

APPENDIX "E"

Français

Safe Drinking Water Act, 2002

ONTARIO REGULATION 170/03 DRINKING WATER SYSTEMS

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This is the English version of a bilingual regulation.

CONTENTS

1.	Interpretation: general
2.	Interpretation: ground water under direct influence of surface water
3.	Interpretation: open designated facilities and public facilities
4.	Application
4.1	Exemptions: certain systems that do not serve designated facilities
5.	Exemptions: residential systems
5.1	Water obtained through transportation
6.	Exemptions: non-residential systems connected to other systems
7.	Exemptions: non-residential systems that receive transported water
8.	Exemptions: warning notices for systems and users without electricity, etc.
8.0.1	Systems regulated under the Health Protection and Promotion Act
8.1	Exemption from certified operator requirement of Act
9.	Exemptions from approval requirements of Act
9.1	Exemptions from transfer of ownership requirements of Act
10.	Revocation of OWRA approvals for non-municipal systems
10.1	System information
11.	Annual reports
12.	Information to be available
13.	Retention of records
14.	Forms
15.	Purpose of notice to interested authorities
Schedule 1	Treatment equipment
Schedule 2	Treatment equipment
Schedule 3	Point of entry treatment
Schedule 4	Relief from schedule 1
Schedule 5	Relief from schedule 2
Schedule 6	Operational checks, sampling and testing — general
Schedule 7	Operational checks
Schedule 8	Maintenance and operational checks
Schedule 9	Maintenance and operational checks
Schedule 10	Microbiological sampling and testing
Schedule 11	Microbiological sampling and testing
Schedule 12	Microbiological sampling and testing
Schedule 13	Chemical sampling and testing
Schedule 15	Chemical sampling and testing
Schedule 15.1	Lead
Schedule 15.2	Lead
Schedule 16	Reporting adverse test results and other problems
Schedule 17	Corrective action
Schedule 18	Corrective action
Schedule 19	Warning notice of potential problems
Schedule 21	Engineering evaluation reports
Schedule 22	Summary reports for municipalities
Schedule 23	Inorganic parameters
Schedule 24	Organic parameters

Interpretation: general

1. (1) In this Regulation,

“appurtenance” includes a valve, valve chamber, hydrant, hydrant lead, flow meter, curb stop, maintenance access point, personnel access opening or other minor accessory part of a watermain; (“accessoire”)

“calendar quarter” means, in relation to a year, the three-month period that begins on January 1, April 1, July 1 or October 1; (“trimestre civil”)

“certified operator” means, with respect to a subsystem, an individual who holds or is deemed to hold a certificate under Ontario Regulation 128/04 (Certification of Drinking Water System Operators and Water Quality Analysts) that is applicable under that regulation to that subsystem or that type of subsystem, but does not include an individual who holds or is deemed to hold only a water quality analyst’s certificate or conditional water quality analyst’s certificate under that regulation; (“exploitant agréé”)

“children and youth care facility” means,

- (a) a day nursery,
- (b) a facility where child development services, child treatment services, child welfare services, community support services or youth justice services, within the meaning of the *Child and Family Services Act*, are provided, unless the facility is located in a private residence,
- (c) a facility where child and family intervention services, within the meaning of Regulation 70 of the Revised Regulations of Ontario, 1990 (General) made under the *Child and Family Services Act*, are provided, unless the facility is located in a private residence,
- (d) an Ontario Early Years Centre that receives funding under the *Ministry of Community and Social Services Act*,
- (e) a location where a satellite program of an Ontario Early Years Centre that receives funding under the *Ministry of Community and Social Services Act* is operated, if the satellite program provides programs and services on a regular basis, or
- (f) a residence licensed as a children’s residence under the *Child and Family Services Act*; (“établissement de services à l’enfance et à la jeunesse”)

“children’s camp” means a camp that is intended primarily for campers under 18 years of age and that is a class A camp or class B camp within the meaning of Regulation 568 of the Revised Regulations of Ontario, 1990 (Recreational Camps) under the *Health Protection and Promotion Act*; (“camp de vacances pour enfants”)

“chloramination” means combined chlorine residual disinfection where the combined chlorine residual is predominately in the form of monochloramine; (“chloramination”)

“chlorination” means free chlorine residual disinfection; (“chloration”)

“day nursery” means a day nursery as defined in the *Day Nurseries Act*; (“garderie”)

“delivery agent care facility” means,

- (a) a place that receives funding to provide emergency shelter or long-term housing under the Community Homelessness Prevention Initiative of the Ministry of Municipal Affairs and Housing, unless,
 - (i) the place is located in a private residence, or
 - (ii) the place is used only for services other than emergency shelter or long-term housing, or is used only for office and administrative purposes,
- (b) REVOKED: O. Reg. 420/12, s. 1 (1).
- (c) a place where a resource centre program that receives funding under the *Day Nurseries Act* is provided, or
- (d) a place where a recreational program that receives funding under the *Day Nurseries Act* is provided; (“établissement de prestation de services”)

“designated facility” means,

- (a) a children and youth care facility,
 - (a.1) a children’s camp,
- (b) a delivery agent care facility,
- (c) a health care facility,
- (d) a school or private school,
- (e) a social care facility, or

(f) a university, a college of applied arts and technology, or an institution with authority to grant degrees; (“établissement désigné”)

“distribution sample” means, with respect to a drinking water system, a water sample that is taken, in the drinking water system’s distribution system or in plumbing that is connected to the drinking water system, from a point significantly beyond the point at which drinking water enters the distribution system or plumbing; (“échantillon de distribution”)

“food service establishment” means food service premises, as defined in Regulation 562 of the Revised Regulations of Ontario, 1990 (Food Premises) under the *Health Protection and Promotion Act*, to which the general public is admitted, other than temporary food service premises that are operated solely in conjunction with an exhibition, fair, carnival, sports meeting or other special or temporary event; (“établissement de restauration”)

“health care facility” means a facility that provides overnight accommodation and that is,

(a) a hospital within the meaning of the *Public Hospitals Act* or the *Community Psychiatric Hospitals Act*,

(b) a private hospital within the meaning of the *Private Hospitals Act*,

(c) a psychiatric facility within the meaning of the *Mental Health Act*,

(d) a long term-care home within the meaning of the *Long-Term Care Homes Act, 2007*,

(e), (f) REVOKED: O. Reg. 106/10, s. 1.

(g) a cancer centre established by the Ontario Cancer Treatment and Research Foundation under the *Cancer Act*,

(h) a home for special care within the meaning of the *Homes for Special Care Act*,

(i) an approved home within the meaning of the *Mental Hospitals Act*,

(j) a residence for seniors or retired persons, or any other similar residence, where attainment of a mature age is a factor in being accepted for occupancy,

(k) a nursing station, health centre, clinic or other facility that receives funding through the Ministry of Health and Long-Term Care’s Underserviced Area Program, or

(l) a facility owned or leased by a person who receives funding from the Ministry of Health and Long-Term Care for one or more of the following health care support services that are provided to or are available to residents of the facility:

(i) a residential treatment services program,

(ii) a withdrawal management services program,

(iii) a dedicated supportive housing project; (“établissement de soins de santé”)

“infiltration gallery” means a subsurface ground water collection system constructed with open-jointed or perforated pipes that discharge collected water into a watertight chamber; (“galerie d’infiltration”)

“interested authority” means,

(a) with respect to a children and youth care facility, the Ministry of Children and Youth Services, or any successor of that ministry,

(a.1) with respect to a delivery agent care facility, the service manager designated under the *Housing Services Act, 2011* or the delivery agent designated under the *Day Nurseries Act* for the geographic area in which the facility is located, or any successor of that service manager or delivery agent,

(b) with respect to a health care facility, the Ministry of Health and Long-Term Care, or any successor of that ministry,

(c) with respect to a school, the Ministry of Education, or any successor of that ministry,

(d) with respect to a social care facility, the Ministry of Community and Social Services, or any successor of that ministry, or

(e) with respect to a university, a college of applied arts and technology, or an institution with authority to grant degrees, the Ministry of Training, Colleges and Universities, or any successor of that ministry; (“autorité compétente”)

“large municipal non-residential system” means a municipal drinking water system that does not serve a major residential development and is capable of supplying drinking water at a rate of more than 2.9 litres per second; (“gros réseau non résidentiel municipal”)

“large municipal residential system” means a municipal drinking water system that serves a major residential development and serves more than 100 private residences; (“gros réseau résidentiel municipal”)

“large non-municipal non-residential system” means a non-municipal drinking water system that is capable of supplying drinking water at a rate of more than 2.9 litres per second and does not serve,

- (a) a major residential development, or
 - (b) a trailer park or campground that has more than five service connections; (“gros réseau non résidentiel et non municipal”)
- “licensed engineering practitioner” means a person who holds a licence, limited licence or temporary licence under the *Professional Engineers Act*; (“praticien de l’ingénierie titulaire d’un permis”)
- “month” means a calendar month; (“mois”)
- “non-municipal seasonal residential system” means a non-municipal drinking water system that,
- (a) serves,
 - (i) a major residential development, or
 - (ii) a trailer park or campground that has more than five service connections, and
 - (b) does not operate to supply water to a development, trailer park or campground referred to in clause (a) for at least 60 consecutive days in,
 - (i) every calendar year, or
 - (ii) every period that begins on April 1 in one year and ends on March 31 in the following year; (“réseau résidentiel saisonnier non municipal”)
- “non-municipal year-round residential system” means a non-municipal drinking water system, other than a non-municipal seasonal residential system, that serves,
- (a) a major residential development, or
 - (b) a trailer park or campground that has more than five service connections; (“réseau résidentiel toutes saisons non municipal”)
- “Ontario Drinking Water Quality Standards” means Ontario Regulation 169/03 (Ontario Drinking Water Quality Standards); (“normes de qualité de l’eau potable de l’Ontario”)
- “OWRA approval” means an approval granted before this Regulation came into force under section 52 of the *Ontario Water Resources Act*; (“approbation visée par la LREO”)
- “OWRA order” means an order, direction or report in respect of a water works that was issued before this Regulation came into force under the *Ontario Water Resources Act*; (“texte visé par la LREO”)
- “point of entry treatment unit” means equipment that,
- (a) is designed to provide primary disinfection,
 - (b) is installed in a drinking water system at or near where water from the system enters a building or other structure, and
 - (c) is connected to the plumbing associated with the building or other structure; (“unité de traitement au point d’entrée”)
- “primary disinfection” means a process or series of processes intended to remove or inactivate human pathogens such as viruses, bacteria and protozoa in water; (“désinfection primaire”)
- “private residence” has the meaning prescribed in Ontario Regulation 171/03 (Definitions of Words and Expressions Used in the Act) for the purpose of the definition of “private residence” in subsection 2 (1) of the Act; (“résidence privée”)
- “private school” means a private school as defined in the *Education Act*; (“école privée”)
- “*Procedure for Corrective Action for Systems Not Currently Using Chlorine*” means the document of that name, originally dated April 16, 2003, published by and available from the Ministry, as amended from time to time; (“*Mesures correctives à prendre pour les réseaux n’utilisant pas de chlore*”)
- “*Procedure for Disinfection of Drinking Water in Ontario*” means the document of that name, originally dated April 16, 2003, published by and available from the Ministry, as amended from time to time; (“*Marche à suivre pour désinfecter l’eau potable en Ontario*”)
- “professional hydrogeologist” means a hydrogeologist who is a member of the Association of Professional Geoscientists of Ontario; (“hydrogéologue”)
- “public facility” means,
- (a) a food service establishment,
 - (b) a place that operates primarily for the purpose of providing overnight accommodation to the travelling public,
 - (b.1) a trailer park or campground,

- (c) a marina,
- (d) a church, mosque, synagogue, temple or other place of worship,
- (e) a recreational camp,
- (f) a recreational or athletic facility,
- (g) a place, other than a private residence, where a service club or fraternal organization meets on a regular basis, or
- (h) any place where the general public has access to a washroom, drinking water fountain or shower; (“installation publique”)

“resample and test” means,

- (a) with respect to corrective action that arises from the test of a water sample for a microbiological parameter,
 - (i) take a set of water samples, at approximately the same time, with,
 - (A) at least one sample from the same location as the sample that gave rise to the corrective action,
 - (B) at least one sample from a location that is a significant distance upstream from the location described in sub-subclause (A), if that is reasonably possible, and
 - (C) at least one sample from a location that is a significant distance downstream from the location described in sub-subclause (A), if that is reasonably possible, and
 - (ii) conduct, on the samples taken under subclause (i), the same test that gave rise to the corrective action, or
- (b) with respect to corrective action that arises from the test of a water sample for a parameter that is not a microbiological parameter,
 - (i) take a water sample from the same location as the sample that gave rise to the corrective action, and
 - (ii) conduct, on the sample taken under subclause (i), the same test that gave rise to the corrective action; (“prélever de nouveaux échantillons et les analyser”)

“school” means a school as defined in the *Education Act*; (“école”)

“secondary disinfection” means a process or series of processes intended to provide and maintain a disinfectant residual in a drinking water system’s distribution system, and in plumbing connected to the distribution system, for the purposes of,

- (a) protecting water from microbiological re-contamination,
- (b) reducing bacterial regrowth,
- (c) controlling biofilm formation, and
- (d) serving as an indicator of distribution system integrity,

and includes the use of disinfectant residuals from primary disinfection to provide and maintain a disinfectant residual in a drinking water system’s distribution system for the purposes described in clauses (a) to (d); (“désinfection secondaire”)

“service connection” means,

- (a) a point where a drinking water system connects to plumbing, other than plumbing in a trailer park or campground, or
- (b) in a trailer park or campground, a fixture that allows a trailer or other vehicle to connect to the trailer park’s or campground’s drinking water system; (“branchement d’eau”)

“service pipe” means the pipe portion of a drinking water system that extends from a watermain to the property line of a property serviced by the watermain; (“conduite de branchement”)

“small municipal non-residential system” means a municipal drinking water system that does not serve a major residential development, is not capable of supplying drinking water at a rate of more than 2.9 litres per second and serves a designated facility or public facility; (“petit réseau non résidentiel municipal”)

“small municipal residential system” means a municipal drinking water system that serves a major residential development but serves fewer than 101 private residences; (“petit réseau résidentiel municipal”)

“small non-municipal non-residential system” means a non-municipal drinking water system that is not capable of supplying drinking water at a rate of more than 2.9 litres per second, serves a designated facility or public facility and does not serve,

- (a) a major residential development, or
- (b) a trailer park or campground that has more than five service connections; (“petit réseau non résidentiel et non municipal”)

“social care facility” means,

- (a) a supported group living residence or intensive support residence that receives funding under the *Services and Supports to Promote the Social Inclusion of Persons with Developmental Disabilities Act, 2008*,
- (b)-(d) REVOKED: O. Reg. 253/05, s. 1 (8).
- (e) a place where an emergency shelter service that receives funding under the *Ministry of Community and Social Services Act* is provided, unless the place is located in a private residence,
- (f), (g) REVOKED: O. Reg. 253/05, s. 1 (8).
- (h) a sheltered workshop that receives funding under the *Ministry of Community and Social Services Act*,
- (i) a place where a supported employment program that receives funding under the *Ministry of Community and Social Services Act* is provided,
- (j) a place where community participation services and supports that receive funding under the *Services and Supports to Promote the Social Inclusion of Persons with Developmental Disabilities Act, 2008* are provided, unless the place is located in a private residence,
- (k) a place where an employment preparation, training and job placement program that receives funding under the *Ontario Disability Support Program Act, 1997* is provided,
- (l) a place where a violence against women program that receives funding under the *Ministry of Community and Social Services Act* is provided, unless the place is located in a private residence,
- (m) a place where an aboriginal healing and wellness program funded under the Aboriginal Healing and Wellness Strategy is provided; (“établissement de services sociaux”)

“subsystem” has the same meaning as in Ontario Regulation 128/04 (Certification of Drinking Water System Operators and Water Quality Analysts); (“sous-réseau”)

“trained person” means,

- (a) an individual who holds or is deemed to hold a certificate under Ontario Regulation 128/04 (Certification of Drinking Water System Operators and Water Quality Analysts), other than an individual who holds or is deemed to hold only a water quality analyst’s certificate or conditional water quality analyst’s certificate under that regulation, or
- (b) a person who, in the preceding 36 months, successfully completed a course approved by the Director that relates to the operation and routine maintenance of drinking water systems; (“personne qualifiée”)

“watermain” means any system of pipes and appurtenances used for the distribution of drinking water, but does not include plumbing or a pumping facility; (“conduite d’eau principale”)

“water quality analyst” has the same meaning as in Ontario Regulation 128/04 (Certification of Drinking Water System Operators and Water Quality Analysts); (“analyste de la qualité de l’eau”)

“week” means a period of seven days that begins on Sunday and ends on the following Saturday. (“semaine”) O. Reg. 170/03, s. 1 (1); O. Reg. 170/03, s. 1 (12); O. Reg. 249/03, s. 1; O. Reg. 269/03, s. 1; O. Reg. 165/04, s. 1; O. Reg. 126/04, s. 1; O. Reg. 253/05, s. 1 (1-8); O. Reg. 247/06, s. 1; O. Reg. 326/08, s. 1; O. Reg. 418/09, s. 1 (1-4); O. Reg. 106/10, s. 1; O. Reg. 420/12, s. 1; O. Reg. 374/15, s. 1.

(2) Despite the definition of “large municipal non-residential system” in subsection (1), a drinking water system described in that definition that has one or more distribution lines that supply water exclusively for operations described in subsection (3), shall be deemed to be a small municipal non-residential system for the purposes of this Regulation if the result of the following calculation is 2.9 litres per second or less:

$$A - B$$

where,

A = the maximum rate, expressed in litres per second, at which the drinking water system can supply drinking water,

B = the sum of the average rates, expressed in litres per second, at which the drinking water system supplied drinking water in the preceding calendar year to the distribution lines that supply water exclusively for operations described in subsection (3).

O. Reg. 170/03, s. 1 (2).

(3) The operations referred to in subsections (2) and (6) are the following:

1. Agricultural operations.
2. Landscaping operations.

3. Industrial or manufacturing operations, including food manufacturing or processing operations.

4. Swimming pool or skating rink maintenance operations. O. Reg. 170/03, s. 1 (3).

(4) Despite subsection (2) and the definition of “large municipal non-residential system” in subsection (1), a drinking water system described in subsection (2) shall be deemed, during the calendar year in which the system begins operation, to be a small municipal non-residential system for the purposes of this Regulation if the owner of the system, on reasonable grounds, estimates that the result of the calculation referred to in subsection (2) would be 2.9 litres per second or less if the system had operated during all of the preceding calendar year. O. Reg. 170/03, s. 1 (4).

(5) REVOKED: O. Reg. 253/05, s. 1 (9).

(6) Despite the definition of “large non-municipal non-residential system” in subsection (1), a drinking water system described in that definition that has one or more distribution lines that supply water exclusively for operations described in subsection (3) shall be deemed to be a small non-municipal non-residential system for the purposes of this Regulation if the result of the following calculation is 2.9 litres per second or less:

$$A - B$$

where,

A = the maximum rate, expressed in litres per second, at which the drinking water system can supply drinking water,

B = the sum of the average rates, expressed in litres per second, at which the drinking water system supplied drinking water in the preceding calendar year to the distribution lines that supply water exclusively for operations described in subsection (3).

