



Province of Alberta

ENVIRONMENTAL PROTECTION
AND ENHANCEMENT ACT

POTABLE WATER REGULATION

Alberta Regulation 277/2003

With amendments up to and including Alberta Regulation 21/2021

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(Consolidated up to 21/2021)

ALBERTA REGULATION 277/2003

Environmental Protection and Enhancement Act

POTABLE WATER REGULATION

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Interpretation

1(1) In this Regulation and, in the case of the definitions referred to in clauses (g), (h), (k) and (l), for the purposes of the Act,

- (a) “Act” means the *Environmental Protection and Enhancement Act*;
- (b) “approved laboratory” means a laboratory approved by the Director;
- (c) “certified operator” means a person who holds a valid certificate of qualification of the appropriate level issued under section 15;

- (d) “Director” means the person designated by Ministerial Order as Director for the purposes of this Regulation;
- (e) “hamlet” means an unincorporated community that has been designated as a hamlet in accordance with the *Municipal Government Act*;
- (f) “high quality groundwater” means groundwater that
 - (i) does not require treatment to comply with the applicable physical, chemical and radiological Maximum Acceptable Concentration or Interim Maximum Acceptable Concentration, except for fluoride, specified in the *Guidelines for Canadian Drinking Water Quality*, published by Health Canada, as amended or replaced from time to time, for the parameters listed in the *Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems*, published by the Department, as amended or replaced from time to time,
 - (ii) contains a concentration of naturally occurring fluoride of less than or equal to 2.4 milligrams per litre, and
 - (iii) is not under the direct influence of surface water;
- (g) “industrial development” means any development on the site of a plant referred to in section 2 of the Schedule of Activities in the Act;
- (h) “municipal development” means a development that consists of 2 or more lots but does not include a city, town, specialized municipality, village, summer village, settlement as defined in the *Metis Settlements Act*, hamlet, privately owned development or industrial development;
- (i) “owner” with respect to a waterworks system means
 - (i) the local authority of a city, town, specialized municipality, village, summer village or settlement as defined in the *Metis Settlements Act* in which the waterworks system is located;
 - (ii) for a hamlet,
 - (A) a cooperative, as defined in the *Cooperatives Act*, formed by the individual lot owners served by the hamlet’s waterworks system, or

- (B) if no cooperative exists, the local authority of the municipal district, improvement district, specialized municipality or special area in which the hamlet's waterworks system is located;
- (iii) for a municipal development,
 - (A) the local authority of the municipal district, improvement district, specialized municipality or special area in which the municipal development's waterworks system is located,
 - (B) the owner of a private utility, or
 - (C) where neither (A) nor (B) applies, the collection of individual lot owners located in a municipal development that is served by the waterworks system;
- (iv) for a privately owned development, the owner of the privately owned development;
- (v) for a waterworks system owned by a regional services commission, the regional services commission that owns the waterworks system;
- (vi) for a waterworks system that is a private utility, the owner of the private utility;
- (vii) for an industrial development, the owner of the industrial development in which the waterworks system is located;
- (viii) for a waterworks system that is a watering point, the owner of the watering point;
- (j) "person responsible for a waterworks system" means
 - (i) the owner of the waterworks system,
 - (ii) the operator of the waterworks system,
 - (iii) the local authority that contracts to obtain potable water from the waterworks system,
 - (iv) the local authority that grants a franchise for the supply of potable water by the waterworks system,
 - (v) the approval holder or registration holder, as the case may be, for the waterworks system,

