipped with standby equipment to ensure disinfection in case of emergency, particularly if the main treatment facility breaks down.

6. Where the water supplied by a distribution system is chlorinated, it shall, at the outlet of the treatment facility, have a content of free residual chlorine of at least 0.2 mg/l after a 30-minute period of contact.

If the disinfection is carried out by means of a process other than chlorination, that process shall, under the same conditions, provide a residual disinfection potential at least equivalent to that which would be obtained by chlorination. That requirement does not however apply to a distribution system that serves only one building.

## CHAPTER III QUALITY CONTROL OF WATER SUPPLIED BY DISTRIBUTION SYSTEMS

7. The provisions of Divisions I, II and III of this Chapter do not apply to a distribution system that serves only one enterprise.

### DIVISION I BACTERIOLOGICAL CONTROL

8. The person in charge of a distribution system must, for the control of total coliform bacteria and *Escherichia coli* bacteria, take samples of the water distributed according to the frequency determined in the following table:

Users	Minimum number of samples to be collected per month
8000 persons and less	8
8001 to 100 000 persons	1 per 1000 persons
100 001 persons and more	100 + 1 per group of 10 000 persons exceeding 100 000 persons

The samples to be collected pursuant to the first paragraph must be taken from the tap of different users, after the water has run for at least five minutes on the same day of sampling. In addition, the water collected must not have been treated by means of an individual device.

Where possible, those samples shall be spread in equal numbers over each of the weeks in the month.

9. At least 50 % of the samples prescribed by section 8 must be collected at the outermost limits of the distribution system and have as its object, the analysis of facultatively aerobic or anaerobic heterotrophic bacteria, in addition to total coliform bacteria and *Escherichia coli* bacteria.

## DIVISION II PHYSICAL AND CHEMICAL CONTROL

### §1. Control of inorganic substances

10. The person in charge of a distribution system must, for the control of inorganic substances referred to in the Schedule (excluding chloramines, bromates, antimony), take samples of the water supplied according to the frequency determined in the following table:

Users	Minimum number of samples to be collected
30 persons or less, without any educational institution, house of detention or health and social services institution	None
30 persons or less, with one or several educational institutions, houses of detention or health and social services institutions	1 sample every 2 years with an interval of 22 to 26 months between samplings
31 to 1000 persons	
1001 to 5000 persons	1 sample per year with an interval of 10 to 14 months between samplings
5001 and more	2 samples per year with an interval of 4 to 8 months between samplings

The sampling methods provided for in the second paragraph of section 8 shall apply to the samples prescribed above, which must be collected at the central point in the distribution system.

### §2. Control of trihalomethanes

11. The person in charge of a distribution system supplying chlorinated water and who is bound under section 8 to take water samples must, for the control of trihalomethanes referred to in the Schedule, take at least one sample of the water supplied every quarter, with a minimum interval of two months between samplings.

The sampling methods provided for in the second paragraph of section 8 shall apply to the samples prescribed above, which must be collected at the outermost limits of the distribution system.

### §3. Control of pH and turbidity

12. The person in charge of a distribution system who is bound under section 8 to take samples of the water supplied must, for the control of pH and turbidity, take

(1) at least one sample per month in the case of disinfected water;

(2) the minimum number of samples provided for in section 10 in the case of non disinfected water.

The sampling methods provided for in the second paragraph of section 8 shall apply to the samples prescribed above, which must be collected at the central point in the distribution system.

## DIVISION III DISINFECTION CONTROL

13. The person in charge of a distribution system that supplies disinfected water must, during each sampling carried out pursuant to section 8, measure the quantity of free residual disinfectant in a water sample collected for that purpose and enter the result in the analysis report prescribed by the Minister.