O. Reg. 170/03, s. 1 (6).

(7) Despite subsection (6) and the definition of “large non-municipal non-residential system” in subsection (1), a drinking water system described in subsection (6) shall be deemed, during the calendar year in which the system begins operation, to be a small non-municipal non-residential system for the purposes of this Regulation if the owner of the system, on reasonable grounds, estimates that the result of the calculation referred to in subsection (6) would be 2.9 litres per second or less if the system had operated during all of the preceding calendar year. O. Reg. 170/03, s. 1 (7).

(8) REVOKED: O. Reg. 253/05, s. 1 (10).

(9) For the purposes of the definition of “non-municipal seasonal residential system” in subsection (1), a drinking water system that, during the 365-day period that begins on the day the system begins operation, will not supply water for at least 60 consecutive days to a development, trailer park or campground referred to in clause (a) of that definition shall be deemed, during that 365-day period, to be a drinking water system that does not operate to supply water to a development, trailer park or campground referred to in clause (a) of that definition for at least 60 consecutive days in every calendar year. O. Reg. 253/05, s. 1 (11).

(10) SPENT: O. Reg. 170/03, s. 1 (10).

(11) SPENT: O. Reg. 170/03, s. 1 (11).

(12) SPENT: O. Reg. 170/03, s. 1 (12).

Interpretation: ground water under direct influence of surface water

2. (1) A drinking water system that obtains water from a raw water supply that is ground water under the direct influence of surface water is deemed, for the purposes of this Regulation, to be a drinking water system that obtains water from a raw water supply that is surface water. O. Reg. 170/03, s. 2 (1).

(2) The following drinking water systems are deemed, for the purposes of this Regulation, to be drinking water systems that obtain water from a raw water supply that is ground water under the direct influence of surface water:

1. A drinking water system that obtains water from a well that is not a drilled well or from a well that does not have a watertight casing that extends to a depth of six metres below ground level.
2. A drinking water system that obtains water from an infiltration gallery.
3. A drinking water system that is not capable of supplying water at a rate greater than 0.58 litres per second and that obtains water from a well, any part of which is within 15 metres of surface water.
4. A drinking water system that is capable of supplying water at a rate greater than 0.58 litres per second and that obtains water from an overburden well, any part of which is within 100 metres of surface water.
5. A drinking water system that is capable of supplying water at a rate greater than 0.58 litres per second and that obtains water from a bedrock well, any part of which is within 500 metres of surface water.
6. A drinking water system that exhibits evidence of contamination by surface water.

7. A drinking water system in respect of which a written report has been prepared by a licensed engineering practitioner or professional hydrogeologist that concludes that the system's raw water supply is ground water under the direct influence of surface water and that includes a statement of his or her reasons for reaching that conclusion. O. Reg. 170/03, s. 2 (2); O. Reg. 418/09, s. 1 (5).
- (3) Subsection (2) does not apply to a drinking water system if,
- (a) a written report prepared after August 1, 2000 by a licensed engineering practitioner or professional hydrogeologist concludes that the raw water supply is not ground water under the direct influence of surface water and the report includes a statement of his or her reasons for reaching that conclusion; and
- (b) in the case of a drinking water system that requires an approval, drinking water works permit or municipal drinking water licence, the Director agrees that the raw water supply is not ground water under the direct influence of surface water. O. Reg. 170/03, s. 2 (3); O. Reg. 418/09, ss. 1 (5), 2.
- (4) A drinking water system that obtains water from a raw water supply that is surface water is deemed, for the purposes of this Regulation, not to be a drinking water system that obtains water from a raw water supply that is ground water. O. Reg. 170/03, s. 2 (4).

Interpretation: open designated facilities and public facilities

3. (1) For the purposes of this Regulation, a school or private school is open on a day if, at any time during that day, programs for children under 18 years of age are held at the school or private school. O. Reg. 170/03, s. 3 (1).

(2) For the purposes of this Regulation, a designated facility other than a school or private school is open on a day if, at any time during that day, any of the persons that the facility serves, cares for or provides programming for are present at the facility. O. Reg. 170/03, s. 3 (2).

(3) For the purposes of this Regulation, a public facility is open on a day unless persons served by the facility are denied access to the facility during the entire day. O. Reg. 170/03, s. 3 (3).

(4) For the purposes of this Regulation, a place that is both a designated facility and a public facility is open on a day, despite subsections (1) to (3), if,

- (a) as a designated facility, it is open on that day, according to subsection (1) or (2), whichever is applicable; or
- (b) as a public facility, it is open on that day, according to subsection (3). O. Reg. 249/03, s. 2.

Application

4. Unless otherwise provided, this Regulation applies to the drinking water systems referred to in the following Table, with each row of the Table setting out the Schedules to this Regulation that apply to the drinking water systems referred to in that row:

TABLE
APPLICATION OF SCHEDULES

Item	Drinking Water Systems	Applicable Schedules - Treatment	Applicable Schedules - Operational Checks, Sampling and Testing	Applicable Schedules - Adverse Test Results and Other Problems	Applicable Schedules - Reports	Applicable Schedules - Chemical Testing Parameters
1.	Large municipal residential systems	1, 4	6, 7, 10, 13, 15.1	16, 17	22	23, 24
2.	Small municipal residential systems	1, 3, 4	6, 7, 11, 13, 15.1	16, 18, 19	22	23, 24
3.	Large municipal non-residential systems	2, 3, 5	6, 8, 12, 15, 15.2	16, 18, 19	21	23, 24
4.	Small municipal non-residential systems	2, 3, 5	6, 9, 12, 15, 15.2	16, 18, 19	21	23, 24
5.	Non-municipal year-round residential systems	2, 3, 5	6, 8, 11, 13, 15.1	16, 18, 19	21	23, 24
6.	Non-municipal seasonal residential systems	2, 3, 5	6, 9, 12, 15, 15.2	16, 18, 19	21	23, 24
7.	Large non-municipal non-residential systems	2, 3, 5	6, 8, 12, 15, 15.2	16, 18, 19	21	23, 24
8.	Small non-municipal non-residential systems	2, 3, 5	6, 9, 12, 15, 15.2	16, 18, 19	21	23, 24

O. Reg. 170/03, s. 4; O. Reg. 247/06, s. 2; O. Reg. 399/07, s. 1.

Exemptions: certain systems that do not serve designated facilities

4.1 This Regulation, except section 8.0.1, does not apply to any of the following drinking water systems unless the system serves a designated facility:

1. Large municipal non-residential systems.
2. Small municipal non-residential systems.
3. Non-municipal seasonal residential systems.
4. Large non-municipal non-residential systems.
5. Small non-municipal non-residential systems. O. Reg. 253/05, s. 2; O. Reg. 326/08, s. 2.

Exemptions: residential systems

5. (1) If a large municipal residential system or small municipal residential system obtains all of its water from a drinking water system described in subsection (1.1), Schedules 1, 7, 10, 11 and 13 do not apply to the system that obtains the water, except for the following provisions:

1. Section 7-1, subsections 7-2 (3) to (6) and section 7-5 of Schedule 7.
2. Sections 10-1 and 10-2 of Schedule 10.
3. Sections 11-1, 11-2 and 11-4 of Schedule 11.
4. Sections 13-1, 13-5, 13-6, 13-10 and 13-11 of Schedule 13. O. Reg. 247/06, s. 3 (1); O. Reg. 399/07, s. 2 (1).

(1.1) Subsection (1) applies if the drinking water system from which water is obtained,

- (a) is a large municipal residential system or small municipal residential system to which this Regulation applies;
- (b) provides primary disinfection in accordance with section 1-3 of Schedule 1, or provides filtration and primary disinfection in accordance with section 1-4 of Schedule 1; and
- (c) provides secondary disinfection in accordance with section 1-5 of Schedule 1. O. Reg. 247/06, s. 3 (1).

(2) If a non-municipal year-round residential system obtains all of its water from a drinking water system described in subsection (3.1), Schedules 2, 8, 11 and 13 do not apply to the system that obtains the water, except for the following provisions:

1. Sections 8-1 and 8-2, subsections 8-3 (3) and (3.1) and sections 8-5 and 8-7 of Schedule 8.
2. Sections 11-1, 11-2 and 11-4 of Schedule 11.
3. Sections 13-1, 13-5, 13-10 and 13-11 of Schedule 13.
4. If the system that obtains the water rechlorinates the water, section 13-6 of Schedule 13. O. Reg. 170/03, s. 5 (2); O. Reg. 249/03, s. 3 (2); O. Reg. 247/06, s. 3 (2, 3); O. Reg. 399/07, s. 2 (2).

(3) If a non-municipal seasonal residential system obtains all of its water from a drinking water system described in subsection (3.1), Schedules 2, 9, 12 and 15 do not apply to the system that obtains the water, except for the following provisions:

1. Sections 9-1 and 9-2, subsections 9-3 (3) and (3.1) and sections 9-5, 9-6 and 9-8 of Schedule 9.
2. Sections 12-1, 12-2 and 12-4 of Schedule 12.
3. Sections 15-1 and 15-7 of Schedule 15. O. Reg. 247/06, s. 3 (4); O. Reg. 399/07, s. 2 (3).

(3.1) Subsections (2) and (3) apply if the drinking water system from which water is obtained,

- (a) is a drinking water system to which this Regulation applies;
- (b) provides primary disinfection in accordance with section 1-3 of Schedule 1 or section 2-3 of Schedule 2, or provides filtration and primary disinfection in accordance with section 1-4 of Schedule 1 or section 2-4 of Schedule 2; and
- (c) provides secondary disinfection in accordance with section 1-5 of Schedule 1 or section 2-5 of Schedule 2. O. Reg. 247/06, s. 3 (5).

(4) This Regulation, except sections 8.1, 9, 10 and 10.1 and subsections 11 (2.1), (8) and (9), does not apply to a drinking water system that obtains all of its water from another drinking water system if,

- (a) pursuant to subsection (1), (2) or (3), the drinking water system that obtains the water is exempt from provisions of this Regulation; and
- (b) the owner of the drinking water system from which the water is obtained has agreed in writing,

- (i) to ensure that the treatment equipment that provides secondary disinfection in accordance with section 1-5 of Schedule 1 or 2-5 of Schedule 2 is operated so that, at all times and at all locations within the distribution system of the system that obtains the water,
 - (A) the free chlorine residual is never less than 0.05 milligrams per litre, if the drinking water system from which the water is obtained provides chlorination and does not provide chloramination, or
 - (B) the combined chlorine residual is never less than 0.25 milligrams per litre, if the drinking water system from which the water is obtained provides chloramination,
- (ii) to sample and test the water in the distribution system of the system that obtains the water as if it were part of the distribution system of the system from which the water is obtained, and
- (iii) to comply, on behalf of the owner of the system that obtains the water and the operating authority for the system,
 - (A) with Schedule 15.1, in the case of a large municipal residential system, a small municipal residential system or a non-municipal year-round residential system, or
 - (B) with Schedule 15.2, in the case of a seasonal residential system. O. Reg. 269/03, s. 2 (2); O. Reg. 247/06, s. 3 (6); O. Reg. 399/07, s. 2 (4).

(5) If a drinking water system obtains water from another drinking water system and the owner of the system from which water is obtained has agreed in writing to do anything referred to in subclauses (4) (b) (i), (ii) and (iii), the owner shall comply with the agreement. O. Reg. 247/06, s. 3 (7); O. Reg. 418/09, s. 3.

- (6) This section applies whether the water that is obtained,
 - (a) is obtained through connections;
 - (b) is obtained through transportation; or
 - (c) is obtained through a combination of connections and transportation. O. Reg. 247/06, s. 3 (7).

Water obtained through transportation

5.1 (1) If a drinking water system to which an exemption set out in section 5 applies obtains water through transportation, the transported drinking water must be stored in a container that is constructed and maintained in a manner that prevents surface water and other foreign materials from coming into contact with the drinking water. O. Reg. 418/09, s. 4.

(2) If a non-municipal year-round residential system obtains all of its water through transportation, Schedule 21 does not apply to the system that obtains the water. O. Reg. 418/09, s. 4.

(3) If a non-municipal seasonal residential system obtains all of its water through transportation, Schedule 21 does not apply to the system that obtains the water. O. Reg. 418/09, s. 4.

Exemptions: non-residential systems connected to other systems

6. (1) This Regulation, except section 8.1, subsection 9 (1), sections 9.1, 10 and 10.1 and subsections 11 (2.1), (8) and (9), does not apply to a drinking water system listed in subsection (2) if,

- (a) the drinking water system is connected to and receives all of its drinking water from another drinking water system to which this Regulation does apply;
- (a.1) the drinking water system from which the drinking water is obtained provides primary disinfection in accordance with section 1-3 of Schedule 1 or section 2-3 of Schedule 2, or provides filtration and primary disinfection in accordance with section 1-4 of Schedule 1 or section 2-4 of Schedule 2;
- (b) the drinking water system from which the drinking water is obtained provides secondary disinfection in accordance with section 1-5 of Schedule 1 or section 2-5 of Schedule 2; and
- (c) the owner of the drinking water system from which the water is obtained has agreed in writing,
 - (i) to ensure that the treatment equipment that provides the secondary disinfection referred to in clause (b) is operated so that, at all times and at all locations within the distribution system of the system that obtains the water,
 - (A) the free chlorine residual is never less than 0.05 milligrams per litre, if the drinking water system from which the water is obtained provides chlorination and does not provide chloramination, or
 - (B) the combined chlorine residual is never less than 0.25 milligrams per litre, if the drinking water system from which the water is obtained provides chloramination,
 - (ii) to sample and test the water in the distribution system of the system that obtains the water as if it were part of the distribution system of the system from which the water is obtained, and

(iii) to comply with Schedule 15.2 on behalf of the owner of the system that obtains the water and the operating authority for the system. O. Reg. 170/03, s. 6 (1); O. Reg. 269/03, s. 3; O. Reg. 253/05, s. 3; O. Reg. 247/06, s. 4 (1, 2); O. Reg. 399/07, s. 3.

(2) The exemption provided by subsection (1) applies to the following drinking water systems:

1. A large municipal non-residential system.
2. A small municipal non-residential system.
3. A large non-municipal non-residential system.
4. A small non-municipal non-residential system. O. Reg. 170/03, s. 6 (2).

(3) If a drinking water system obtains water from another drinking water system and the owner of the system from which water is obtained has agreed in writing to do anything referred to in subclauses (1) (c) (i) and (ii), the owner shall comply with the agreement. O. Reg. 247/06, s. 4 (3).

Exemptions: non-residential systems that receive transported water

7. (1) Schedules 2, 3, 8, 9, 11 to 15 and 21 do not apply to one of the following drinking water systems if all of its drinking water is transported to the system from a drinking water system described in subsection (1.1) and the drinking water is stored in a container that is constructed and maintained in a manner that prevents surface water and other foreign materials from coming into contact with the drinking water:

1. A large municipal non-residential system.
2. A small municipal non-residential system.
3. A large non-municipal non-residential system.
4. A small non-municipal non-residential system. O. Reg. 170/03, s. 7 (1); O. Reg. 247/06, s. 5 (1); O. Reg. 418/09, s. 5.

(1.1) Subsection (1) applies if the drinking water system from which drinking water is transported,

- (a) provides primary disinfection in accordance with section 1-3 of Schedule 1 or section 2-3 of Schedule 2, or provides filtration and primary disinfection in accordance with section 1-4 of Schedule 1 or section 2-4 of Schedule 2; and
- (b) provides secondary disinfection in accordance with section 1-5 of Schedule 1 or section 2-5 of Schedule 2. O. Reg. 247/06, s. 5 (2).

(2) The owner of the drinking water system referred to in subsection (1) that receives the drinking water and the operating authority for the system shall ensure that a distribution sample is taken at least once a day and is tested for,

- (a) free chlorine residual, if the system from which the drinking water is obtained provides chlorination and does not provide chloramination; or
- (b) combined chlorine residual, if the system from which the drinking water is obtained provides chloramination. O. Reg. 170/03, s. 7 (2).

(3) Subsection (2) does not apply to a drinking water system on days on which all designated facilities and all public facilities served by the system are not open. O. Reg. 269/03, s. 4.

(4) Subsection (2) does not apply to a drinking water system if all of the following criteria are satisfied:

1. A point of entry treatment unit owned or leased by the owner of the system is connected to the plumbing of every building and other structure that is served by the drinking water system and is part of a designated facility or public facility.
2. None of the point of entry treatment units use chlorination or chloramination.
3. Each point of entry treatment unit,
 - i. has a feature that ensures that no water is directed to users of water treated by the unit in the event that the unit malfunctions, loses power or ceases to provide the appropriate level of disinfection, or
 - ii. is designed and operated in accordance with the standards described in subsection (5).

4. If a point of entry treatment unit has a feature described in subparagraph 3 i and the unit malfunctions, loses power or ceases to provide the appropriate level of disinfection, a person takes appropriate action at the location where the unit is installed before water is again directed to users of water treated by the unit. O. Reg. 247/06, s. 5 (3).

(5) The standards referred to in subparagraph 3 ii of subsection (4) are the following:

1. The point of entry treatment unit must have a feature that causes an alarm to sound immediately at the following locations if the unit malfunctions, loses power or ceases to provide the appropriate level of disinfection:

- i. The building or structure where the point of entry treatment unit is installed.
 - ii. A location where a person is present, if a person is not always present at the location described in subparagraph i.
 - iii. Every designated facility served by the drinking water system.
2. If an alarm sounds under paragraph 1, a person who is at the building or structure where the point of entry treatment unit is installed must take appropriate action or a person must promptly be dispatched to that location to take appropriate action.
 3. A person who is dispatched under paragraph 2 must arrive at the building or structure where the point of entry treatment unit is installed as soon as possible. O. Reg. 247/06, s. 5 (3).

Exemptions: warning notices for systems and users without electricity, etc.