- (vi) any successor, assignee, executor or administrator, receiver, receiver-manager or trustee of a person referred to in subclause (i), (ii), (iii), (iv) or (v), and
 - (vii) any person who acts as the principal or agent of a person referred to in subclause (i), (ii), (iii), (iv), (v) or (vi);
 - (k) “privately owned development” means a recreational development, school, mobile home park, restaurant, motel, community hall, work camp, holiday trailer park, campsite, picnic site, information centre or other similar development, including such a development owned or operated by the Government, that is on a parcel of land that is not subdivided, but does not include
 - (i) a single family dwelling, or
 - (ii) a farmstead;
 - (l) “private utility” means a waterworks system that is owned and operated by a person other than a person referred to in clause (i)(i), (ii), (iii)(A) and (C), (iv), (v), (vii) and (viii), but does not include a waterworks system that services only a single family dwelling or a farmstead;
 - (m) “professional engineer” means a professional engineer or registered professional technologist (engineering) under the *Engineering and Geoscience Professions Act*;
 - (n) “service connection” means the potable water service line from a water distribution main to the property being serviced, but for the purposes of section 5, means the potable water service line from a water distribution main to a building;
 - (o) “water distribution system” means a system of pipes, valves, fittings and appurtenances, including associated pressure reducing stations, that is used to convey potable water in a waterworks system to a service connection;
 - (p) “water treatment plant” means the physical components of the waterworks system that are used to produce potable water including components associated with the management of any wastes generated during treatment;
 - (q) “watering point” means a waterworks system that provides potable water in bulk to the public.
- (2) This Regulation only applies to waterworks systems referred to in Schedule 1, Division 5 and Schedule 2, Division 5 of the

Activities Designation Regulation, including additions, replacements, extensions and modifications referred to in the Notes in those Divisions.

AR 277/2003 s1;170/2012

Duty to comply with Regulation

2 Except where this Regulation provides otherwise, a person responsible for a waterworks system shall comply with this Regulation.

Water treatment requirements

3 A waterworks system must be

- (a) designed,
- (b) operated, and
- (c) maintained

to achieve under all normal and foreseeable operating conditions all water quality requirements specified in this Regulation, an approval or the applicable code of practice.

Design standards

4(1) A waterworks system must be designed so that it meets as a minimum

- (a) the standards and design requirements set out in the *Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems*, published by the Department, as amended or replaced from time to time, or
- (b) any other standards and design requirements specified by the Director.

(2) The design of a waterworks system or a portion of a waterworks system must be stamped and signed by the professional engineer who designed the system or portion of the system.

(3) Where

- (a) a waterworks system is operating on the date this Regulation comes into force and does not meet the standards and design requirements referred to in subsection (1)(a), or

- (b) a waterworks system does not meet a change made to the standards and design requirements referred to in subsection (1)(a) made after the date this Regulation comes into force,

subsection (1)(a) does not apply to the waterworks system until the date specified by the Director in a notice in writing given to a person responsible for the waterworks system.

- (4) A person who receives a notice under subsection (3) shall comply with the notice in accordance with its terms.

Extension, replacement or modification

5(1) Prior to commencing

- (a) an extension of a water distribution system,
- (b) a replacement of a portion of a water distribution system, or
- (c) a modification of potable water storage,

the registration holder or approval holder, as the case may be, shall inform the Director in writing of the intent to undertake the extension, replacement or modification.

- (2) The information referred to in subsection (1) must contain at least the following, where applicable:

- (a) the registration or approval number for the waterworks system as issued under the Act;
- (b) the location of the proposed extension, replacement or modification;
- (c) written confirmation, stamped and signed by a professional engineer, that the increased water flow associated with the extension is within the design capacity of the existing water distribution system;
- (d) written confirmation, stamped and signed by a professional engineer, that the increased water demand associated with the extension is within the design capacity of the authorized waterworks system providing potable water to the water distribution system;
- (e) any other information required by the Director.

- (3) No person shall commence

- (a) the extension of a water distribution system,

- (b) the replacement of a portion of a water distribution system, or
- (c) the modification of potable water storage,

where

- (d) the waterworks system design does not comply with the design standards set out in the *Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems*, published by the Department, as amended or replaced from time to time, or
- (e) the water distribution system will service a portion of a city, town, specialized municipality, village, summer village, settlement area as defined in the *Metis Settlements Act*, hamlet, privately owned development, municipal development or industrial development that is not serviced by a wastewater system in respect of which a current approval or registration has been issued under the Act,

unless that person has obtained written authorization of the Director.