In addition, the person in charge of such a system must, at least once a day, measure the quantity of free residual disinfectant and the pH, temperature and turbidity of the water in a water sample collected at the outlet of the treatment facility or, where that facility has a disinfected water reservoir, at the outlet of that reservoir. He shall keep up to date a register in which the date and results of those measurements are entered along with the names of the persons who took them; that data shall be preserved and kept at the disposal of the Minister of the Environment for a minimum period of 24 months. Where the person in charge of the distribution system is neither the owner nor the operator of the facility where the disinfection treatment of the water he supplies is carried out, the obligations prescribed by this paragraph will devolve upon the owner or operator of that facility.

14. Where the analysis of a sample of disinfected water collected pursuant to section 12 shows that the turbidity of that water is greater than 0.5 NTU (nephelometric turbidity unit), the person in charge of the distribution system from where the sample comes must, as soon as he is informed, either

— check, using the register constituted under the second paragraph of section 13, the daily measures of turbidity carried out during the period of 90 consecutive days that preceded the sampling; or

— if he is not the owner or operator of the disinfection treatment facility, request that the owner or operator do the aforementioned checking without delay.

#### **DIVISION IV METHODS, ANALYSES AND RESULTS**

15. The water samples prescribed under the provisions of this Regulation must be collected and preserved in accordance with the methods described in the Standard Methods for the Examination of Water and Wastewater published by the American Water Works Association, the Water Environment Federation and the American Public Health Association.

Notwithstanding the preceding paragraph, the maximum waiting period between the taking of samples of water for bacteriological control and the analysis of such samples shall be two days.

16. The water samples collected pursuant to sections 8 to 12, 22 and 23 must be forwarded, for analysis purposes, to laboratories accredited by the Minister under section 118.6 of the Environment Quality Act.

17. The water samples collected pursuant to the second paragraph of section 13 and the first paragraph of section 27 must be analyzed in accordance with the methods described in the document referred to in section 15.

18. A laboratory that analyzed a water sample must immediately inform the person in charge of the distribution system in question, as well as the Minister and the public health director of the region in question, of any result revealing that the water at the disposal of a user does not comply with any one of the standards of quality defined in the Schedule or that the turbidity of that water is greater than 0.5 NTU (nephelometric turbidity unit).

19. The person in charge of a distribution system shall send to the Minister by electronic means the results of the measurements taken pursuant to the second paragraph of section 13 and the results of the analyses of the water samples referred to in section 16, within ten days of the sampling in the case of samples for the control of bacteria, free residual disinfectant or turbidity or, in the case of samples for the control of other parameters, within 60 days of the sampling.

#### **CHAPTER IV NONCOMPLIANCE OF WATER WITH THE STANDARDS OF QUALITY**

20. Where the water at the disposal of a user does not comply with any one of the standards of quality established in the Schedule, the person in charge of the distribution system from where the water comes must, as soon as he is so informed, notify the Minister and the public health director of the region in question of the

measures taken to remedy the situation and, where applicable, to protect the users from any risks incurred.

If the water contains *Escherichia coli* bacteria, the person in charge of the distribution system shall also notify the users in question, as soon as he is informed of it, through the media or by forwarding individual written notices, that the water at their disposal is unfit for consumption and that precautions must be taken, in particular, boiling the water for at least one minute before drinking it. The notice prescribed by this paragraph must be given at least once every two weeks and until it is shown, in accordance with the provisions of section 22, that the water supplied is free from *Escherichia coli* bacteria. The person in charge of the distribution system must send immediately to the Minister and the public health director a written notice stating that the notices to be given pursuant to this paragraph were given according to the methods prescribed.

Where another distribution system is connected to his system or a tank truck is supplied with drinking water directly by his system, the person in charge of the distribution system referred to in the first and second paragraphs must also immediately notify the person in charge of that other system or, as the case may be, the owner or the operator of the vehicle.

21. Where an educational institution, a house of detention or a health and social services institution is served by a distribution system that was subject to a notice given pursuant to the second paragraph of section 20, the person in charge of the institution must, as soon as he is informed that the water at the disposal of users is unfit for consumption, post a notice everywhere in the institution where the water is made available for consumption purposes and interrupt any water service from drinking fountains supplied with contaminated water.