8. (1) Subject to subsections (2) and (5), this Regulation does not apply to a drinking water system if,
 - (a) the owner of the system posts warning notices in accordance with subsection (6);
 - (b) the owner of the system complies with subsections (8) and (9);
 - (c) all drinking water fountains that are connected to the drinking water system have been rendered inoperative; and
 - (d) the owner of the system has notified the Director in writing that the steps described in clauses (a) and (c) have been taken. O. Reg. 170/03, s. 8 (1); O. Reg. 249/03, s. 4 (1, 2); O. Reg. 165/04, s. 2 (1); O. Reg. 253/05, s. 4 (1).
- (2) Subsection (1) applies to a drinking water system only if the system does not use electricity and does not serve any building or other structure that uses electricity. O. Reg. 253/05, s. 4 (2).
- (3), (4) REVOKED: O. Reg. 253/05, s. 4 (2).
- (4.1), (4.2) REVOKED: O. Reg. 253/05, s. 4 (2).
- (5) The exemption provided by subsection (1) does not apply to the following provisions:
 1. Sections 8.1, 9, 9.1, 10 and 10.1.
 2. Schedules 4 and 5. O. Reg. 170/03, s. 8 (5); O. Reg. 253/05, s. 4 (3); O. Reg. 247/06, s. 6 (1).
- (6) A warning notice must be posted at every tap that supplies water from the drinking water system in a location where it is likely to come to the attention of all users and potential users of the tap. O. Reg. 170/03, s. 8 (6).
- (7) REVOKED: O. Reg. 165/04, s. 2 (5).
- (8) The owner of the drinking water system shall ensure that the warning notices are checked at least once a week to ensure that they are legible and comply with this section. O. Reg. 170/03, s. 8 (8).
- (8.1) The owner of the drinking water system shall ensure that a check that is done during a week for the purpose of subsection (8) is done at least five days, and not more than 10 days, after a check that was done for that purpose in the previous week. O. Reg. 247/06, s. 6 (2).
- (9) The owner of the drinking water system shall ensure that,
 - (a) every time the warning notices are checked under subsection (8), a record is made of the date and time and of the name of the person who performed the check; and
 - (b) the records referred to in clause (a) are kept for at least 12 months at a location where they can conveniently be viewed by a provincial officer who is inspecting the warning notices. O. Reg. 170/03, s. 8 (9); O. Reg. 247/06, s. 6 (3).
- (10) Nothing in this section relieves any person of any obligation to provide potable water or water that meets the standards prescribed by the Ontario Drinking Water Quality Standards. O. Reg. 170/03, s. 8 (10).

Systems regulated under the *Health Protection and Promotion Act*

8.0.1 The Act, except sections 1, 2, 3, 6, 7, 8, 10, 18.1, 20, 62 to 80, 100, 104, 108, 109, 110, 118 and 122 to 170, does not apply in respect of a small drinking water system within the meaning of the *Health Protection and Promotion Act*. O. Reg. 326/08, s. 3.

Exemption from certified operator requirement of Act

- 8.1 (1) Section 12 of the Act does not apply to a person operating a municipal drinking water system unless the system is,
 - (a) a large municipal residential system;
 - (b) a small municipal residential system; or
 - (c) a large municipal non-residential system. O. Reg. 249/03, s. 5; O. Reg. 418/09, s. 6 (1).

(2) Section 12 of the Act does not apply to a person operating a large municipal non-residential system if, pursuant to section 6 or 7 of this Regulation, provisions of this Regulation do not apply to the system. O. Reg. 249/03, s. 5; O. Reg. 418/09, s. 6 (2).

(3) Section 12 of the Act does not apply to a person operating a non-municipal year-round residential system if,

(a) pursuant to subsection 5 (2) of this Regulation, provisions of this Regulation do not apply to the system; and

(b) the system does not rechlorinate the water it obtains. O. Reg. 269/03, s. 5; O. Reg. 418/09, s. 6 (3).

(4) Section 12 of the Act does not apply to a person operating a non-municipal year-round residential system if, pursuant to subsection 5 (4) of this Regulation, provisions of this Regulation do not apply to the system. O. Reg. 269/03, s. 5; O. Reg. 418/09, s. 6 (4).

(5) Section 12 of the Act does not apply to a person operating a large non-municipal non-residential system if, pursuant to section 6 or 7 of this Regulation, provisions of this Regulation do not apply to the system. O. Reg. 269/03, s. 5; O. Reg. 418/09, s. 6 (5).

(5.1) Section 12 of the Act does not apply to a person operating a non-municipal year-round residential system if, pursuant to section 8-6.1 of Schedule 8, a reference in that Schedule to a certified operator is deemed, with respect to that system, to be a reference to any person. O. Reg. 247/06, s. 7; O. Reg. 418/09, s. 6 (6).

(6) Section 12 of the Act does not apply to a person operating a large municipal non-residential system, non-municipal year-round residential system or large non-municipal non-residential system if, pursuant to section 8-7 of Schedule 8, a reference in that Schedule to a certified operator is deemed, with respect to that system, to be a reference to any person. O. Reg. 165/04, s. 3; O. Reg. 418/09, s. 6 (7).

(7) Section 12 of the Act does not apply to a person operating a drinking water system that is not listed in the Table to section 4. O. Reg. 253/05, s. 5; O. Reg. 418/09, s. 6 (8).

Exemptions from approval requirements of Act

9. (1) Subsection 31 (1) of the Act does not apply to a municipal drinking water system unless the system is,

(a) a large municipal residential system; or

(b) a small municipal residential system. O. Reg. 249/03, s. 6.

(2) Subsection 31 (1) of the Act does not apply to a large municipal residential system or a small municipal residential system in respect of,

(a) the establishment or alteration of or a change to a service pipe;

(b) the establishment or alteration of or a change in an appurtenance of a watermain, if the appurtenance does not disrupt the operation of the drinking water system that the watermain is part of;

(c) the relining of a watermain, if the new lining does not disrupt the operation of the drinking water system that the watermain is part of;

(d) the replacement of an existing watermain with a new watermain that has similar dimensions and performance criteria and that is in the same or approximately the same location, if the existing watermain was established or altered in accordance with an approval, drinking water works permit or municipal drinking water licence. O. Reg. 170/03, s. 9 (2); O. Reg. 418/09, s. 7.

(3) Subsection 31 (1) of the Act does not apply to a municipal drinking water system that is not listed in the Table to section 4. O. Reg. 253/05, s. 6.

Exemptions from transfer of ownership requirements of Act

9.1 Section 51 of the Act does not apply to a large municipal non-residential system or small municipal non-residential system. O. Reg. 247/06, s. 8.

Revocation of OWRA approvals for non-municipal systems

10. For the purpose of subsection 52 (7) of the Act, the earliest of the following dates is prescribed as the date that the approval under the *Ontario Water Resources Act* is deemed to be revoked:

1. REVOKED: O. Reg. 253/05, s. 7.

2. The date the owner of the drinking water system gives the Director a notice that complies with section 21-7 of Schedule 21.

3. The date the owner of the drinking water system gives the Director a statement under subsection 21-2 (3) of Schedule 21.

4. The date the Director is notified in accordance with clause 8 (1) (d) that the steps described in clauses 8 (1) (a), (b) and (c) have been taken.
5. The date the Director imposes a condition under subsection 60 (2) of the Act in an approval under Part VI of the Act. O. Reg. 170/03, s. 10; O. Reg. 253/05, s. 7.

System information

10.1 (1) The owner of a drinking water system that commences operation after this section comes into force shall give the Director a written notice containing information about the system within 30 days after the system commences operation. O. Reg. 247/06, s. 9.

(2) The owner of a drinking water system that commenced operation before this section came into force shall give the Director a written notice containing information about the system within 60 days after this section comes into force. O. Reg. 247/06, s. 9.

(3) If there is any change to the information given to the Director under subsection (1) or (2), the owner of the drinking water system shall give the Director written notice of the change within 10 days of the change. O. Reg. 247/06, s. 9.

(4) The owner of a drinking water system shall be deemed to have given the Director written notice in accordance with subsection (2) if, before this section came into force, a written notice or report that relates to the system was submitted to the Director in a form that complied with section 14. O. Reg. 247/06, s. 9.

Annual reports

11. (1) The owner of a drinking water system shall ensure that an annual report is prepared in accordance with this section. O. Reg. 170/03, s. 11 (1); O. Reg. 247/06, s. 10 (1).

(2) The owner of a drinking water system, other than a large municipal residential system or a small municipal residential system, shall ensure that, when the annual report is prepared, a copy of the report is given to,

(a) each designated facility served by the system; and

(b) the interested authority for each designated facility served by the system. O. Reg. 170/03, s. 11 (2); O. Reg. 247/06, s. 10 (2).

(2.1) If a drinking water system is connected to and receives all of its drinking water from another drinking water system, the owner of the system from which the water is obtained shall ensure that, when the annual report for the system is prepared, a copy of the report is given to the owner of the system that obtains the water. O. Reg. 269/03, s. 6 (1); O. Reg. 247/06, s. 10 (3).

(3) In the case of the following drinking water systems, the annual report must cover the period from January 1 to December 31 in a year and must be prepared not later than February 28 of the following year:

1. Large municipal residential systems.

2. Small municipal residential systems.

3. Large municipal non-residential systems.

4. Small municipal non-residential systems.

5. Non-municipal year-round residential systems. O. Reg. 170/03, s. 11 (3); O. Reg. 247/06, s. 10 (4).

(4) In the case of non-municipal seasonal residential systems and large non-municipal non-residential systems, the annual report must cover the period from November 1 in a year to October 31 of the following year and must be prepared not later than December 31 of the latter year. O. Reg. 170/03, s. 11 (4); O. Reg. 247/06, s. 10 (5).

(5) In the case of small non-municipal non-residential systems, the annual report must cover the period from April 1 in a year to March 31 of the following year and must be prepared not later than May 31 of the latter year. O. Reg. 170/03, s. 11 (5); O. Reg. 247/06, s. 10 (6).

(6) The annual report must,

(a) contain a brief description of the drinking water system, including a list of water treatment chemicals used by the system during the period covered by the report;

(b) summarize any reports made to the Ministry under subsection 18 (1) of the Act or section 16-4 of Schedule 16 during the period covered by the report;

(c) summarize the results of tests required under this Regulation, or under an approval, municipal drinking water licence or order, including an OWRA order, during the period covered by the report and, if tests required under this Regulation in respect of a parameter were not required during that period, summarize the most recent results of tests of that parameter;

(d) describe any corrective actions taken under Schedule 17 or 18 during the period covered by the report;

- (e) describe any major expenses incurred during the period covered by the report to install, repair or replace required equipment; and
- (f) in the case of a large municipal residential system or a small municipal residential system, include a statement of where a report prepared under Schedule 22 will be available for inspection under subsection 12 (4). O. Reg. 170/03, s. 11 (6); O. Reg. 418/09, s. 8.
- (7) The owner of a drinking water system shall ensure that a copy of an annual report for the system is given, without charge, to every person who requests a copy. O. Reg. 269/03, s. 6 (2).
- (8) If a drinking water system is connected to and receives all of its drinking water from another drinking water system, the owner of the system that obtains the water shall ensure that a copy of an annual report for the system from which the water is obtained is given, without charge, to every person who requests a copy. O. Reg. 269/03, s. 6 (2).
- (9) Subsections (7) and (8) do not apply to an annual report that is more than two years old. O. Reg. 269/03, s. 6 (2).
- (9.1) Every time that an annual report is prepared for a drinking water system, the owner of the system shall ensure that effective steps are taken to advise users of water from the system that copies of the report are available, without charge, and of how a copy may be obtained. O. Reg. 269/03, s. 6 (2).
- (10) If a large municipal residential system serves more than 10,000 people, the owner of the system shall ensure that a copy of every report prepared under this section is available to the public at no charge on a website on the Internet. O. Reg. 170/03, s. 11 (10).
- (11) The obligation to ensure that a report be given to the interested authority for a designated facility under subsection (2) does not apply to the following designated facilities:
 - 1. A private school.
 - 2. A children's camp.
 - 3. A residence for seniors or retired persons, or any other similar residence, where attainment of a mature age is a factor in being accepted for occupancy. O. Reg. 170/03, s. 11 (11).
- (12)-(17) REVOKED: O. Reg. 253/05, s. 8 (1).
- (18) If section 12 of Ontario Regulation 459/00 and section 15 of Ontario Regulation 505/01 did not apply to the owner of a system to which subsection (5) applies, no report is required to be prepared under subsection (5) until May 31, 2006 and, despite that subsection, the report required to be prepared not later than May 31, 2006 shall cover the period from June 1, 2005 to March 31, 2006. O. Reg. 247/06, s. 10 (7).
- (19) REVOKED: O. Reg. 253/05, s. 8 (2).

Information to be available

- 12. (1) The owner of a drinking water system shall ensure that the following information is available for inspection in accordance with subsection (4):
 - 1. A copy of every test result obtained in respect of a test required under this Regulation, or where continuous monitoring equipment is used under section 6-5 of Schedule 6, the daily minimum, maximum, and mean results obtained in respect of a test required under this Regulation, or under an approval, municipal drinking water licence or order, including an OWRA order.
 - 2. A copy of every approval, drinking water works permit, municipal drinking water licence and order, including OWRA orders, that applies to the system and is still in effect, if the approval, permit, licence or order was issued after January 1, 2001.
 - 3. A copy of every annual report prepared under section 11.
 - 4. A copy of every report prepared under Schedule 21 or 22.
 - 5. A copy of this Regulation. O. Reg. 170/03, s. 12 (1); O. Reg. 247/06, s. 11; O. Reg. 418/09, s. 9.
- (2) Paragraphs 1 and 2 of subsection (1) do not apply to a record, report or test result until the day after it comes into the owner's possession. O. Reg. 170/03, s. 12 (2).
- (3) Paragraphs 1 to 4 of subsection (1) do not apply to a record, report or test result that is more than two years old. O. Reg. 170/03, s. 12 (3); O. Reg. 253/05, s. 9 (1).
- (4) The information must be available for inspection by any member of the public during normal business hours without charge,
 - (a) at the office of the owner or, if the office of the owner is not reasonably convenient to users of water from the system, at a location that is reasonably convenient to those users; and

(b) if the owner is not a municipality but the system serves a municipality, at the office of the municipality. O. Reg. 170/03, s. 12 (4).

(5) If the owner of a drinking water system provides the operator of a designated facility with a copy of the information referred to in subsection (1), the operator of the facility shall ensure that the information is available at the facility, between 9 a.m. and 5 p.m. or during normal business hours, for inspection without charge by any person allowed to enter the facility. O. Reg. 170/03, s. 12 (5).

(6) REVOKED: O. Reg. 253/05, s. 9 (2).

Retention of records

13. (1) The owner of a drinking water system shall ensure that the following documents and other records are kept for at least two years:

1. Every record or report related to a test required under any of the following provisions:
 - i. Section 7.
 - ii. Schedules 6 to 12.
 - iii. Sections 17-5 to 17-9 of Schedule 17.
 - iv. Sections 18-5 to 18-9 of Schedule 18.
2. Every record or report related to a test required under an approval, municipal drinking water licence or order, including an OWRA approval or OWRA order, unless the record or report relates to a parameter listed in Schedule 23 or 24 to this Regulation or Schedule 3 to Ontario Regulation 169/03 (Ontario Drinking Water Quality Standards).
3. Every record made under subsection 8-2 (5) of Schedule 8 or subsection 9-2 (5) of Schedule 9.
4. Every record made under subsection 3-1.1 (6) or (7) of Schedule 3. O. Reg. 247/06, s. 12; O. Reg. 418/09, s. 10 (1).

(2) The owner of a drinking water system shall ensure that the following documents and other records are kept for at least six years:

1. Every record or report related to a test required under any of the following provisions:
 - i. Subsection 13-2 (2), subsection 13-4 (2) and sections 13-5, 13-6 and 13-7 of Schedule 13.
 - ii. Section 15-4 of Schedule 15.
 - ii.1 Any provision in Schedule 15.1.
 - ii.2 Section 15.2-2 of Schedule 15.2.
 - iii. Sections 17-10 to 17-12 of Schedule 17.
2. Every record or report related to a test required under an approval, municipal drinking water licence or order, including an OWRA approval or OWRA order, if the record or report relates to a parameter listed in Schedule 23 or 24 to this Regulation or Schedule 3 to Ontario Regulation 169/03 (Ontario Drinking Water Quality Standards).
3. Every annual report prepared under section 11.
4. Every report prepared under Schedule 22. O. Reg. 247/06, s. 12; O. Reg. 399/07, s. 4 (1, 2); O. Reg. 418/09, s. 10 (2, 3).

(3) The owner of a drinking water system shall ensure that the following documents and other records are kept for at least 15 years:

1. Every record or report related to a test required under any of the following provisions:
 - i. Subsections 13-2 (3) and 13-4 (3) and sections 13-8 and 13-9 of Schedule 13.
 - ii. Sections 15-2, 15-5 and 15-6 of Schedule 15.
 - iii. Section 17-13 of Schedule 17.
 - iv. Sections 18-10 to 18-13 of Schedule 18.
2. Every report prepared under Schedule 21.
3. Every report referred to in paragraph 7 of subsection 2 (2) or clause 2 (3) (a) that is related to the system's raw water supply.
4. If the owner gave the Director a written statement by a licensed engineering practitioner under subsection 21-2 (3) of Schedule 21, a copy of the OWRA approval referred to in that subsection. O. Reg. 247/06, s. 12; O. Reg. 399/07, s. 4 (3); O. Reg. 418/09, s. 1 (5).

(4) The owner of a drinking water system shall ensure that reports prepared under Schedule 21 are kept at a location where they can conveniently be viewed by a provincial officer who is inspecting the system's water treatment equipment. O. Reg. 247/06, s. 12.

(5) If the Director or a provincial officer makes a request for a document or other record referred to in subsection (1), (2) or (3), the owner of a drinking water system shall ensure that the document or other record is given to the Director or provincial officer within such period as the Director or provincial officer may specify. O. Reg. 247/06, s. 12.

(6) If a licensed engineering practitioner or professional hydrogeologist is preparing an opinion, report or assessment referred to in this Regulation in respect of a drinking water system and makes a request for a document or other record referred to in subsection (1), (2) or (3), the owner of the system shall ensure that the document or other record is given to the licensed engineering practitioner or professional hydrogeologist within such period as the licensed engineering practitioner or professional hydrogeologist may specify. O. Reg. 247/06, s. 12; O. Reg. 418/09, s. 1 (5).

(7) For the purpose of this section,

- (a) a reference in subsection (1), (2) or (3) to tests required under a provision of this Regulation shall be deemed to include a reference to,
 - (i) tests required for the same parameter under section 7 of Ontario Regulation 459/00 (Drinking Water Protection — Larger Water Works), if that regulation applied to the drinking water system, or
 - (ii) tests required for the same parameter under section 9 of Ontario Regulation 505/01 (Drinking Water Protection — Small Water Works Serving Designated Facilities), if that regulation applied to the drinking water system;
- (b) a reference in paragraph 3 of subsection (2) to annual reports prepared under section 11 shall be deemed to include a reference to,
 - (i) reports prepared under section 12 of Ontario Regulation 459/00, if that regulation applied to the drinking water system, or
 - (ii) reports prepared under section 15 of Ontario Regulation 505/01, if that regulation applied to the drinking water system; and
- (c) a reference in paragraph 2 of subsection (3) to reports prepared under Schedule 21 shall be deemed to include a reference to reports prepared under section 5 of Ontario Regulation 505/01, if that regulation applied to the drinking water system. O. Reg. 247/06, s. 12.

Forms

14. (1) Where this Regulation requires or permits the submission of a written notice or report or the posting of a warning notice, the notice or report must be in a form provided by or approved by the Director. O. Reg. 170/03, s. 14 (1).

(2) The Director may require that a document or other record that is given to the Director under this Regulation be given in an electronic format specified by the Director. O. Reg. 170/03, s. 14 (2).

Purpose of notice to interested authorities

15. The sole purpose of the provisions of this Regulation that require notice to be given to interested authorities is to provide interested authorities with information relating to compliance with this Regulation. O. Reg. 170/03, s. 15.