(4) On request, the registration holder or approval holder, as the case may be, shall immediately provide to the Director or inspector any engineering drawings, specifications or other information regarding any aspect of the extension of a water distribution system, the replacement of a portion of a water distribution system or the modification of potable water storage.

Potable water quality

6(1) The physical, microbiological, chemical and radiological characteristics of the potable water in a waterworks system must be maintained to meet as a minimum

- (a) the applicable Maximum Acceptable Concentration or Interim Maximum Acceptable Concentration specified in the *Guidelines for Canadian Drinking Water Quality*, published by Health Canada, as amended or replaced from time to time, for the parameters listed in the *Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems*, published by the Department, as amended or replaced from time to time, and
- (b) any additional or other limits established by the Director in an approval or a code of practice.

(2) Where

- (a) a waterworks system is operating on the date this Regulation comes into force and does not meet the limits referred to in subsection (1)(a), or
- (b) a waterworks system does not meet a change made to the limits referred to in subsection (1)(a) made after the date this Regulation comes into force,

subsection (1)(a) does not apply to the waterworks system until the date specified by the Director in a notice in writing given to a person responsible for the waterworks system.

(3) A person who receives a notice under subsection (2) shall comply with the notice in accordance with its terms.

Performance standards

7(1) A waterworks system must meet at least the minimum waterworks performance standards set out in the *Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems*, published by the Department, as amended or replaced from time to time.

(2) Where

- (a) a waterworks system is operating on the date this Regulation comes into force and does not meet the standards referred to in subsection (1), or
- (b) a waterworks system does not meet a change made to the standards referred to in subsection (1) made after the date this Regulation comes into force,

subsection (1) does not apply to the waterworks system until the date specified by the Director in a notice in writing given to a person responsible for the waterworks system.

(3) A person who receives a notice under subsection (2) shall comply with the notice in accordance with its terms.

Addition of treatment chemicals

8 No person shall use or permit the use of a chemical for the treatment of water unless

- (a) the chemical is listed as a direct or indirect additive in Standard 60 or Standard 61, published by the National Standards Institute and National Sanitation Foundation (ANSI/NSF), as amended or replaced from time to time,
- (b) the chemical is listed in the approval, or

- (c) the person has obtained written authorization of the Director for use of the chemical.

Operation and maintenance requirements**9(1)** The equipment and controls for

- (a) filtration,
- (b) disinfection, and
- (c) all other required treatment

in a waterworks system must be operated in a manner that achieves the potable water quality required by this Regulation, an approval or a code of practice.

(2) In order to ensure continuous operation at a water treatment plant,

- (a) spare parts that are required to maintain the equipment used for disinfection of water or that are critical components of the waterworks system must be reasonably available, or
- (b) a back up water treatment system must be installed and maintained in operating condition.

Conservation and responsible use

10 A waterworks system must be designed and operated so as to conserve and ensure the responsible use of water.

Malfunction reports

11 Any failure or shut-down of the equipment used for disinfection must be reported immediately

- (a) to the Director, and
- (b) to the appropriate Regional Health Authority.

Fluoridation

12 Where fluoride is added to a waterworks system, the

- (a) application of fluoride,
- (b) monitoring of fluoride,
- (c) reporting of fluoride,

- (d) design of the fluoridation equipment, and
- (e) operation of the fluoridation equipment

must be in accordance with the requirements specified in the *Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems*, published by the Department, as amended or replaced from time to time.

Prohibitions re: waterworks system

13(1) Subject to section 8 or except where permitted by an approval, no person shall use or permit the use of any chemical or any commercial product in circumstances such that the chemical or commercial product may come into contact with water in any part of a waterworks system.

(2) No person shall cause or permit any connection in a waterworks system that allows a substance that may cause an adverse effect to enter into the waterworks system.