If the distribution system subject to a notice given pursuant to the second paragraph of section 20 serves an enterprise, the person in charge of that enterprise must, as soon as he is aware of the notice, notify the users thereof within the enterprise.

22. Where the analysis of a sample of water at the disposal of a user showed that it contained *Escherichia coli* bacteria or that it did not comply with the parameters set out in the Schedule respecting other bacteria, that water may not be considered as complying with the microbiological parameters in the Schedule unless, during at least two consecutive days, the minimum number of samples of that water determined in the table below have been taken, and that their analysis showed a total absence of coliform bacteria and that the water complies with the aforementioned parameters respecting other bacteria:

Consumers	Minimum number of samples to be collected per day
5000 persons or less	4
5001 to 20 000 persons	1 per 2000 persons
20 001 persons and more	20

The sampling methods provided for in the second paragraph of section 8 shall apply to that sampling.

Where the person in charge of the distribution system from where the water sampled comes does not have access by road to an accredited laboratory, the sampling prescribed by the first paragraph may be carried out during the same day provided that there is an interval of at least two hours between each sampling.

The water samples collected for the purposes of this section may not be taken into account for the purposes of the sampling prescribed by section 8.

**23.** Where the analysis of a sample of water at the disposal of a user showed that it did not comply with any one of the parameters set out in the Schedule respecting organic substances (excluding trihalomethanes) or inorganic substances, radioactive substances or activities, pH or turbidity, that water may not be considered as complying with the aforementioned parameters unless, during at least two consecutive days, a sample of that water was collected and that its analysis showed that the water complies with the aforementioned parameters.

The sampling methods provided for in sections 10 and 12 shall apply, as the case may be, to the samples prescribed by the first paragraph. The provisions of the third paragraph of section 22 shall also apply, *mutatis mutandis*. Finally, the water samples collected for the purposes of this section may not be taken into account for the purposes of the sampling prescribed by sections 10 and 12.

**24.** As soon as the water supplied by a distribution system that was subject to a notice given pursuant to section 20 is in compliance again with the standards of quality established in the Schedule, the person in charge of the system shall so inform any person who had to be notified by him under that section, following the same methods as those prescribed by that section.

## CHAPTER V CONTROL OF THE QUALITY OF WATER DELIVERED BY TANK TRUCK

**25.** The provisions of Chapters III and IV are applicable, *mutatis mutandis*, to the drinking water delivered by tank truck. Thus, the owner or operator of a tank truck is bound by the same obligations as those devolving upon the person in charge of any distribution system under the aforementioned provisions; as for the samples prescribed by those provisions, they shall be collected at the outlet of the tank.

**26.** Drinking water delivered by tank truck must have undergone a chlorination treatment before being put at the disposal of a user.

In addition, the water contained in the tank must have at all times a concentration of free residual chlorine equal to or greater than 0.2 mg/l.

**27.** An owner or operator of a tank truck who supplies drinking water to more than 30 persons must, at least once a day, measure the quantity of free residual chlorine in a water sample collected at the outlet of the tank.

In addition, he shall keep an updated register in which the date and results of the measurements prescribed above are entered along with the names of the persons who took them. That data shall be preserved and kept at the disposal of the Minister, for a minimum period of 24 months.

**28.** The tank of a vehicle used for delivering drinking water may not be used to transport other materials likely to contaminate that water.

## CHAPTER VI QUALIFICATION REQUIRED

**29.** The person in charge of a distribution system bound under section 8 to take samples of the water supplied must have qualified personnel necessary for the operation of that system, among other things to ensure the good working order of the disinfection treatment facility.