16. OMITTED (PROVIDES FOR COMING INTO FORCE OF PROVISIONS OF THE ENGLISH VERSION OF THIS REGULATION). O. Reg. 170/03, s. 16.

SCHEDULE 1 TREATMENT EQUIPMENT

Municipal: Large Residential
Small Residential

Application

1-1. This Schedule applies to the following drinking water systems:

1. Large municipal residential systems.
2. Small municipal residential systems.

General obligations

1-2. (1) The owner of a drinking water system shall ensure the following:

1. Any well that serves as an entry point of raw water supply is constructed and maintained to prevent surface water and other foreign materials from entering the well.
2. Water treatment equipment is provided in accordance with sections 1-3 to 1-5.

- (2) The owner of a drinking water system and the operating authority for the system shall ensure the following:
1. The water treatment equipment is in operation whenever water is being supplied.
 2. The water treatment equipment is operated in accordance with the Ministry's *Procedure for Disinfection of Drinking Water in Ontario*.
 3. The water treatment equipment required by section 1-3 or 1-4 is operated in a manner that achieves the design capabilities it is required to have under that section.
 4. If the drinking water system's water treatment equipment provides chlorination or chloramination for secondary disinfection, the equipment is operated so that, at all times and at all locations within the distribution system,
 - i. the free chlorine residual is never less than 0.05 milligrams per litre, if the drinking water system provides chlorination and does not provide chloramination, or
 - ii. the combined chlorine residual is never less than 0.25 milligrams per litre, if the drinking water system provides chloramination.
 5. Adjustments to the water treatment equipment are carried out only by certified operators.

Primary disinfection for ground water raw water supply

1-3. The owner of a drinking water system that obtains water from a raw water supply that is ground water shall ensure provision of water treatment equipment that is designed to be capable of achieving, at all times, primary disinfection in accordance with the Ministry's *Procedure for Disinfection of Drinking Water in Ontario*, including at least 99 per cent removal or inactivation of viruses by the time,

- (a) water leaves the point of entry treatment units, in the case of a drinking water system to which, pursuant to section 3-1.1 of Schedule 3, section 1-5 does not apply; or
- (b) water enters the distribution system, in any other case.

Filtration and primary disinfection for surface water raw water supply

1-4. The owner of a drinking water system that obtains water from a raw water supply that is surface water shall ensure provision of,

- (a) water treatment equipment that,
 - (i) is designed to be capable of chemically assisted filtration, and
 - (ii) is designed to be capable of achieving, at all times, primary disinfection in accordance with the Ministry's *Procedure for Disinfection of Drinking Water in Ontario*, including at least 99 per cent removal or inactivation of *Cryptosporidium* oocysts, at least 99.9 per cent removal or inactivation of *Giardia* cysts and at least 99.99 per cent removal or inactivation of viruses by the time,
 - (A) water leaves the point of entry treatment units, in the case of a drinking water system to which, pursuant to section 3-1.1 of Schedule 3, section 1-5 does not apply, or
 - (B) water enters the distribution system, in any other case; or
- (b) other water treatment equipment that, in the Director's opinion, is designed to be capable of producing water of equal or better quality than the equipment described in clause (a).

Secondary disinfection

1-5. The owner of a drinking water system shall ensure provision of,

- (a) water treatment equipment that is designed to be capable of secondary disinfection using chlorination or chloramination in accordance with the Ministry's *Procedure for Disinfection of Drinking Water in Ontario* and that is designed to be capable of achieving, at all locations within the distribution system,
 - (i) a free chlorine residual of 0.2 milligrams per litre, if the drinking water system provides chlorination and does not provide chloramination, or
 - (ii) a combined chlorine residual of 1.0 milligrams per litre, if the drinking water system provides chloramination; or
- (b) other water treatment equipment that, in the Director's opinion, is designed to be capable of providing secondary disinfection that is equivalent to or better than the secondary disinfection provided by the equipment described in clause (a).

Primary disinfection equipment that does not use chlorination or chloramination

1-6. (1) If primary disinfection equipment that does not use chlorination or chloramination is provided by a drinking water system, the owner of the system and the operating authority for the system shall ensure that the disinfection equipment is designed and operated in accordance with the standards described in subsection (2), or that,

- (a) the disinfection equipment has a feature that ensures that no water is directed to users of water treated by the equipment in the event that the equipment malfunctions, loses power or ceases to provide the appropriate level of disinfection; and
- (b) if the disinfection equipment malfunctions, loses power or ceases to provide the appropriate level of disinfection, a certified operator takes appropriate action at the location where the equipment is installed before water is again directed to users of water treated by the equipment.

(2) The standards referred to in subsection (1) are the following:

- 1. The disinfection equipment must have a feature that causes an alarm to sound immediately in the following locations if the disinfection equipment malfunctions, loses power or ceases to provide the appropriate level of disinfection:
 - i. The building or structure where the disinfection equipment is installed.
 - ii. A location where a person is present, if a person is not always present at the building or structure where the disinfection equipment is installed.
- 2. If an alarm sounds under paragraph 1, a certified operator who is at the building or structure where the disinfection equipment is installed must take appropriate action or, if no certified operator is at that location, a certified operator must promptly be dispatched to that location to take appropriate action.
- 3. A certified operator who is dispatched under paragraph 2 must arrive at the building or structure where the disinfection equipment is installed as soon as possible.

(3) If primary disinfection equipment that does not use chlorination or chloramination is provided by a large municipal residential system, the owner of the system and the operating authority for the system shall ensure that the disinfection equipment has a recording device that continuously records the performance of the disinfection equipment.

OWRA approvals and OWRA orders with less stringent requirements

1-7. This Schedule prevails over an OWRA approval or OWRA order granted or issued before August 1, 2000 that provides for less stringent requirements.

OWRA approvals that give additional time for compliance

1-8. If an OWRA approval granted on or after August 1, 2000 provides that a drinking water system is required, by a date specified in the approval that is later than the date this Regulation comes into force,

- (a) to comply with section 5 of Ontario Regulation 459/00 (Drinking Water Protection — Larger Water Works); or
 - (b) to ensure that water treatment equipment is provided for primary disinfection, secondary disinfection or filtration,
- sections 1-3 to 1-6 do not apply until the date specified in the approval.

1-9. REVOKED: O. Reg. 253/05, s. 11.

O. Reg. 170/03, Sched. 1; O. Reg. 249/03, s. 8; O. Reg. 253/05, s. 11; O. Reg. 247/06, s. 13; O. Reg. 326/08, s. 4; O. Reg. 418/09, s. 11.

**SCHEDULE 2
TREATMENT EQUIPMENT**

Municipal: Large Non-Residential
Small Non-Residential

Non-Municipal: Year-Round Residential
Seasonal Residential
Large Non-Residential
Small Non-Residential

Application

2-1. This Schedule applies to the following drinking water systems:

- 1. Large municipal non-residential systems.
- 2. Small municipal non-residential systems.
- 3. Non-municipal year-round residential systems.
- 4. Non-municipal seasonal residential systems.

5. Large non-municipal non-residential systems.
6. Small non-municipal non-residential systems.

General obligations

2-2. (1) The owner of a drinking water system shall ensure the following:

1. Any well that serves as an entry point of raw water supply is constructed and maintained to prevent surface water and other foreign materials from entering the well.
2. Water treatment equipment is provided in accordance with sections 2-3 to 2-5.

(2) The owner of a drinking water system and the operating authority for the system shall ensure the following:

1. The water treatment equipment is in operation whenever water is being supplied.
2. The water treatment equipment is operated in accordance with the Ministry's *Procedure for Disinfection of Drinking Water in Ontario*.
3. The water treatment equipment required by section 2-3 or 2-4 is operated in a manner that achieves the design capabilities it is required to have under that section.
4. The water treatment equipment required by section 2-5 is operated so that, at all times and at all locations within the distribution system,
 - i. the free chlorine residual is never less than 0.05 milligrams per litre, if the drinking water system provides chlorination and does not provide chloramination, or
 - ii. the combined chlorine residual is never less than 0.25 milligrams per litre, if the drinking water system provides chloramination.
5. The water treatment equipment is properly maintained.
6. Written operating instructions for the water treatment equipment are kept near the equipment.
7. Clearly marked adequate supplies of chemicals or other materials necessary for the operation of the water treatment equipment are kept nearby, separate from other chemicals and materials that are not used for the drinking water system.
8. Replacement parts are kept nearby for those parts of the water treatment equipment that may be expected to require periodic replacement.
9. Adjustments to the water treatment equipment are carried out only by,
 - i. certified operators, in the case of,
 - A. a large municipal non-residential system,
 - B. a non-municipal year-round residential system, or
 - C. a large non-municipal non-residential system, or
 - ii. trained persons, in the case of,
 - A. a small municipal non-residential system,
 - B. a non-municipal seasonal residential system, or
 - C. a small non-municipal non-residential system.

(3) Subsection (2) does not apply to a large municipal non-residential system, small municipal non-residential system, large non-municipal non-residential system or small non-municipal non-residential system on days when the system is not supplying water to any designated facilities or public facilities that are open.

(4) Subsection (2) does not apply to a non-municipal seasonal residential system during a period of 60 or more consecutive days when the system,

- (a) is not supplying water to any designated facilities or public facilities that are open;
- (b) is not supplying water to any major residential development; and
- (c) is not supplying water to any trailer park or campground that has more than five service connections.

Primary disinfection for ground water raw water supply

2-3. (1) The owner of a drinking water system that obtains water from a raw water supply that is ground water shall ensure provision of water treatment equipment that is designed to be capable of achieving, at all times, primary disinfection

in accordance with the Ministry's *Procedure for Disinfection of Drinking Water in Ontario*, including at least 99 per cent removal or inactivation of viruses by the time,

- (a) water leaves the point of entry treatment units, in the case of a drinking water system to which, pursuant to section 3-1.1 or 3-2 of Schedule 3, section 2-5 does not apply; or
- (b) water enters the distribution system, in any other case.

(2) Subsection (1) also applies in respect of a non-municipal year-round residential system that is deemed, under paragraph 4 or 5 of subsection 2 (2), to obtain water from a raw water supply that is ground water under the direct influence of surface water if,

- (a) the system does not serve any designated facilities; and
- (b) the owner of the system gives the Director,
 - (i) a written notice that complies with section 2-12, and
 - (ii) a written notice stating that the owner of the system and the operating authority for the system have complied with section 11-3 of Schedule 11 and sections 18-5 and 18-6 of Schedule 18 for a period of 12 consecutive months and that, during that period,
 - (A) no test results from water samples described in subsection 11-3 (1) of Schedule 11 from the system's raw water indicated the presence of *Escherichia coli* (E. coli) or total coliforms, and
 - (B) no test results from water samples taken under section 18-5 or 18-6 of Schedule 18 indicated the presence of *Escherichia coli* (E. coli) or total coliforms.

(3) Subsection (1) also applies, until the end of the month following the first anniversary of the day the system commences operation, in respect of a non-municipal year-round residential system that is deemed under paragraph 4 or 5 of subsection 2 (2) to obtain water from a raw water supply that is ground water under the direct influence of surface water, if,

- (a) the system commences operation after this section comes into force;
- (b) the system does not serve any designated facilities; and
- (c) before the system commences operation, the owner of the system gives the Director a written notice that complies with section 2-12.

(4) Subsections (2) and (3) cease to apply to a non-municipal year-round residential system 90 days after,

- (a) a test result obtained under paragraph 2 of section 18-5 of Schedule 18 indicates the presence of *Escherichia coli* (E. coli) in a water sample; or
- (b) a test result obtained under paragraph 1 of section 18-6 of Schedule 18 indicates the presence of total coliforms in a water sample, if the day on which the sample was taken is the second day during a period of 12 consecutive months on which a water sample was taken under paragraph 1 of section 18-6 of Schedule 18 that produced a test result indicating the presence of total coliforms.

(5) No notice may be given to the Director under clause (2) (b) if subsection (2) or (3) previously ceased to apply to the system under subsection (4).

Filtration and primary disinfection for surface water raw water supply

2-4. (1) The owner of a drinking water system that obtains water from a raw water supply that is surface water shall ensure provision of,

- (a) water treatment equipment that,
 - (i) is designed to be capable of chemically assisted filtration, and
 - (ii) is designed to be capable of achieving, at all times, primary disinfection in accordance with the Ministry's *Procedure for Disinfection of Drinking Water in Ontario*, including at least 99 per cent removal or inactivation of *Cryptosporidium* oocysts, at least 99.9 per cent removal or inactivation of *Giardia* cysts and at least 99.99 per cent removal or inactivation of viruses by the time,
 - (A) water leaves the point of entry treatment units, in the case of a drinking water system to which, pursuant to section 3-1.1 or 3-2 of Schedule 3, section 2-5 does not apply, or
 - (B) water enters the distribution system, in any other case; or
- (b) other water treatment equipment that, in the opinion of a licensed engineering practitioner, is designed to be capable of producing water of equal or better quality than the equipment described in clause (a).

(2) Subsection (1) does not apply in respect of a non-municipal year-round residential system if subsection 2-3 (1) applies in respect of the system.

Secondary disinfection

- 2-5.** (1) The owner of a drinking water system shall ensure provision of,
- (a) water treatment equipment that is designed to be capable of secondary disinfection using chlorination or chloramination in accordance with the Ministry's *Procedure for Disinfection of Drinking Water in Ontario* and that is designed to be capable of achieving, at all locations within the distribution system,
 - (i) a free chlorine residual of 0.2 milligrams per litre, if the drinking water system provides chlorination and does not provide chloramination, or
 - (ii) a combined chlorine residual of 1.0 milligrams per litre, if the drinking water system provides chloramination; or
 - (b) other water treatment equipment that, in the opinion of a licensed engineering practitioner, is designed to be capable of providing secondary disinfection that is equivalent to or better than the secondary disinfection provided by the equipment described in clause (a).
- (2) This section does not apply if,
- (a) the owner complies with section 2-3 or 2-4, whichever is applicable; and
 - (b) all parts of the drinking water system and of the plumbing connected to the drinking water system that are downstream of the equipment provided in accordance with section 2-3 or 2-4 are enclosed in a building or other protective structure.

Primary disinfection equipment that does not use chlorination or chloramination

- 2-6.** (1) If primary disinfection equipment that does not use chlorination or chloramination is provided by a drinking water system, the owner of the system and the operating authority for the system shall ensure that the disinfection equipment is designed and operated in accordance with the standards described in subsection (2), or that,
- (a) the disinfection equipment has a feature that ensures that no water is directed to users of water treated by the equipment in the event that the equipment malfunctions, loses power or ceases to provide the appropriate level of disinfection; and
 - (b) if the disinfection equipment malfunctions, loses power or ceases to provide the appropriate level of disinfection, a person described in paragraph 9 of subsection 2-2 (2) takes appropriate action at the location where the equipment is installed before water is again directed to users of water treated by the equipment.
- (2) The standards referred to in subsection (1) are the following:
1. The disinfection equipment must have a feature that causes an alarm to sound immediately in the following locations if the disinfection equipment malfunctions, loses power or ceases to provide the appropriate level of disinfection:
 - i. The building or structure where the disinfection equipment is installed.
 - ii. A location where a person is present, if a person is not always present at the building or structure where the disinfection equipment is installed.
 2. If an alarm sounds under paragraph 1, a person described in paragraph 9 of subsection 2-2 (2) who is at the building or structure where the disinfection equipment is installed must take appropriate action or, if no such person is at that location, a person described in paragraph 9 of subsection 2-2 (2) must promptly be dispatched to that location to take appropriate action.
 3. A person who is dispatched under paragraph 2 must arrive at the building or structure where the disinfection equipment is installed as soon as possible.
- (3) If a drinking water system provides primary disinfection with ultraviolet light disinfection equipment and not with chlorination or chloramination, the owner of the system and the operating authority for the system shall ensure that any sensors that form part of the equipment's monitoring system are checked and calibrated in accordance with the manufacturer's instructions.

OWRA approvals and OWRA orders with less stringent requirements

2-7. This Schedule prevails over an OWRA approval or OWRA order granted or issued before August 1, 2000 that provides for less stringent requirements.

OWRA approvals and OWRA orders that give additional time for compliance

2-8. If an OWRA approval or OWRA order granted or issued on or after August 1, 2000 provides that a drinking water system is required, by a date specified in the approval or order that is later than the date this Regulation comes into force,

- (a) to comply with section 5 of Ontario Regulation 459/00 (Drinking Water Protection — Larger Water Works) or section 4 of Ontario Regulation 505/01 (Drinking Water Protection — Smaller Water Works Serving Designated Facilities); or

(b) to ensure that water treatment equipment is provided for primary disinfection, secondary disinfection or filtration, sections 2-2 to 2-6 do not apply until the date specified in the approval or order.

Delayed compliance

2-9. Subject to section 2-8, if a non-municipal year-round residential system does not serve a designated facility, the system commenced operation before June 1, 2003 and, immediately before that day, the system was not in compliance with sections 2-2 to 2-6, those sections do not apply until July 1, 2006.

2-10. REVOKED: O. Reg. 247/06, s. 14 (7).

Exceptions

2-11. (1) This Schedule, except paragraph 1 of subsection 2-2 (1), does not apply to a non-municipal year-round residential system if,

- (a) the system does not serve any designated facilities;
- (b) the system obtains water from a raw water supply that is ground water; and
- (c) the owner of the system gives the Director,
 - (i) a written notice that complies with section 2-12, and
 - (ii) a written notice stating that the owner of the system and the operating authority for the system have complied with section 11-3 of Schedule 11 and sections 18-5 and 18-6 of Schedule 18 for a period of 12 consecutive months and that, during that period,
 - (A) no test results from water samples described in subsection 11-3 (1) of Schedule 11 from the system's raw water indicated the presence of *Escherichia coli* (E. coli) or total coliforms, and
 - (B) no test results from water samples taken under section 18-5 or 18-6 of Schedule 18 indicated the presence of *Escherichia coli* (E. coli) or total coliforms.

(2) This Schedule, except paragraph 1 of subsection 2-2 (1), does not apply to a non-municipal year-round residential system until the end of the month following the first anniversary of the day the system commences operation if,

- (a) the system commences operation after this section comes into force;
 - (b) the system does not serve any designated facilities;
 - (c) the system obtains water from a raw water supply that is ground water; and
 - (d) before the system commences operation, the owner of the system gives the Director a written notice that complies with section 2-12.
- (3) Subsections (1) and (2) cease to apply to a non-municipal year-round residential system 90 days after,
- (a) a test result obtained under paragraph 2 of section 18-5 of Schedule 18 indicates the presence of *Escherichia coli* (E. coli) in a water sample; or
 - (b) a test result obtained under paragraph 1 of section 18-6 of Schedule 18 indicates the presence of total coliforms in a water sample, if the day on which the sample was taken is the second day during a period of 12 consecutive months on which a water sample was taken under paragraph 1 of section 18-6 of Schedule 18 that produced a test result indicating the presence of total coliforms.

(4) No notice may be given to the Director under clause (1) (c) if subsection (1) or (2) previously ceased to apply to the system under subsection (3).