Certified operator required

14(1) At all times, the operation of the

- (a) water treatment plant, and
- (b) water distribution system

in a waterworks system must be performed by, or under the direction of, a person who holds a valid certificate of qualification at the applicable level as set out in an approval or the applicable code of practice.

(2) A person responsible for a waterworks system shall at no time permit the number of certified operators available to operate or direct the operation of the water treatment plant or water distribution system to fall below the applicable number as set out in an approval or the applicable code of practice.

(3) A person responsible for a waterworks system shall notify the Director in writing

- (a) forthwith of the names of all certified operators referred to in this section, and
- (b) within 30 days of any change of certified operators referred to in this section.

Certification of operators

15(1) The Director may issue the following kinds of certificate of qualification:

- (a) water treatment operator certificate of qualification;
- (b) water distribution operator certificate of qualification

at any level described in the *Water and Wastewater Operator's Certification Guidelines*, published by the Department, as amended or replaced from time to time, to persons who meet the requirements of subsection (2).

(2) An applicant for any level of certificate of qualification referred to in subsection (1) must

- (a) apply to the Director on a form acceptable to the Director,
- (b) meet the qualification requirements as set out in the guidelines referred to in subsection (1) for that level of certificate of qualification, and
- (c) be at least 18 years of age.

(3) An applicant for renewal of any level of certificate of qualification referred to in subsection (1) must meet the qualifications for renewal set out in, and make the application in accordance with, the guidelines referred to in subsection (1).

Returns and reports

16(1) A person responsible for a waterworks system shall submit returns and reports respecting the construction, operation or reclamation of the system

- (a) as required in an approval or the applicable code of practice, or
- (b) as required by the Director, by a notice in writing.

(2) A person who receives a notice under subsection (1)(b) shall comply with the notice in accordance with its terms.

Sampling

17(1) A person responsible for a waterworks system shall

- (a) obtain water samples, and

- (b) submit the samples for physical, microbiological, radiological or chemical analysis by an approved laboratory,

in accordance with an approval, the applicable code of practice or a notice in writing from the Director.

(2) With respect to any sample required to be taken pursuant to this Regulation, an approval, the applicable code of practice or a notice in writing from the Director,

- (a) sample collection,
- (b) sample preservation,
- (c) sample storage,
- (d) sample handling, and
- (e) sample analysis

must be conducted in accordance with

- (f) the *Standard Methods for the Examination of Water and Wastewater*, published by the American Public Health Association, the American Waterworks Association and the Water Environment Federation, as amended or replaced from time to time,
- (g) the *Methods Manual for Chemical Analysis of Water and Wastes*, published by the Alberta Research Council, as amended or replaced from time to time, or
- (h) a method authorized in writing by the Director.

(3) Unless the Director specifies otherwise in an approval, the minimum number of water samples to be obtained for analysis of bacteriological quality must be

- (a) obtained in accordance with the *Guidelines for Canadian Drinking Water Quality*, published by Health Canada, as amended or replaced from time to time, and
- (b) evenly distributed through the sampling period.

(4) Where, in the Director's opinion, a sample or analysis is unsatisfactory, the Director may require a person responsible for a waterworks system

- (a) to resubmit the same sample for analysis or reanalyze the same sample,

- (b) to take and analyze additional samples, or
 - (c) to take and analyze samples at a greater frequency.
- (5)** A person responsible for a waterworks system shall comply
- (a) with a notice under this section in accordance with its terms, and
 - (b) with the Director's requirements under subsection (4).

Repeal

18 The *Potable Water Regulation* (AR 122/93) is repealed.

Expiry

19 For the purpose of ensuring that this Regulation is reviewed for ongoing relevancy and necessity, with the option that it may be repassed in its present or an amended form following a review, this Regulation expires on June 30, 2022.

AR 277/2003 s19;96/2011;121/2013;63/2015;126/2017;21/2021

Coming into force

20 This Regulation comes into force on October 1, 2003.



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