Within the meaning of this section, “qualified personnel” means any person who holds a diploma, certificate or other attestation issued following training in matters of drinking water purification or treatment recognized by the Minister of Education, by Emploi-Québec or by the Minister responsible thereof or by a professional order governed by the Professional Code (R.S.Q., c. C-26).

The obligation to have qualified personnel also applies

(1) to the owner or operator of that facility where the person in charge of the distribution system is neither the owner nor the operator of the facility where the disinfection treatment of the water is carried out;

(2) to the owner or operator of a tank truck bound to take samples of the drinking water supplied.

## CHAPTER VII PENAL

**30.** Any person, in contravention of section 3, who puts at the disposal of a user drinking water that does not comply with the standards of quality set out in the Schedule is liable

(1) to a fine of \$1000 to \$20 000 in the case of a natural person;

(2) to a fine of \$2000 to \$40 000 in the case of a legal person.

**31.** In the case of a contravention of sections 4 to 6, 14, 20, 26, 28 and 29, the owner or operator of a distribution system, disinfection treatment facility or tank truck, as the case may be, is liable to the fines provided for in section 30.

The person who enters false or inaccurate data in the register or report referred to in section 13 or 27 or who omits to write therein the data prescribed by those sections is liable to the same fines.

**32.** Any offence against section 18 or 21 makes the offender liable to the fines provided for in section 30.

**33.** A person who commits an offence against this Regulation and that is not covered by sections 30 to 32 is liable to

(1) a fine of \$500 to \$10 000 in the case of a natural person; and

(2) a fine of \$1000 to \$20 000 in the case of a legal person.

**34.** In the case of a subsequent offence, the fines provided for in sections 30 to 33 shall be doubled.

## CHAPTER VIII MISCELLANEOUS AND FINAL

**35.** This Regulation applies in particular to immovables included in reserved areas and agricultural zones

established under the Act to preserve agricultural land and agricultural activities (R.S.Q., c. P-41.1).

**36.** This Regulation replaces the Drinking Water Regulation made by Order in Council 1158-84 dated 16 May 1984.

**37.** In the regulatory provisions listed below, reference to the Drinking Water Regulation made by Order in Council 1158-84 dated 16 May 1984 shall be replaced by a reference to the Regulation respecting the quality of drinking water made by Order in Council (*enter the number and date of the Order in Council that made this Regulation*):

(1) in the definition of the expression “water intake” in section 1 of the Regulation respecting standards of forest management for forests in the public domain, made by Order in Council 498-96 dated 24 April 1996;

(2) in the definitions of the expression “drinking water” in sections 1.1.1, 5.1.1 and 5.6.1 of the Regulation respecting food (R.R.Q., 1981, c. P-29, r. 1);

(3) in the definition of the expression “drinking water” in section 1 of the Regulation respecting the quality of dairy products, made by Order in Council 183-88 dated 10 February 1988; and

(4) in section 28 of the Regulation respecting waterworks and sewer services (R.R.Q., 1981, c. Q-2, r. 7).

**38.** The Minister of the Environment must, no later than on 15 June 2006, and thereafter every five years, draw up a report to the Government on the implementation of this Regulation, in particular on the opportunity to change the standards of quality of drinking water considering the scientific and technical knowledge of the time.

That report shall be available to the public no less than fifteen days after it has been sent to the Government.

**39.** This Regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*.

## SCHEDULE

### STANDARDS OF QUALITY OF DRINKING WATER

#### 1. Microbiological parameters

(a) Water collected for microbiological analysis purposes must be free from pathogenic organisms and *Escherichia coli* bacteria;

(b) Water must not contain more than 10 total coliforms per 100 millilitres of water collected where a technique is used to count them;

(c) Where pursuant to section 8, 21 water samples or more are collected over a period of 30 consecutive days, at least 90 % of the samples must be free from total coliform bacteria;

(d) Where pursuant to section 8, 21 water samples or less are collected over 30 consecutive days, only one of the samples may contain total coliform bacteria;

(e) Water must not contain more than 200 atypical colonies per 100 millilitres of water collected where the membrane filter technique is used to count the total coliforms or fecal coliforms;

(f) Water must not contain bacteria in such quantity that they may not be identified nor counted where the membrane filter technique is used to count coliforms in 100 millilitres of water collected;

(g) Water must not contain more than 500 facultatively aerobic or anaerobic heterotrophic bacteria per millilitre of water collected, after incubation at 35 °C for 48 hours.