Well technician's notice

2-12. (1) For the purpose of this Schedule, a notice complies with this section with respect to a non-municipal year-round residential system if the notice is signed by a person described in subsection (2) and the notice states that, after the day this section came into force, the person inspected each well that is used as a raw water supply for the system and, for each of those wells, the person is of the opinion that,

- (a) the well does not have a well pit;
- (b) the well does not penetrate through the bottom of a bored or dug well;
- (c) the well is accessible for cleaning, treatment, repair, testing, inspection and visual examination at all times;
- (d) the site of the well is at an elevation higher than the immediately surrounding area;

- (e) the site of the well is separated by at least the clearance distance required by Ontario Regulation 332/12 (Building Code), made under the *Building Code Act, 1992*, from a leaching bed system or other sewage system as defined in that regulation, including a sewage system that has not been constructed but for which a building permit has been issued;
 - (f) the site of the well is at least 15 metres from a source of pollution other than one mentioned in clause (e);
 - (g) the well is cased to,
 - (i) at least 15 centimetres above the floor, if a pump is installed directly over the well and a floor has been constructed around or adjacent to the casing, or
 - (ii) at least 30 centimetres above the ground surface, in any other case;
 - (h) the surface drainage is such that water will not collect or pond in the vicinity of the well, including the area above the annular space;
 - (i) the top of the well's casing is sealed with a commercially manufactured vermin-proof well cap, if a pump is not located directly over the well;
 - (j) the top of the well's casing is shielded in a manner sufficient to prevent entry of any material that may impair the quality of the water in the well, if a pump is installed directly over the well;
 - (k) the well's air vent extends above the ground surface a distance sufficient to prevent the entry of flood water from any anticipated flooding in the area;
 - (l) the open end of the well's air vent is shielded and screened in a manner sufficient to prevent the entry of any materials into the well;
 - (m) the well's casing does not impair the quality of water with which it comes in contact;
 - (n) the portion of the well's casing that is visible without a down-hole camera,
 - (i) is clean and free of contamination, and
 - (ii) is watertight;
 - (o) the portion of the well's casing that is visible without a down-hole camera has no joints, except for joints that,
 - (i) achieve a permanent, watertight bond, such as welded steel joints, and
 - (ii) are made so that the jointed casing does not impair the quality of water with which it comes in contact;
 - (p) any seams in the portion of the well's casing that is visible without a down-hole camera achieve a permanent watertight bond; and
 - (q) a pitless adapter is used and the connection is watertight, if a connection to the casing of the well is made below the ground surface.
- (2) The person referred to in subsection (1) is,
- (a) a person who holds a well technician licence described as a Well Drilling licence in paragraph 1 of subsection 5 (1) of Regulation 903 of the Revised Regulations of Ontario, 1990 (Wells) made under the *Ontario Water Resources Act*;
 - (b) a licensed engineering practitioner who has experience in ground water supply;
 - (c) a professional hydrogeologist who has experience in ground water supply; or
 - (d) a person registered as a certified engineering technologist under the *Ontario Association of Certified Engineering Technicians and Technologists Act, 1998* who has experience in ground water supply.
- (3) Words and expressions used in this section have the same meanings as in section 35 of the *Ontario Water Resources Act* and section 1 of Regulation 903 of the Revised Regulations of Ontario, 1990 (Wells) made under that Act.

O. Reg. 170/03, Sched. 2; O. Reg. 249/03, s. 9; O. Reg. 269/03, s. 7; O. Reg. 165/04, s. 4; O. Reg. 408/04, s. 2; O. Reg. 253/05, s. 12; O. Reg. 247/06, s. 14; O. Reg. 326/08, s. 5; O. Reg. 418/09, s. 1 (5), 12; O. Reg. 335/13, s. 1.

SCHEDULE 3
POINT OF ENTRY TREATMENT

Municipal: Small Residential
Large Non-Residential
Small Non-Residential

Non-Municipal: Year-Round Residential
Seasonal Residential
Large Non-Residential
Small Non-Residential

Application

3-1. This Schedule applies to the following drinking water systems:

- 0.1 Small municipal residential systems.
 - 1. Large municipal non-residential systems.
 - 2. Small municipal non-residential systems.
- 2.1 Non-municipal year-round residential systems.
- 2.2 Non-municipal seasonal residential systems.
 - 3. Large non-municipal non-residential systems.
 - 4. Small non-municipal non-residential systems.

Point of entry treatment units in residential systems

3-1.1 (1) Section 1-5 of Schedule 1 does not apply to a small municipal residential system, section 2-5 of Schedule 2 does not apply to a non-municipal year-round residential system that serves fewer than 101 private residences, and section 2-5 of Schedule 2 does not apply to a non-municipal seasonal residential system that has fewer than 101 service connections, if the following criteria are met:

- 1. A point of entry treatment unit owned or leased by the owner of the drinking water system is connected to the plumbing of every building and other structure that is part of a private residence, designated facility or public facility served by the system.
- 2. Every point of entry treatment unit has a feature that ensures that no water is directed to users of water treated by the equipment in the event that the equipment malfunctions, loses power or ceases to provide the appropriate level of disinfection.
- 3. None of the point of entry treatment units use chlorination or chloramination.
- 4. The owner of the drinking water system or the operating authority for the system has a record that,
 - i. sets out the location of each point of entry treatment unit and the date it was installed, and
 - ii. in the case of a small municipal residential system that requires an approval, drinking water works permit or municipal drinking water licence under the Act, contains a confirmation by the owner of the system that each point of entry treatment unit was installed in accordance with the approval, permit or licence.
- 5. The owner of the drinking water system has given the Director a written notice certifying that,
 - i. the owner of the drinking water system has given a written statement that contains the information set out in subsection (5) to the occupants of every private residence and the operators of every designated facility and public facility that is served by the system at the time the notice is given to the Director,
 - ii. the owner of the drinking water system has discussed the information set out in subsection (5), in person or by telephone, with an apparently adult occupant of every private residence and the operator of every designated facility and public facility that is served by the system at the time the notice is given to the Director, and
 - iii. the owner of the drinking water system has made reasonable efforts to give a written statement that contains the information set out in subsection (5) to the owner of every private residence, designated facility and public facility that is served by the system at the time the notice is given to the Director, if the owner of the residence or facility is not an occupant of the residence or the operator of the facility.
- 6. The owner of the drinking water system or the operating authority for the system gives notice to the occupants of a property where a point of entry treatment unit is located whenever the owner or operating authority requires permission to enter the property.

(2) If subsection (1) applies to a drinking water system and the system begins to serve another private residence, designated facility or public facility, the owner of the drinking water system shall promptly,

- (a) give a written statement that contains the information set out in subsection (5) to the occupants of the private residence or the operator of the designated facility or public facility;
- (b) discuss the information set out in subsection (5), in person or by telephone, with an apparently adult occupant of the private residence or the operator of the designated facility or public facility; and
- (c) make reasonable efforts to give a written statement that contains the information set out in subsection (5) to the owner of the private residence, designated facility or public facility, if the owner of the residence or facility is not an occupant of the residence or the operator of the facility.

(3) If subsection (1) applies to a drinking water system and the owner of the system becomes aware that the occupants of a private residence served by the system have changed or that the operator of a designated facility or public facility served by the system has changed, the owner shall promptly,

- (a) give a written statement that contains the information set out in subsection (5) to the occupants of the private residence or the operator of the designated facility or public facility; and
- (b) discuss the information set out in subsection (5), in person or by telephone, with an apparently adult occupant of the private residence or the operator of the designated facility or public facility.

(4) If subsection (1) applies to a drinking water system, the owner of the system becomes aware that the owner of a private residence served by the system has changed or that the operator of a designated facility or public facility served by the system has changed, and the owner of the residence or facility is not an occupant of the residence or the operator of the facility, the owner of the drinking water system shall promptly make reasonable efforts to give a written statement that contains the information set out in subsection (5) to the owner of the residence or facility.

(5) The following information is the information referred to in paragraph 5 of subsection (1) and in subsections (2), (3) and (4):

1. The water supplied to the private residence, designated facility or public facility, as the case may be, is treated by equipment known as a point of entry treatment unit, the purpose of which is to ensure the safety of the water.
2. A description of the location and appearance of the point of entry treatment unit that is sufficient to enable a person to identify the unit.
3. The point of entry treatment unit is owned or leased by the owner of the drinking water system and does not belong to the owner or occupants of the property where the unit is installed.
4. The point of entry treatment unit has a feature to ensure that no water is directed to users of water treated by the equipment in the event that the equipment malfunctions, loses power or ceases to provide the appropriate level of disinfection.
5. No person should damage or tamper with the point of entry treatment unit.
6. The owner of the drinking water system or the operating authority for the system will from time to time require access to the property where the point of entry treatment unit is installed to sample water and maintain the unit.
7. The owner of the drinking water system or, if an operating authority is responsible for the operation of the system, the operating authority, should be contacted if the supply of water is interrupted or if there is any reason to believe that the point of entry treatment unit requires repairs.
8. The owner of the drinking water system or, if an operating authority is responsible for the operation of the system, the operating authority, may be contacted if there are any questions about the point of entry treatment unit.
9. Information on how to contact the owner of the drinking water system or, if an operating authority is responsible for the operation of the system, on how to contact the operating authority.

(6) If subsection (1) applies to a small municipal residential system, the owner of the system and the operating authority for the system shall ensure that,

- (a) each point of entry treatment unit is checked at least once every 12 months to confirm proper functioning; and
- (b) a record is made of the date and time of every check performed under clause (a), the name of the person who performed the check and the results of the check.

(7) If subsection (1) applies to a drinking water system, the owner of the system and the operating authority for the system shall ensure that a record is made whenever the owner or operating authority fails to obtain access to a property where a point of entry treatment unit is installed for the purpose of complying with,

- (a) clause (6) (a);

- (b) section 8-2 of Schedule 8 or section 9-2 of Schedule 9; or
- (c) section 11-2 of Schedule 11 or section 12-2 of Schedule 12.

Point of entry treatment units in non-residential systems

3-2. Section 2-5 of Schedule 2 does not apply to a large municipal non-residential system, a small municipal non-residential system, a large non-municipal non-residential system or a small non-municipal non-residential system if the following criteria are met:

- 1. A point of entry treatment unit owned or leased by the owner of the drinking water system is connected to the plumbing of every building and other structure that is part of a designated facility or public facility served by the system.
- 2. The owner of the drinking water system or the operating authority for the system gives notice to the occupants of a property where a point of entry treatment unit is located whenever the owner or operating authority requires permission to enter the property.
- 3. The owner of the drinking water system has access at all times to shut-off valves that enable the owner to shut off the supply of water to the plumbing to which point of entry treatment units are connected.

O. Reg. 170/03, Sched. 3; O. Reg. 249/03, s. 10; O. Reg. 269/03, s. 8; O. Reg. 247/06, s. 15; O. Reg. 418/09, s. 13.

**SCHEDULE 4
RELIEF FROM SCHEDULE 1**

Municipal: Large Residential
Small Residential

Application: systems

4-1. This Schedule applies to the following drinking water systems:

- 1. Large municipal residential systems.
- 2. Small municipal residential systems.

Application: conditions

4-2. This Schedule applies to a condition imposed by the Director under clause 38 (2) (a) of the Act only if the condition provides relief from compliance with all of the requirements of the following provisions:

- 1. Paragraph 2 of subsection 1-2 (1) of Schedule 1.
- 2. Paragraphs 1 to 4 of subsection 1-2 (2) of Schedule 1.
- 3. Sections 1-3 to 1-6 of Schedule 1.

Prohibitions

4-3. (1) The Director is prohibited from imposing a condition under clause 38 (2) (a) of the Act if the drinking water system obtains water from a raw water supply that is surface water.

(2) The Director is prohibited from imposing a condition under clause 38 (2) (a) of the Act if the condition would apply after the fifth anniversary of the date the condition is imposed, but this subsection does not prohibit the Director from subsequently imposing that condition again pursuant to a new application under clause 38 (3) (a) of the Act.

(3) The Director is prohibited from imposing a condition under clause 38 (2) (a) of the Act unless the municipality to which the drinking water system relates has passed a resolution requesting the condition.

Assessment

4-4. A person who proposes that the Director include a condition under clause 38 (2) (a) or 46 (2) (a) of the Act in an approval or municipal drinking water licence shall ensure that a written assessment is prepared in accordance with the following rules before an application is made under clause 38 (3) (a) or 46 (3) (a) of the Act:

- 1. The assessment must be prepared by a professional hydrogeologist.
- 2. The assessment must assess the aquifer and the wells that the drinking water system obtains water from, the well head protection and the impact of existing and anticipated land uses.
- 3. The assessment must include,
 - i. the results of all drinking water tests required under the Act during the 24 months before the assessment is prepared, and

- ii. the results of all analyses required under Ontario Regulation 459/00 (Drinking Water Protection — Larger Water Works) during the 24 months before the assessment is prepared, if the assessment is prepared less than 24 months after the revocation of that Regulation.
4. The assessment must include,
- i. a written statement from the professional hydrogeologist confirming that he or she has requested and, to the best of his or her knowledge, received all information in the possession of the medical officer of health that relates to the drinking water system,
 - ii. a written statement from the professional hydrogeologist confirming that he or she has consulted with the medical officer of health about potential health-related issues or concerns that relate to the drinking water system, and
 - iii. a summary of all the potential health-related issues and concerns that relate to the drinking water system that were identified by the medical officer of health.

Consultation

4-5. A person who proposes that the Director include a condition under clause 38 (2) (a) or 46 (2) (a) of the Act in an approval or municipal drinking water licence shall ensure that public consultation is conducted in accordance with the following rules before an application is made under clause 38 (3) (a) or 46 (3) (a) of the Act:

- 1. A public meeting must be conducted to obtain comments on the proposed condition.
- 2. Reasonable notice of the public meeting must be given to users and prospective users of water from the drinking water system.
- 3. The person proposing the condition must prepare a written summary of the comments made at the public meeting, along with the person's responses to the comments.

O. Reg. 170/03, Sched. 4; O. Reg. 249/03, s. 11; O. Reg. 418/09, s. 14.

**SCHEDULE 5
RELIEF FROM SCHEDULE 2**

Municipal: Large Non-Residential
Small Non-Residential

Non-Municipal: Year-Round Residential
Seasonal Residential
Large Non-Residential
Small Non-Residential

Application

5-1. This Schedule applies to the following drinking water systems:

- 1. Large municipal non-residential systems.
- 2. Small municipal non-residential systems.
- 3. Non-municipal year-round residential systems.
- 4. Non-municipal seasonal residential systems.
- 5. Large non-municipal non-residential systems.
- 6. Small non-municipal non-residential systems.

Application: conditions

5-2. This Schedule applies to a condition imposed by the Director under clause 38 (2) (a) or 60 (2) (a) of the Act only if the condition provides relief from compliance with all of the requirements of the following provisions:

- 1. Paragraph 2 of subsection 2-2 (1) of Schedule 2.
- 2. Subsection 2-2 (2) of Schedule 2.
- 3. Sections 2-3 to 2-6 of Schedule 2.

Prohibitions

5-3. (1) The Director is prohibited from imposing a condition under clause 38 (2) (a) or 60 (2) (a) of the Act if the drinking water system obtains water from a raw water supply that is surface water.

(2) The Director is prohibited from imposing a condition under clause 38 (2) (a) or 60 (2) (a) of the Act if the condition would apply after the fifth anniversary of the date the condition is imposed, but this subsection does not prohibit the Director

from subsequently imposing that condition again pursuant to a new application under clause 38 (3) (a) or 60 (3) (a) of the Act.

Assessment

5-4. (1) A person who proposes that the Director include a condition in an approval under clause 38 (2) (a) or 60 (2) (a) of the Act shall ensure that a written assessment is prepared in accordance with the following rules before an application is made under clause 38 (3) (a) or 60 (3) (a) of the Act:

1. The assessment must be prepared by a licensed engineering practitioner.
2. The assessment must include,
 - i. a written statement from the licensed engineering practitioner confirming that he or she has requested and, to the best of his or her knowledge, received all information in the possession of the medical officer of health that relates to the drinking water system,
 - ii. a written statement from the licensed engineering practitioner confirming that he or she has consulted with the medical officer of health about potential health-related issues or concerns that relate to the drinking water system, and
 - iii. a summary of all the potential health-related issues and concerns that relate to the drinking water system that were identified by the medical officer of health.
3. The assessment must include a characterization of the drinking water system's raw water supply prepared by or under the supervision of the licensed engineering practitioner that includes,
 - i. the results of all microbiological tests conducted on waters from the system during the 24 months before the assessment is prepared,
 - ii. the results of a testing program conducted on the system's raw water supply that includes, in each of the 24 months before the assessment is prepared, at least one test for *Escherichia coli* (E. coli) and at least one test for total coliforms,
 - iii. a written statement from the licensed engineering practitioner confirming that, in his or her opinion, there are no significant and rapid shifts in raw water supply characteristics in relation to any of the following parameters:
 - A. pH,
 - B. turbidity,
 - C. temperature,
 - D. nitrate and nitrite,
 - E. conductivity, and
 - iv. copies of all results of any tests the licensed engineering practitioner has obtained, from any person, that show past evidence of any of the following organisms or chemicals in the system's raw water supply:
 - A. viruses,
 - B. chlorophyll a,
 - C. protozoan cysts,
 - D. macro-organisms.
4. The assessment must include surveys and analyses prepared by or under the supervision of the licensed engineering practitioner that deal with the potential risks of microbiological contamination with respect to each of the following:
 - i. well construction and well head protection,
 - ii. the well head vicinity and recharge zone,
 - iii. the drinking water system's distribution system and plumbing that is connected to the drinking water system that is owned by the owner of the drinking water system,
 - iv. connections between the drinking water system and plumbing that is not owned by the owner of the drinking water system.
5. The assessment must include a proposed management plan prepared by or under the supervision of the licensed engineering practitioner that provides guidance for operations related to preventing, reducing and managing microbiological risks, including,

- i. procedures describing seasonal start-up and scheduled routine maintenance activities related to flushing and disinfecting the system,
- ii. procedures for increased monitoring activities following heavy rainfall, floods or other adverse weather events,
- iii. logs for recording samples taken for tests, including records of locations, times, signatures and test results,
- iv. a protocol for notifying users of water from the system, the Ministry and the medical officer of health, including contact lists,
- v. procedures for corrective action to be taken on receipt of adverse sampling results that are consistent with the Ministry's *Procedure for Corrective Action for Systems Not Currently Using Chlorine*, and
- vi. procedures for recording summaries of any corrective actions taken, the results that were achieved, and the resolution of the issues that gave rise to the corrective actions.

(2) Subparagraph 3 i of subsection (1) does not apply to a drinking water system that has not begun operation.

Consultation

5-5. A person who proposes that the Director include a condition in an approval under clause 38 (2) (a) or 60 (2) (a) of the Act shall ensure that public consultation is conducted in accordance with the following rules before an application is made under clause 38 (3) (a) or 60 (3) (a) of the Act:

1. The following persons must be notified of the proposed condition and given a reasonable opportunity to comment on it:
 - i. The occupants of the private residences served by the system.
 - ii. The operators and occupants of the designated facilities served by the system.
 - iii. The operators of the public facilities served by the system.
 - iv. The operators of all other premises served by the system.
2. The person proposing the condition must prepare a written summary of the comments made under paragraph 1, along with the person's responses to the comments.

O. Reg. 170/03, Sched. 5; O. Reg. 247/06, s. 16; O. Reg. 326/08, s. 6; O. Reg. 418/09, s. 1 (5).

SCHEDULE 6 OPERATIONAL CHECKS, SAMPLING AND TESTING — GENERAL

Application

6-1. This Schedule applies to the following drinking water systems:

1. Large municipal residential systems.
2. Small municipal residential systems.
3. Large municipal non-residential systems.
4. Small municipal non-residential systems.
5. Non-municipal year-round residential systems.
6. Non-municipal seasonal residential systems.
7. Large non-municipal non-residential systems.
8. Small non-municipal non-residential systems.

Frequency of sampling and equipment checks

6-1.1 (1) If this Regulation or an approval, municipal drinking water licence or order, including an OWRA approval or OWRA order, requires at least one water sample to be taken every week and tested for a parameter, the owner of the drinking water system and the operating authority for the system shall ensure that at least one sample that is taken during a week for the purpose of being tested for that parameter is taken at least five days, and not more than 10 days, after a sample was taken for that purpose in the previous week.

(2) If this Regulation or an approval, municipal drinking water licence or order, including an OWRA approval or OWRA order, requires at least one water sample to be taken every two weeks and tested for a parameter, the owner of the drinking water system and the operating authority for the system shall ensure that at least one sample that is taken during a two-week period for the purpose of being tested for that parameter is taken at least 10 days, and not more than 20 days, after a sample was taken for that purpose in the previous two-week period.

(3) If this Regulation or an approval, municipal drinking water licence or order, including an OWRA approval or OWRA order, requires at least one water sample to be taken every month and tested for a parameter, the owner of the drinking water system and the operating authority for the system shall ensure that at least one sample that is taken during a month for the purpose of being tested for that parameter is taken at least 20 days, and not more than 40 days, after a sample was taken for that purpose in the previous month.

(4) If this Regulation or an approval, municipal drinking water licence or order, including an OWRA approval or OWRA order, requires at least one water sample to be taken every three months or in each calendar quarter and tested for a parameter, the owner of the drinking water system and the operating authority for the system shall ensure that at least one sample that is taken during a three-month period or calendar quarter for the purpose of being tested for that parameter is taken at least 60 days, and not more than 120 days, after a sample was taken for that purpose in the previous three-month period or calendar quarter.

(5) If this Regulation or an approval, municipal drinking water licence or order, including an OWRA approval or OWRA order, requires at least one water sample to be taken every 12 months and tested for a parameter, the owner of the drinking water system and the operating authority for the system shall ensure that at least one sample that is taken during a 12-month period for the purpose of being tested for that parameter is taken not more than 30 days before or after the first anniversary of the day a sample was taken for that purpose in the previous 12-month period.

(6) If this Regulation or an approval, municipal drinking water licence or order, including an OWRA approval or OWRA order, requires at least one water sample to be taken every 36 months and tested for a parameter, the owner of the drinking water system and the operating authority for the system shall ensure that at least one sample that is taken during a 36-month period for the purpose of being tested for that parameter is taken not more than 60 days before or after the third anniversary of the day a sample was taken for that purpose in the previous 36-month period.

(7) If this Regulation or an approval, municipal drinking water licence or order, including an OWRA approval or OWRA order, requires at least one water sample to be taken every 60 months and tested for a parameter, the owner of the drinking water system and the operating authority for the system shall ensure that at least one sample that is taken during a 60-month period for the purpose of being tested for that parameter is taken not more than 90 days before or after the fifth anniversary of the day a sample was taken for that purpose in the previous 60-month period.

(8) This section applies, with necessary modifications, if this Regulation or an approval, drinking water works permit, municipal drinking water licence or order, including an OWRA approval or OWRA order, requires equipment to be checked at intervals to which any of subsections (1) to (7) apply.

Location of samples

6-2. Unless otherwise specified, a person who is required to ensure that samples are taken under this Regulation, or under an approval, municipal drinking water licence or order, including an OWRA order, shall ensure that they are taken from the point at which water enters the drinking water systems' distribution system or plumbing that is connected to the drinking water system.

Microbiological samples and chlorine residual

6-3. (1) If this Regulation or an approval, municipal drinking water licence or order, including an OWRA order, requires a water sample to be taken and tested for a microbiological parameter, the owner of the drinking water system and the operating authority for the system shall ensure that another sample is taken at the same time from the same location and is tested immediately for,

(a) free chlorine residual, if the system provides chlorination and does not provide chloramination; or

(b) combined chlorine residual, if the system provides chloramination.

(2) Subsection (1) does not apply to water samples taken from the drinking water system's raw water or raw water supply.

(3) Subsection (1) does not apply to sampling and testing for a microbiological parameter that is conducted by microbiological in-line testing equipment.

Form of sampling

6-4. (1) A person who is required to ensure that samples are taken under this Regulation, or under an approval, municipal drinking water licence or order, including an OWRA order, shall ensure that they are taken in the form of grab samples, unless continuous monitoring equipment or microbiological in-line testing equipment is authorized or required.

(2) Continuous monitoring equipment may be used for sampling and testing that is required under this Regulation, or under an approval, municipal drinking water licence or order, for,

(a) turbidity;

(b) fluoride;

(c) free chlorine residual; and

(d) free chlorine residual and total chlorine residual measured for the purpose of determining combined chlorine residual.

(3) Microbiological in-line testing equipment may be used for sampling and testing for a microbiological parameter that is required under this Regulation, or under an approval, municipal drinking water licence or order, if the Director is of the opinion that the testing method used by the equipment and the person operating the equipment is equivalent to a testing method for the parameter that is accredited by an accreditation body for drinking water testing that is designated or established under the Act.

Continuous monitoring

6-5. (1) If a drinking water system uses continuous monitoring equipment for sampling and testing that is required under this Regulation, or under an approval, drinking water works permit, municipal drinking water licence or order, for a parameter set out in the Table to this section, the owner of the system and the operating authority for the system shall ensure that the following standards are met:

1. The continuous monitoring equipment must, except when no water is being directed to users of water sampled by the equipment,
 - i. test for the parameter with at least the minimum frequency specified in the Table for the parameter, and
 - ii. record the date, time, sampling location and result of every test for the parameter with at least the minimum frequency referred to in subparagraph i.
2. If the continuous monitoring equipment tests for a parameter more often than is required by subparagraph 1 i, the equipment may, instead of complying with subparagraph 1 ii,
 - i. record the minimum, maximum and mean results of tests for the parameter for every period that is equal to the length of time referred to in subparagraph 1 i, along with the sampling location, the date of the tests conducted during the period and the time at the end of the period, and
 - ii. record the result of every test that causes an alarm to sound under paragraph 1 of subsection (1.1), along with the sampling location and the date and time of the test.
3. Test results recorded under paragraph 1 or 2 must be examined, within 72 hours after the tests are conducted,
 - i. by a certified operator, in the case of,
 - A. a large municipal residential system,
 - B. a small municipal residential system,
 - C. a large municipal non-residential system,
 - D. a non-municipal year-round residential system, or
 - E. a large non-municipal non-residential system, or
 - ii. by a trained person, in the case of,
 - A. a non-municipal seasonal residential system,
 - B. a small municipal non-residential system, or
 - C. a small non-municipal non-residential system.
4. If test results are not examined under paragraph 3 at the location where the tests are conducted, the continuous monitoring equipment must transmit the results to the location where they are examined.
5. The continuous monitoring equipment must be designed and operated in accordance with the standards described in subsection (1.1), or,
 - i. the continuous monitoring equipment must have a feature that ensures that no water is directed to users of water sampled by the equipment in the event that the equipment malfunctions or loses power or a test result for a parameter is above the maximum alarm standard or below the minimum alarm standard specified in the Table to this section for the parameter, and
 - ii. if the continuous monitoring equipment malfunctions or loses power or a test result for a parameter is above the maximum alarm standard or below the minimum alarm standard specified in the Table to this section for the parameter, a person who is qualified to examine test results under paragraph 3 takes appropriate action at the location where tests are conducted before water is again directed to users of water sampled by the equipment.
- 6., 7. REVOKED: O. Reg. 247/06, s. 17 (5).
8. The continuous monitoring equipment must be checked and calibrated in accordance with the manufacturer's instructions.

9. If the manufacturer's instructions do not indicate how often to check and calibrate the continuous monitoring equipment, the equipment must be checked and calibrated at least once a month while the drinking water system is in operation, in the case of,
 - i. a small municipal non-residential system,
 - ii. a non-municipal seasonal residential system, or
 - iii. a small non-municipal non-residential system.
10. If the manufacturer's instructions do not indicate how often to check and calibrate the continuous monitoring equipment and paragraph 9 does not apply, the equipment must be checked and calibrated as often as necessary to ensure that test results are within the following margins of error:
 - i. In the case of free chlorine residual, 0.05 milligrams per litre, if the concentrations usually measured by the equipment are less than or equal to 1.0 milligrams per litre, and proportionally higher if the concentrations usually measured are greater than 1.0 milligrams per litre,
 - ii. In the case of free chlorine residual and total chlorine residual measured for the purpose of determining combined chlorine residual, 0.05 milligrams per litre, if the concentrations usually measured by the equipment are less than or equal to 1.0 milligrams per litre, and proportionally higher if the concentrations usually measured are greater than 1.0 milligrams per litre,
 - iii. 0.1 Nephelometric Turbidity Units (NTU), in the case of turbidity.

(1.1) The standards referred to in paragraph 5 of subsection (1) are the following:

1. The continuous monitoring equipment must cause an alarm to sound immediately at the following locations if the equipment malfunctions or loses power or a test result for a parameter is above the maximum alarm standard or below the minimum alarm standard specified in the Table to this section for the parameter:
 - i. The location where the equipment conducts tests.
 - ii. A location where a person is present, if a person is not always present at the location where the equipment conducts tests.
 - iii. Every designated facility served by the drinking water system, unless the system is a large municipal residential system or a small municipal residential system.
2. A person qualified to examine test results under paragraph 3 of subsection (1) must take appropriate action if the person is at the location where tests are conducted and,
 - i. an alarm sounds under paragraph 1,
 - ii. a record of a test result indicates that an alarm should have sounded under paragraph 1, or
 - iii. there is good reason to believe that the continuous monitoring equipment has malfunctioned or lost power.
3. A person qualified to examine test results under paragraph 3 of subsection (1) must promptly be dispatched to the location where tests are conducted to take appropriate action if no person qualified to examine test results under paragraph 3 of subsection (1) is at that location and,
 - i. an alarm sounds under paragraph 1, unless a person qualified to examine test results under paragraph 3 of subsection (1) determines that,
 - A. the alarm sounded because a test result for a parameter was above the maximum alarm standard or below the minimum alarm standard specified in the Table to this section for the parameter, and
 - B. within two minutes, a further test result indicated that the parameter was no longer above the maximum alarm standard or below the minimum alarm standard, as the case may be,
 - ii. a record of a test result indicates that an alarm should have sounded under paragraph 1, or
 - iii. there is good reason to believe that the continuous monitoring equipment has malfunctioned or lost power.
4. A person who is dispatched under paragraph 3 must arrive at the location where tests are conducted as soon as possible.

(2) For the purposes of the Table to this section, the concentration of free chlorine residual or combined chlorine residual that is required to achieve primary disinfection for the drinking water system shall be determined in accordance with the Ministry's *Procedure for Disinfection of Drinking Water in Ontario*.

TABLE

Item	Parameter	Minimum Testing and	Maximum Alarm	Minimum Alarm Standard
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		Recording Frequency	Standard	
1.	Free chlorine residual required to achieve primary disinfection	5 minutes	Not applicable	0.1 milligrams per litre less than the concentration of free chlorine residual that is required to achieve primary disinfection
2.	Free chlorine residual and total chlorine residual measured for the purpose of determining combined chlorine residual required to achieve primary disinfection	5 minutes	Not applicable	0.1 milligrams per litre less than the concentration of combined chlorine residual that is required to achieve primary disinfection
3.	Free chlorine residual in a distribution sample	1 hour	Not applicable	0.05 milligrams per litre
4.	Free chlorine residual and total chlorine residual measured for the purpose of determining combined chlorine residual in a distribution sample	1 hour	Not applicable	0.25 milligrams per litre
5.	Turbidity	15 minutes	1.0 Nephelometric Turbidity Units (NTU)	Not applicable

Turbidity testing

6-6. If a water sample is required to be taken and tested for turbidity, the owner of the drinking water system and the operating authority for the system shall ensure that the testing is conducted using a turbidity meter that measures turbidity in Nephelometric Turbidity Units (NTU).

Chlorine residual testing

6-7. (1) If a water sample is required to be taken and tested for free chlorine residual or combined chlorine residual, the owner of the drinking water system and the operating authority for the system shall ensure that the testing is conducted using,

- (a) an electronic direct readout colourimetric or amperometric chlorine analyzer; or
- (b) another device, if, based on an inspection of the device and on a review of relevant records and documentation, a licensed engineering practitioner states in writing that it is equivalent to or better than an electronic direct readout colourimetric or amperometric chlorine analyzer, having regard to accuracy, reliability and ease of use.

(2) Subsection (1) does not apply to testing that is conducted by continuous monitoring equipment.

Sample handling

6-8. If this Regulation or an approval, municipal drinking water licence or order, including an OWRA order, requires a water sample to be tested for a parameter by a laboratory, the owner of the drinking water system and the operating authority for the system shall ensure that, subject to the other provisions of this Regulation, the sample is taken and handled in accordance with the directions of the laboratory to which the sample will be delivered for testing, including directions with respect to,

- (a) collection procedures;
- (b) the use of specified kinds of containers or of containers that are provided by the laboratory;
- (c) the labelling of samples;
- (d) the completion and submission of forms that are provided by the laboratory;
- (e) methods of transporting samples, including temperature conditions that must be maintained during transportation; and
- (f) time periods for delivery of samples.

Testing by laboratories

6-9. (1) REVOKED: O. Reg. 249/03, s. 12 (5).

(2) REVOKED: O. Reg. 249/03, s. 12 (6).

(3) REVOKED: O. Reg. 249/03, s. 12 (8).

(4) If a test of a water sample for a parameter is required by this Regulation, or by an approval or order, including an OWRA order, the owner of the drinking water system and the operating authority for the system shall ensure that written notice of the identity of the laboratory that will conduct the test is given to the Director before the sample is tested, unless,

- (a) the Director has previously been notified under this subsection that a water sample from the drinking water system was to be tested for that parameter by that laboratory; or

(b) before this Regulation came into force, the Director was previously notified in accordance with Ontario Regulation 459/00 (Drinking Water Protection — Larger Water Works) or Ontario Regulation 505/01 (Drinking Water Protection — Smaller Water Works Serving Designated Facilities) that a water sample from the drinking water system was to be tested for that parameter by that laboratory.

(5) REVOKED: O. Reg. 249/03, s. 12 (10).

(6) If a test of a water sample for a parameter is required by an approval, municipal drinking water licence or order, including an OWRA order, and the parameter is identified in the approval or order as a health-related parameter, the owner of the drinking water system and the operating authority for the system shall ensure that the laboratory that conducts the testing is informed, when the sample is sent to the laboratory, of the maximum concentration set out for the parameter in the approval or order.

(7)-(9) REVOKED: O. Reg. 249/03, s. 12 (11).

Records

6-10. (1) The owner of a drinking water system and the operating authority for the system shall ensure that, for every sample required by this Regulation or by an approval, municipal drinking water licence or order, including an OWRA order, a record is made of the following information:

1. The date and time the sample was taken, the location where the sample was taken and the name of the person who took the sample.
2. If the sample is taken under section 7 of this Regulation or Schedule 7, 8 or 9, the date and time the sample was tested, the name of the person who conducted the test, and the results of the test.
3. If the sample is taken from a drinking water system's distribution system under section 15.1-4 or 15.1-5 of Schedule 15.1, the addresses of all premises served by the plumbing from which samples were taken on the same day in accordance with subsection 15.1-6 (3).
4. If the sample is taken under section 15.1-7 of Schedule 15.1 and tested for pH,
 - i. the date and time of the test,
 - ii. the name of the person who conducted it, and
 - iii. the results of the test.

(2) Subsection (1) does not apply to a sample tested by continuous monitoring equipment or microbiological in-line testing equipment.

OWRA orders

6-11. If an OWRA order requires samples to be taken and tested for a parameter and a provision of Schedules 7 to 15.2 also requires samples to be taken and tested for the parameter, the provision of Schedules 7 to 15.2 prevails.

OWRA approvals

6-12. (1) If an OWRA approval requires more stringent sampling or testing than a provision of this Schedule or Schedules 7 to 15.2, the OWRA approval prevails.

(2) If an OWRA approval requires less stringent sampling or testing than a provision of this Schedule or Schedules 7 to 15.2, the provision of this Schedule or Schedules 7 to 15.2 prevails.

O. Reg. 170/03, Sched. 6; O. Reg. 249/03, s. 12; O. Reg. 269/03, s. 9; O. Reg. 253/05, s. 13; O. Reg. 247/06, s. 17; O. Reg. 399/07, s. 5; O. Reg. 326/08, s. 7; O. Reg. 418/09, ss. 1 (5), 15; O. Reg. 374/15, s. 2.

SCHEDULE 7 OPERATIONAL CHECKS

Municipal: Large Residential
Small Residential

Application

7-1. This Schedule applies to the following drinking water systems.

1. Large municipal residential systems.
2. Small municipal residential systems.

Chlorine residual

7-2. (1) The owner of a drinking water system that provides chlorination for primary disinfection shall ensure that sampling and testing for free chlorine residual is carried out by continuous monitoring equipment in the treatment process at

or near a location where the intended contact time has just been completed in accordance with the Ministry's *Procedure for Disinfection of Drinking Water in Ontario*.

(2) The owner of a drinking water system that provides chloramination for primary disinfection shall ensure that sampling and testing for combined chlorine residual is carried out by continuous monitoring equipment in the treatment process at or near a location where the intended contact time has just been completed in accordance with the Ministry's *Procedure for Disinfection of Drinking Water in Ontario*.

(3) The owner of a large municipal residential system that provides secondary disinfection and the operating authority for the system shall ensure that at least seven distribution samples are taken each week in accordance with subsection (4) and are tested immediately for,

- (a) free chlorine residual, if the system provides chlorination and does not provide chloramination; or
- (b) combined chlorine residual, if the system provides chloramination.

(4) The following rules apply to the distribution samples referred to in subsection (3) unless at least one sample is taken on each day of the week:

1. At least four of the samples must be taken on one day of the week, at least 48 hours after the last sample was taken in the previous week.
2. At least three of the samples must be taken on a second day of the week, at least 48 hours after the last sample was taken on the day referred to in paragraph 1.
3. When more than one sample is taken on the same day of the week under paragraph 1 or 2, each sample must be taken from a different location.