## 2. Parameters respecting inorganic substances

Water must not contain inorganic substances in a concentration greater than that indicated in the table below:

<b>Inorganic substances</b>	<b>Maximum concentration (mg/L)</b>
Antimony	0.006
Arsenic (As)	0.025
Barium (Ba)	1
Boron (B)	5
Bromates	0.010
Cadmium (Cd)	0.005
Chloramines	3
Total chromium (Cr)	0.05
Cyanides (CN)	0.2
Fluorides (F)	1.5
Nitrates + nitrites (expressed as N)	10

<b>Inorganic substances</b>	<b>Maximum concentration (mg/L)</b>
Mercury (Hg)	0.001
Lead (Pb)	0.01
Selenium (Se)	0.01
Uranium (U)	0.02

## 3. Parameters respecting organic substances

Water must not contain organic substances in a concentration greater than that indicated in the following tables:

<b>Pesticides</b>	<b>Maximum concentration (µg/L)</b>
Aldicarb and its metabolites	9
Aldrin and dieldrin	0.7
Atrazine and its metabolites	5
Azinphos-methyl	20
Bendiocarb	40
Bromoxynil	5
Carbaryl	90
Carbofuran	90
Chlorpyrifos	90
Cyanazine	10
Diazinon	20
Dicamba	120
2,4-dichlorophenoxyacetic acid (2,4-D)	100
Diclofop-methyl	9
Dimethoate	20
Dinoseb	10
Diquat	70
Diuron	150
Glyphosate	280
Malathion	190

<b>Pesticides</b>	<b>Maximum concentration (µg/L)</b>
Methoxychlor	900
Metolachlor	50
Metribuzin	80
Paraquat in (dichlorides)	10
Parathion	50
Phorate	2
Picloram	190
Simazine	10
Terbufos	1
Trifluralin	45
<b>Other organic substances</b>	<b>Maximum concentration (µg/L)</b>
Benzene	5
Benzo(a)pyrene	0.01
Vinyl chloride	2
1,1-dichloroethylene	14
1,2-dichlorobenzene	200
1,4-dichlorobenzene	5
1,2-dichloroethane	5
Dichloromethane	50
2,4-dichlorophenol	900
Monochlorobenzene	80
Nitritotriacetic acid (NTA)	400
Pentachlorophenol	60
Tetrachloroethylene	30
2,3,4,6-tetrachlorophenol	100
Carbon tetrachloride	5
2,4,6-trichlorophenol	5
Trichloroethylene	50

<b>Other organic substances</b>	<b>Maximum annual average concentration (µg/L)</b>
Total trihalomethanes (chloroform, bromodichloromethane, chlorodibromomethane and bromoform)	80

#### 4. Parameters respecting radioactive substances

Water must not contain radioactive substances in a concentration greater than that indicated in the following table:

<b>Radioactive substances or activities</b>	<b>Maximum concentration (Bq/L)</b>
Gross alpha activity	0.1
Gross beta activity	1
Cesium-137	10
Iodine-131	6
Radium-226	0.6
Strontium-90	5
Tritium	7000

#### 5. Parameters respecting pH

The pH of water must not be greater than 8.5 nor less than 6.5.

#### 6. Parameters respecting turbidity

The turbidity of water must be less than or equal to 5 NTU (nephelometric turbidity units).

In addition, in the case of disinfected water, the turbidity must not exceed 0.5 NTU in more than 10 % of the samples collected under section 13 during a period of 90 consecutive days.