(5) The owner of a small municipal residential system that provides secondary disinfection and the operating authority for the system shall ensure that at least two distribution samples are taken each week in accordance with subsection (6) and are tested immediately for,

- (a) free chlorine residual, if the system provides chlorination and does not provide chloramination; or
- (b) combined chlorine residual, if the system provides chloramination.

(6) At least one of the distribution samples referred to in subsection (5) must be taken at least 48 hours after, and during the same week as, one of the other distribution samples referred to in subsection (5).

Turbidity

7-3. (1) The owner of a drinking water system and the operating authority for the system shall ensure that a water sample is taken at least once every month, from a location that is before raw water enters the treatment system, and is tested for turbidity.

(1.1) If the drinking water system obtains water from a raw water supply that is ground water, the owner of the system and the operating authority for the system shall ensure that a sample is taken under subsection (1) from each well that is supplying water to the system.

(2) If a drinking water system obtains water from a raw water supply that is surface water and the system provides filtration,

- (a) subsection (1) does not apply; and
- (b) the owner of the system shall ensure that sampling and testing for turbidity is carried out by continuous monitoring equipment on each filter effluent line.

Fluoride

7-4. If a drinking water system provides fluoridation, the owner of the system and the operating authority for the system shall ensure that a water sample is taken at the end of the fluoridation process at least once every day and is tested for fluoride.

Testing by certified operators or water quality analysts

7-5. (1) The owner of a drinking water system and the operating authority for the system shall ensure that every test required by this Schedule is conducted by a certified operator or a water quality analyst.

(1.1) Despite subsection (1), a test required by section 7-2 or 7-3 at a small municipal residential system may be conducted by a person who is not a certified operator or water quality analyst if the person,

- (a) has been trained by a certified operator to conduct the test;
- (b) works under the supervision of a certified operator; and
- (c) immediately advises a certified operator of all test results.

(2) Subsection (1) does not apply to tests conducted by continuous monitoring equipment.

O. Reg. 170/03, Sched. 7; O. Reg. 249/03, s. 13; O. Reg. 247/06, s. 18; O. Reg. 402/06, s. 1; O. Reg. 326/08, s. 8; O. Reg. 418/09, s. 16.

SCHEDULE 8 MAINTENANCE AND OPERATIONAL CHECKS

Municipal: Large Non-Residential

Non-Municipal: Year-Round Residential
Large Non-Residential

Application

8-1. This Schedule applies to the following drinking water systems:

1. Large municipal non-residential systems.
2. Non-municipal year-round residential systems.
3. Large non-municipal non-residential systems.

Equipment maintenance

8-2. (1) If a report that complies with section 21-5 of Schedule 21 has been prepared in respect of a drinking water system in accordance with that Schedule, the owner of the system and the operating authority for the system shall ensure that the maintenance schedule referred to in clause 21-5 (d) of Schedule 21 is complied with by a certified operator.

(2) If subsection (1) does not apply but a manufacturer of a drinking water system's water treatment equipment has given instructions with respect to the checking or maintenance of the equipment, the owner of the system and the operating authority for the system shall ensure that the instructions are complied with by a certified operator.

(3) If subsections (1) and (2) do not apply and a drinking water system provides chlorination or chloramination, the owner of the system and the operating authority for the system shall ensure that all water treatment equipment is checked at least once every week by a certified operator to confirm proper functioning.

(4) If subsections (1), (2) and (3) do not apply, the owner of a drinking water system and the operating authority for the system shall ensure that all water treatment equipment is checked at least once every three months by a certified operator to confirm proper functioning.

(5) The owner of the drinking water system and the operating authority for the system shall ensure that a record is made of the date and time of every action taken under subsections (1) to (4), the name of the person who took the action and the results of the action.

Chlorine residual

8-3. (1) The owner of a drinking water system that provides chlorination for primary disinfection and the operating authority for the system shall ensure that a water sample is taken at least once every day, in the treatment process at or near a location where the intended contact time has just been completed in accordance with the Ministry's *Procedure for Disinfection of Drinking Water in Ontario*, and is tested immediately for free chlorine residual.

(2) The owner of a drinking water system that provides chloramination for primary disinfection shall ensure that sampling and testing for combined chlorine residual is carried out by continuous monitoring equipment in the treatment process at or near a location where the intended contact time has just been completed in accordance with the Ministry's *Procedure for Disinfection of Drinking Water in Ontario*.

(3) The owner of a drinking water system that provides secondary disinfection and the operating authority for the system shall ensure that at least two distribution samples are taken each week in accordance with subsection (3.1) and are tested immediately for,

- (a) free chlorine residual, if the system provides chlorination and does not provide chloramination; or
- (b) combined chlorine residual, if the system provides chloramination.

(3.1) At least one of the distribution samples referred to in subsection (3) must be taken at least 48 hours after, and during the same week as, one of the other distribution samples referred to in subsection (3).

(4) Subsection (3) does not apply if,

(a) the owner complies with section 2-3 or 2-4 of Schedule 2, whichever is applicable; and

(b) all parts of the drinking water system and of the plumbing connected to the drinking water system that are downstream of the equipment provided in accordance with section 2-3 or 2-4 of Schedule 2 are enclosed in a building or other protective structure.

Turbidity

8-4. (1) The owner of a drinking water system that obtains water from a raw water supply that is ground water, and the operating authority for the system, shall ensure that a water sample is taken at least once every month, from a location that is before raw water enters the treatment system, and is tested for turbidity.

(1.1) If the drinking water system obtains water from a raw water supply that is ground water, the owner of the system and the operating authority for the system shall ensure that a sample is taken under subsection (1) from each well that is supplying water to the system.

(2) If, with respect to a drinking water system that obtains water from a raw water supply that is surface water, continuous monitoring equipment is required to comply with section 2-4 of Schedule 2, the owner of the system shall ensure that sampling and testing for turbidity is conducted by continuous monitoring equipment on each filter effluent line.

(3) If subsection (2) does not apply to a drinking water system that obtains water from a raw water supply that is surface water, the owner of the system, and the operating authority for the system, shall ensure that a water sample is taken at least once every day on each filter effluent line and is tested immediately for turbidity.

(3.1) Subsections (2) and (3) do not apply to a large municipal non-residential system or large non-municipal non-residential system that provides ultraviolet light disinfection equipment for primary disinfection and does not use chlorination or chloramination for primary disinfection, if,

(a) section 2-6 of Schedule 2 is complied with; and

(b) the ultraviolet light disinfection equipment has a feature that ensures that no water is directed to users of water treated by the equipment in the event that the equipment malfunctions, loses power or ceases to provide the appropriate level of disinfection.

(4) Subsections (2) and (3) do not apply to a drinking water system until the equipment required to ensure compliance with Schedule 2 commences operation.

Testing by certified operators or water quality analysts

8-5. (1) The owner of a drinking water system and the operating authority for the system shall ensure that every test required by this Schedule is conducted by a certified operator or a water quality analyst.

(1.1) Despite subsection (1), a test required by this Schedule may be conducted by a person who is not a certified operator or water quality analyst if the person,

(a) has been trained by a certified operator to conduct the test;

(b) works under the supervision of a certified operator; and

(c) immediately advises a certified operator of all test results.

(2) Subsection (1) does not apply to tests conducted by continuous monitoring equipment.

Non-residential systems

8-6. Sections 8-2, 8-3 and 8-4 do not apply to the following drinking water systems during days on which all designated facilities and all public facilities served by the system are not open:

1. A large municipal non-residential system.

2. A large non-municipal non-residential system.

Non-municipal year-round residential system: certified operators

8-6.1 If, pursuant to subsection 2-11 (1) or (2) of Schedule 2, the owner of a non-municipal year-round residential system is not required to comply with provisions of that Schedule, a reference in this Schedule to a certified operator shall be deemed, with respect to that system, to be a reference to any person.

Transition: certified operators

8-7. If the owner of a drinking water system is not required to comply with sections 2-2 to 2-6 of Schedule 2 until after June 1, 2003, a reference in this Schedule to a certified operator shall be deemed, with respect to that system, to be a reference to any person until the equipment required to ensure compliance with Schedule 2 commences operation.

O. Reg. 170/03, Sched. 8; O. Reg. 249/03, s. 14; O. Reg. 247/06, s. 19; O. Reg. 402/06, s. 2; O. Reg. 326/08, s. 9; O. Reg. 418/09, s. 17.

SCHEDULE 9
MAINTENANCE AND OPERATIONAL CHECKS

Municipal: Small Non-Residential
Non-Municipal: Seasonal Residential
Small Non-Residential

Application

9-1. This Schedule applies to the following drinking water systems:

1. Small municipal non-residential systems.
2. Non-municipal seasonal residential systems.
3. Small non-municipal non-residential systems.

Equipment maintenance

9-2. (1) If a report that complies with section 21-5 of Schedule 21 has been prepared in respect of a drinking water system in accordance with that Schedule, the owner of the system and the operating authority for the system shall ensure that the maintenance schedule referred to in clause 21-5 (d) of Schedule 21 is complied with by a trained person.

(2) If subsection (1) does not apply but a manufacturer of a drinking water system's water treatment equipment has given instructions with respect to the checking or maintenance of the equipment, the owner of the system and the operating authority for the system shall ensure that the instructions are complied with by a trained person.

(3) If subsections (1) and (2) do not apply and a drinking water system provides chlorination or chloramination, the owner of the system and the operating authority for the system shall ensure that all water treatment equipment is checked at least once every week by a trained person to confirm proper functioning.

(4) If subsections (1), (2) and (3) do not apply, the owner of a drinking water system and the operating authority for the system shall ensure that all water treatment equipment is checked at least once every three months by a trained person to confirm proper functioning.

(5) The owner of the drinking water system and the operating authority for the system shall ensure that a record is made of the date and time of every action taken under subsections (1) to (4), the name of the person who took the action and the results of the action.

Chlorine residual

9-3. (1) The owner of a drinking water system that provides chlorination for primary disinfection and the operating authority for the system shall ensure that a water sample is taken at least once every day, in the treatment process at or near a location where the intended contact time has just been completed in accordance with the Ministry's *Procedure for Disinfection of Drinking Water in Ontario*, and is tested immediately for free chlorine residual.

(2) The owner of a drinking water system that provides chloramination for primary disinfection shall ensure that sampling and testing for combined chlorine residual is carried out by continuous monitoring equipment in the treatment process at or near a location where the intended contact time has just been completed in accordance with the Ministry's *Procedure for Disinfection of Drinking Water in Ontario*.

(3) The owner of a drinking water system that provides secondary disinfection and the operating authority for the system shall ensure that at least two distribution samples are taken each week in accordance with subsection (3.1) and are tested immediately for,

- (a) free chlorine residual, if the system provides chlorination and does not provide chloramination; or
- (b) combined chlorine residual, if the system provides chloramination.

(3.1) At least one of the distribution samples referred to in subsection (3) must be taken at least 48 hours after, and during the same week as, one of the other distribution samples referred to in subsection (3).

(4) Subsection (3) does not apply if,

- (a) the owner complies with section 2-3 or 2-4 of Schedule 2, whichever is applicable; and
- (b) all parts of the drinking water system and of the plumbing connected to the drinking water system that are downstream of the equipment provided in accordance with section 2-3 or 2-4 of Schedule 2 are enclosed in a building or other protective structure.

Turbidity

9-4. (1) If, with respect to a drinking water system that obtains water from a raw water supply that is surface water, continuous monitoring equipment is required to comply with section 2-4 of Schedule 2, the owner of the system shall ensure that sampling and testing for turbidity is conducted by continuous monitoring equipment on each filter effluent line.

(2) If subsection (1) does not apply to a drinking water system that obtains water from a raw water supply that is surface water, the owner of the system, and the operating authority for the system, shall ensure that a water sample is taken at least once every day on each filter effluent line and is tested immediately for turbidity.

(2.1) Subsections (1) and (2) do not apply to a small municipal non-residential system or small non-municipal non-residential system that provides ultraviolet light disinfection equipment for primary disinfection and does not use chlorination or chloramination for primary disinfection, if,

- (a) section 2-6 of Schedule 2 is complied with; and
- (b) the ultraviolet light disinfection equipment has a feature that ensures that no water is directed to users of water treated by the equipment in the event that the equipment malfunctions, loses power or ceases to provide the appropriate level of disinfection.

(3) Subsections (1) and (2) do not apply until the equipment required to ensure compliance with Schedule 2 commences operation.

Testing by trained persons or water quality analysts

9-5. (1) The owner of a drinking water system and the operating authority for the system shall ensure that every test required by this Schedule is conducted by a trained person or a water quality analyst.

(1.1) Despite subsection (1), a test required by this Schedule may be conducted by a person who is not a trained person or water quality analyst if the person,

- (a) has been trained by a certified operator to conduct the test;
- (b) works under the supervision of a certified operator; and
- (c) immediately advises a certified operator of all test results.

(2) Subsection (1) does not apply to tests conducted by continuous monitoring equipment.

Exceptions

9-6. (1) Sections 9-2 to 9-4 do not apply to a small municipal non-residential system or a small non-municipal non-residential system on days on which all designated facilities and all public facilities served by the system are not open.

(2) Sections 9-2 to 9-4 do not apply to a non-municipal seasonal residential system during a period of 60 or more consecutive days when the system,

- (a) is not supplying water to any designated facilities or public facilities that are open;
- (b) is not supplying water to any major residential development; and
- (c) is not supplying water to any trailer park or campground that has more than five service connections.

9-7. REVOKED: O. Reg. 253/05, s. 14.

Transition: trained persons

9-8. If the owner of a drinking water system is not required to comply with sections 2-2 to 2-6 of Schedule 2 until after June 1, 2003, a reference in this Schedule to a trained person shall be deemed, with respect to that system, to be a reference to any person until the equipment required to ensure compliance with Schedule 2 commences operation.

O. Reg. 170/03, Sched. 9; O. Reg. 249/03, s. 15; O. Reg. 269/03, s. 10; O. Reg. 253/05, s. 14; O. Reg. 247/06, s. 20; O. Reg. 326/08, s. 10.

SCHEDULE 10
MICROBIOLOGICAL SAMPLING AND TESTING

Large Municipal Residential

Application

10-1. This Schedule applies to large municipal residential systems.

Distribution samples

10-2. (1) The owner of a drinking water system and the operating authority for the system shall ensure that,

- (a) if the system serves 100,000 people or less, at least eight distribution samples, plus one additional distribution sample for every 1,000 people served by the system, are taken every month, with at least one of the samples being taken in each week; and
 - (b) if the system serves more than 100,000 people, at least 100 distribution samples, plus one additional distribution sample for every 10,000 people served by the system, are taken every month, with at least three of the samples being taken in each week.
- (2) The owner of the drinking water system and the operating authority for the system shall ensure that each of the samples taken under subsection (1) is tested for,
- (a) *Escherichia coli*; and
 - (b) total coliforms.
- (3) The owner of the drinking water system and the operating authority for the system shall ensure that at least 25 per cent of the samples required to be taken under subsection (1) are tested for general bacteria population expressed as colony counts on a heterotrophic plate count.

Treated samples

10-3. The owner of a drinking water system and the operating authority for the system shall ensure that a water sample is taken at least once every week and tested for,

- (a) *Escherichia coli*;
- (b) total coliforms; and
- (c) general bacteria population expressed as colony counts on a heterotrophic plate count.

Raw water samples

10-4. (1) The owner of a drinking water system and the operating authority for the system shall ensure that a water sample is taken at least once every week from the drinking water system's raw water, before any treatment is applied to the water.

(2) If the drinking water system obtains water from a raw water supply that is ground water, or is deemed under section 2 to obtain water from a raw water supply that is surface water, the owner of the system and the operating authority for the system shall ensure that a sample is taken under subsection (1) from each well in the system.

(3) The owner of the drinking water system and the operating authority for the system shall ensure that each of the samples taken under subsection (1) is tested for,

- (a) *Escherichia coli*; and
- (b) total coliforms.

10-5. REVOKED: O. Reg. 247/06, s. 21 (6).

O. Reg. 170/03, Sched. 10; O. Reg. 247/06, s. 21; O. Reg. 418/09, s. 18.

**SCHEDULE 11
MICROBIOLOGICAL SAMPLING AND TESTING**

Municipal: Small Residential

Non-Municipal: Year-Round Residential

Application

11-1. This Schedule applies to the following drinking water systems:

1. Small municipal residential systems.
2. REVOKED: O. Reg. 247/06, s. 22 (1).
3. Non-municipal year-round residential systems.
4. REVOKED: O. Reg. 247/06, s. 22 (2).

Distribution samples

11-2. (1) The owner of a drinking water system and the operating authority for the system shall ensure that,

- (a) at least one distribution sample is taken every two weeks, if the system provides treatment equipment in accordance with Schedule 1 or 2 and the equipment is operated in accordance with that Schedule; or
- (b) at least one distribution sample is taken every week, if clause (a) does not apply.

(2) The owner of the drinking water system and the operating authority for the system shall ensure that each of the samples taken under subsection (1) is tested for,

- (a) *Escherichia coli*;
- (b) total coliforms; and
- (c) if section 1-5 of Schedule 1 or subsection 2-5 (1) of Schedule 2 applies to the system, general bacteria population expressed as colony counts on a heterotrophic plate count.

(3)-(5) REVOKED: O. Reg. 247/06, s. 22 (6).

(6) If a drinking water system uses point of entry treatment units, the samples taken under subsection (1) shall be taken from locations downstream of the point of entry treatment units and shall be taken on a rotational basis so that a sample is taken from a location downstream of each point of entry treatment unit at least once every 24 months.

(7) REVOKED: O. Reg. 247/06, s. 22 (7).

Raw water samples

11-3. (1) If a drinking water system obtains water from a raw water supply that is ground water or a drinking water system is deemed under section 2 to obtain water from a raw water supply that is surface water, the owner of the system and the operating authority for the system shall ensure that a water sample is taken at least once every month from the raw water in each well that is supplying water to the system, before any treatment is applied to the water.

(2) REVOKED: O. Reg. 247/06, s. 22 (8).

(3) The owner of the drinking water system and the operating authority for the system shall ensure that each of the samples taken under subsection (1) is tested for,

- (a) *Escherichia coli*; and
- (b) total coliforms.

Seven-day shutdowns, etc.

11-4. (1) Sampling and testing is not required under sections 11-2 and 11-3 during a period of seven or more consecutive days when,

- (a) the drinking water system is not in operation; or
- (b) the drinking water system supplies water only to five or fewer private residences, and all private residences are occupied by the owner of the system, members of the family of the owner of the system, employees or agents of the owner of the system, or members of the families of employees or agents of the owner of the system.

(2) If, pursuant to subsection (1), sampling and testing is not required during a period of seven or more consecutive days, the owner of the system and the operating authority for the system shall ensure that no drinking water is supplied to a user of water after that period until samples have been taken and tested under sections 11-2 and 11-3 and the results of the tests have been received by the owner and the operating authority.

11-5. REVOKED: O. Reg. 249/03, s. 16 (3).

O. Reg. 170/03, Sched. 11; O. Reg. 249/03, s. 16; O. Reg. 269/03, s. 11; O. Reg. 247/06, s. 22; O. Reg. 418/09, s. 19.

SCHEDULE 12 MICROBIOLOGICAL SAMPLING AND TESTING

Municipal: Small Non-Residential
Large Non-Residential

Non-Municipal: Seasonal Residential
Small Non-Residential
Large Non-Residential

Application

12-1. This Schedule applies to the following drinking water systems:

- 0.1 Large municipal non-residential systems.
 - 1. Small municipal non-residential systems.
 - 2. Non-municipal seasonal residential systems.
- 2.1 Large non-municipal non-residential systems.
 - 3. Small non-municipal non-residential systems.

Distribution samples

12-2. (1) The owner of a drinking water system and the operating authority for the system shall ensure that,

- (a) at least one distribution sample is taken every month, if the system provides treatment equipment in accordance with Schedule 2 and the equipment is operated in accordance with that Schedule; or
- (b) at least one distribution sample is taken every two weeks, if clause (a) does not apply.

(2) If a non-municipal seasonal residential system supplies water to more than 100 service connections, the owner of the system and the operating authority for the system shall ensure that, for every 100 service connections, at least one distribution sample is taken every month, in addition to the samples required by subsection (1).

(3) The owner of the drinking water system and the operating authority for the system shall ensure that each of the samples taken under subsections (1) and (2) is tested for,

- (a) *Escherichia coli*;
- (b) total coliforms; and
- (c) if subsection 2-5 (1) of Schedule 2 applies to the system, general bacteria population expressed as colony counts on a heterotrophic plate count.

(4)-(6) REVOKED: O. Reg. 247/06, s. 23 (5).

(7) If a drinking water system uses point of entry treatment units, the samples taken under subsection (1) shall be taken from locations downstream of the point of entry treatment units and,

- (a) in the case of a non-municipal seasonal residential system that serves a major residential development, the samples shall be taken on a rotational basis so that a sample is taken from a location downstream of each point of entry treatment unit at least once every 24 months; and
- (b) in any other case, the samples shall be taken on a rotational basis so that, after a sample is taken from a location downstream of a particular point of entry treatment unit, another sample is not taken from a location downstream of that unit until samples have been taken from locations downstream of all the other point of entry treatment units.

(8) REVOKED: O. Reg. 247/06, s. 23 (7).

Raw water samples

12-3. (1) If a drinking water system obtains water from a raw water supply that is ground water or a drinking water system is deemed under section 2 to obtain water from a raw water supply that is surface water, the owner of the system and the operating authority for the system shall ensure that a water sample is taken at least once every month from the raw water in each well that is supplying water to the system, before any treatment is applied to the water.

(2) REVOKED: O. Reg. 247/06, s. 23 (8).

(3) The owner of the drinking water system and the operating authority for the system shall ensure that each of the samples taken under subsection (1) is tested for,

- (a) *Escherichia coli*; and
- (b) total coliforms.

Seven-day shutdowns, etc.

12-4. (1) Sections 12-2 and 12-3 do not apply to a large municipal non-residential system, small municipal non-residential system, large non-municipal non-residential system or small non-municipal non-residential system during a period of seven or more consecutive days when the system is not supplying water to any designated facilities or public facilities that are open.

(2) Sections 12-2 and 12-3 do not apply to a non-municipal seasonal residential system during a period of seven or more consecutive days when the system,

- (a) is not supplying water to any designated facilities or public facilities that are open;
- (b) is not supplying water to any major residential development; and
- (c) is not supplying water to any trailer park or campground that has more than five service connections.

(3) If, pursuant to subsection (1) or (2), sections 12-2 and 12-3 do not apply to a drinking water system during a period of seven or more consecutive days, the owner of the system and the operating authority for the system shall ensure that no drinking water is supplied to a user of water after that period until samples have been taken and tested under sections 12-2 and 12-3 and the results of the tests have been received by the owner and the operating authority.

12-5. REVOKED: O. Reg. 249/03, s. 17 (5).

12-6. REVOKED: O. Reg. 253/05, s. 15 (4).

**SCHEDULE 13
CHEMICAL SAMPLING AND TESTING**

Municipal: Large Residential
Small Residential

Non-Municipal: Year-Round Residential

Application

13-1. This Schedule applies to the following drinking water systems:

1. Large municipal residential systems.
2. Small municipal residential systems.
3. REVOKED: O. Reg. 247/06, s. 24 (1).
4. Non-municipal year-round residential systems.
5. REVOKED: O. Reg. 247/06, s. 24 (2).

Inorganics

13-2. (1) The owner of a large municipal residential system and the operating authority for the system shall ensure that,

- (a) at least one water sample is taken every 12 months, if the system obtains water from a raw water supply that is surface water; or
- (b) at least one water sample is taken every 36 months, if the system obtains water from a raw water supply that is ground water.

(2) The owner of a large municipal residential system and the operating authority for the system shall ensure that each of the samples taken under subsection (1) is tested for every parameter set out in Schedule 23.

(3) The owner of a small municipal residential system or non-municipal year-round residential system and the operating authority for the system shall ensure that at least one water sample is taken every 60 months and tested for every parameter set out in Schedule 23.

13-3. REVOKED: O. Reg. 399/07, s. 6 (1).

Organics

13-4. (1) The owner of a large municipal residential system and the operating authority for the system shall ensure that,

- (a) at least one water sample is taken every 12 months, if the system obtains water from a raw water supply that is surface water; or
- (b) at least one water sample is taken every 36 months, if the system obtains water from a raw water supply that is ground water.

(2) The owner of a large municipal residential system and the operating authority for the system shall ensure that each of the samples taken under subsection (1) is tested for every parameter set out in Schedule 24.

(3) The owner of a small municipal residential system or non-municipal year-round residential system and the operating authority for the system shall ensure that at least one water sample is taken every 60 months and tested for every parameter set out in Schedule 24.

Increased frequency under ss. 13-2 and 13-4

13-5. (1) If a test result obtained under section 13-2 or 13-4 for a parameter exceeds half of the standard prescribed for the parameter in Schedule 2 to the Ontario Drinking Water Quality Standards, the frequency of sampling and testing for that parameter under that section shall be increased so that at least one water sample is taken and tested every three months.

(2) Subsection (1) ceases to apply to a parameter if,

- (a) in the case of a drinking water system that obtains water from a raw water supply that is surface water, for four consecutive three-month periods in which the system is in operation, none of the test results obtained under section 13-2 or 13-4 for the parameter exceed half of the standard prescribed for the parameter in Schedule 2 to the Ontario Drinking Water Quality Standards; or
- (b) in the case of a drinking water system that obtains water from a raw water supply that is ground water, for two consecutive three-month periods in which the system is in operation, none of the test results obtained under section 13-

2 or 13-4 for the parameter exceed half of the standard prescribed for the parameter in Schedule 2 to the Ontario Drinking Water Quality Standards.

Trihalomethanes

13-6. (1) The owner of a drinking water system that provides chlorination or chloramination and the operating authority for the system shall ensure that at least one distribution sample is taken in each calendar quarter, from a point in the drinking water system's distribution system, or plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of trihalomethanes.

(2) The owner of the drinking water system and the operating authority for the system shall ensure that each of the samples taken under subsection (1) is tested for trihalomethanes.

(3) For the purposes of Schedule 2 to the Ontario Drinking Water Quality Standards, the running annual average of quarterly results with respect to trihalomethanes shall be calculated for each calendar quarter by using the following formula:

$$[A + B + C + D] \div 4$$

in which,

"A" is the average of all of the results from the samples tested under subsection (2) in that calendar quarter,

"B" is the average of all of the results from the sample tested under subsection (2) in the calendar quarter that immediately preceded the calendar quarter referred to in "A",

"C" is the average of all of the results from the sample tested under subsection (2) in the calendar quarter that immediately preceded the calendar quarter referred to in "B", and

"D" is the average of all of the results from the sample tested under subsection (2) in the calendar quarter that immediately preceded the calendar quarter referred to in "C".

(4) Despite subsection (1) and subject to subsections (5) and (6), if the following conditions have been met after samples have been taken and tested under subsections (1) and (2) in at least 12 consecutive calendar quarters, a drinking water system that is a small municipal residential system or a non-municipal year-round residential system may cease sampling and testing for eight consecutive calendar quarters:

1. No single test result obtained in the previous 12 consecutive calendar quarters indicated that the concentration of trihalomethanes was greater than 0.050 milligrams per litre.
2. The drinking water system's raw water supply is the same source of raw water supply that was used in the calendar quarters referred to in paragraph 1.
3. No alterations that may increase levels of trihalomethanes in the drinking water system have been made to the treatment equipment used in the calendar quarters referred to in paragraph 1.
4. The owner or operating authority of the drinking water system did not receive a written direction described in subsection (6) from the Director during the calendar quarters referred to in paragraph 1.

(5) Subject to subsection (6), a drinking water system that is a small municipal residential system or a non-municipal year round residential system referred to in subsection (4) that ceases to sample and test for eight consecutive calendar quarters shall resume the sampling and testing required under subsections (1) and (2) for four consecutive calendar quarters and may continue to cease sampling and testing for eight consecutive calendar quarters and resume sampling and testing for four consecutive calendar quarters for as long as the following conditions are met with respect to the period of sampling and testing:

1. No single test result obtained in the four consecutive calendar quarters period of sampling and testing indicated that the concentration of trihalomethanes was greater than 0.050 milligrams per litre.
2. The drinking water system's raw water supply is the same source of raw water supply that was used in the calendar quarters referred to in paragraph 1 as well as in the eight consecutive calendar quarters that immediately preceded the sampling and testing period.
3. No alterations that may increase levels of trihalomethanes in the drinking water system have been made to the treatment equipment used in the calendar quarters referred to in paragraph 1 as well as in the eight consecutive calendar quarters that immediately preceded the sampling and testing period.
4. The owner or operating authority of the drinking water system did not receive a written direction described in subsection (6) from the Director during the calendar quarters referred to in paragraph 1 or during the eight consecutive calendar quarters that immediately preceded the sampling and testing period.

(6) Despite subsections (4) and (5), if the Director has knowledge of water chemistry changes in the water of a drinking water system or alterations to the treatment equipment and in the Director's opinion the changes or alterations may increase levels of trihalomethanes in the drinking water system, the Director shall provide a written direction to the owner or operating

authority of the drinking water system that the requirements in subsections (1) and (2) to sample and test in each calendar quarter apply to the system.

Note: On January 1, 2017, Schedule 13 to the Regulation is amended by adding the following section: (See: O. Reg. 374/15, s. 4 (1))

Haloacetic acids

13-6.1 (1) The owner of a drinking water system that provides chlorination or chloramination and the operating authority for the system shall ensure that at least one distribution sample is taken in each calendar quarter, from a point in the drinking water system's distribution system, or plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of haloacetic acids.

(2) The owner of the drinking water system and the operating authority for the system shall ensure that each of the samples taken under subsection (1) is tested for haloacetic acids.

Note: On January 1, 2020, section 13-6.1 of Schedule 13 to the Regulation is amended by adding the following subsections: (See: O. Reg. 374/15, s. 4 (2))

(3) For the purposes of Schedule 2 to the Ontario Drinking Water Quality Standards, the running annual average of quarterly results with respect to haloacetic acids shall be calculated for each calendar quarter by using the following formula:

$$[A + B + C + D] \div 4$$

in which,

"A" is the average of all of the results from the samples tested under subsection (2) in that calendar quarter,

"B" is the average of all of the results from the samples tested under subsection (2) in the calendar quarter that immediately preceded the calendar quarter referred to in "A",

"C" is the average of all of the results from the samples tested under subsection (2) in the calendar quarter that immediately preceded the calendar quarter referred to in "B", and

"D" is the average of all of the results from the samples tested under subsection (2) in the calendar quarter that immediately preceded the calendar quarter referred to in "C".

(4) Despite subsection (1) and subject to subsection (5), if the following conditions have been met after samples have been taken and tested under subsections (1) and (2) in at least 12 consecutive calendar quarters, a drinking water system that is a small municipal residential system or a non-municipal year-round residential system may cease sampling and testing for eight consecutive calendar quarters:

1. No single test result obtained in the previous 12 consecutive calendar quarters indicated that the concentration of haloacetic acids was greater than 0.040 milligrams per litre.
2. The drinking water system's raw water supply is the same source of raw water supply that was used in the calendar quarters referred to in paragraph 1.
3. No alterations that may increase levels of trihalomethanes in the drinking water system have been made to the treatment equipment used in the calendar quarters referred to in paragraph 1.
4. The owner or operating authority of the drinking water system did not receive a written direction described in subsection (6) from the Director during the calendar quarters referred to in paragraph 1.

(5) A drinking water system that is a small municipal residential system or a non-municipal year round residential system referred to in subsection (4) that ceases to sample and test for eight consecutive calendar quarters shall resume the sampling and testing required under subsections (1) and (2) for four consecutive calendar quarters and may continue to cease sampling and testing for eight consecutive calendar quarters and resume sampling and testing for four consecutive calendar quarters for as long as the following conditions are met with respect to the period of sampling and testing:

1. No single test result obtained in the four consecutive calendar quarters period of sampling and testing indicated that the concentration of haloacetic acids was greater than 0.040 milligrams per litre.
2. The drinking water system's raw water supply is the same source of raw water supply that was used in the calendar quarters referred to in paragraph 1 as well as in the eight consecutive calendar quarters that immediately preceded the sampling and testing period.
3. No alterations that may increase levels of trihalomethanes in the drinking water system have been made to the treatment equipment used in the calendar quarters referred to in paragraph 1 as well as in the eight consecutive calendar quarters that immediately preceded the sampling and testing period.
4. The owner or operating authority of the drinking water system did not receive a written direction described in subsection (6) from the Director during the calendar quarters referred to in paragraph 1 or during the eight consecutive calendar quarters that immediately preceded the sampling and testing period.

(6) Despite subsections (4) and (5), if the Director has knowledge of water chemistry changes in the water of a drinking water system or alterations to the treatment equipment and in the Director's opinion the changes or alterations may increase levels of haloacetic acids in the drinking water system, the Director shall provide a written direction to the owner or operating authority of the drinking water system that the requirements in subsections (1) and (2) to sample and test in each calendar quarter apply to the system.

Nitrate and nitrite

13-7. The owner of a drinking water system and the operating authority for the system shall ensure that at least one water sample is taken every three months and tested for nitrate and nitrite.

Sodium

13-8. The owner of a drinking water system and the operating authority for the system shall ensure that at least one water sample is taken every 60 months and tested for sodium.

Fluoride

13-9. If a drinking water system does not provide fluoridation, the owner of the system and the operating authority for the system shall ensure that a water sample is taken at least once every 60 months and tested for fluoride.

First tests

13-10. Where this Schedule requires that water samples be taken and tested for a parameter with a frequency of a period of time fixed by this Schedule, the owner of the drinking water system and the operating authority for the system shall ensure that the first sample is taken and tested for that parameter,

- (a) within that period of time after the latest of,
 - (i) the date the last sample was taken and tested for that parameter under Ontario Regulation 459/00 (Drinking Water Protection — Larger Water Works) or Ontario Regulation 505/01 (Drinking Water Protection — Smaller Water Works Serving Designated Facilities), if one of those regulations applied to the drinking water system,
 - (ii) the date the last sample was taken and tested for that parameter for the purpose of preparing a report under section 13 of Ontario Regulation 459/00, if that regulation applied to the drinking water system, and
 - (iii) the date the last sample was taken and tested for that parameter before this Regulation came into force for the purpose of complying with an OWRA approval or OWRA order or making an application for an OWRA approval, if a sample was taken and tested for that parameter for that purpose before this Regulation came into force; or
- (b) within that period of time or 12 months, whichever is shorter, after this Schedule begins to apply to the drinking water system, if clause (a) does not apply.

60-day shutdowns, etc.

13-11. Sampling and testing is not required under sections 13-5, 13-6 and 13-7 during a period of 60 or more consecutive days when,

- (a) the drinking water system is not in operation; or
- (b) the drinking water system supplies water only to five or fewer private residences, and all private residences are occupied by the owner of the system, members of the family of the owner of the system, employees or agents of the owner of the system, or members of the families of employees or agents of the owner of the system.

13-12. REVOKED: O. Reg. 249/03, s. 18.

O. Reg. 170/03, Sched. 13; O. Reg. 249/03, s. 18; O. Reg. 269/03, s. 13; O. Reg. 247/06, s. 24; O. Reg. 399/07, s. 6; O. Reg. 418/09, s. 20; O. Reg. 374/15, s. 3.

SCHEDULE 14 REVOKED: O. Reg. 247/06, s. 25.

**SCHEDULE 15
CHEMICAL SAMPLING AND TESTING**

Municipal: Large Non-Residential
Small Non-Residential

Non-Municipal: Seasonal Residential
Large Non-Residential
Small Non-Residential

Application

15-1. This Schedule applies to the following drinking water systems:

1. Large municipal non-residential systems.
2. Small municipal non-residential systems.
3. Non-municipal seasonal residential systems.
4. Large non-municipal non-residential systems.
5. Small non-municipal non-residential systems.

Inorganics and organics

15-2. The owner of a drinking water system that serves a designated facility, and the operating authority for the system, shall ensure that at least one water sample is taken every 60 months and tested for every parameter set out in Schedules 23 and 24.

15-3. REVOKED: O. Reg. 399/07, s. 7.

Nitrate and nitrite

15-4. (1) The owner of a drinking water system and the operating authority for the system shall ensure that at least one water sample is taken every three months and tested for nitrate and nitrite.

(2) Subsection (1) does not apply to a large municipal non-residential system, small municipal non-residential system, large non-municipal non-residential system or small non-municipal non-residential system during a period of 60 or more consecutive days when the system is not supplying water to any designated facilities or public facilities that are open.

(3) Subsection (1) does not apply to a non-municipal seasonal residential system during a period of 60 or more consecutive days when the system,

- (a) is not supplying water to any designated facilities or public facilities that are open;
- (b) is not supplying water to any major residential development; and
- (c) is not supplying water to any trailer park or campground that has more than five service connections.

Sodium

15-5. The owner of a drinking water system and the operating authority for the system shall ensure that at least one water sample is taken every 60 months and tested for sodium.

Fluoride

15-6. The owner of the system and the operating authority for the system shall ensure that at least one water sample is taken at least once every 60 months and tested for fluoride.

First tests

15-7. Where this Schedule requires that water samples be taken and tested for a parameter with a frequency of a period of time fixed by this Schedule, the owner of the drinking water system and the operating authority for the system shall ensure that the first sample is taken and tested for that parameter,

- (a) within that period of time after the later of,
 - (i) the date the last sample was taken and tested for that parameter under Ontario Regulation 459/00 (Drinking Water Protection — Larger Water Works) or Ontario Regulation 505/01 (Drinking Water Protection — Smaller Water Works Serving Designated Facilities), if one of those regulations applied to the drinking water system, and
 - (ii) the date the last sample was taken and tested for that parameter before this Regulation came into force for the purpose of complying with an OWRA approval or OWRA order or making an application for an OWRA approval, if a sample was taken and tested for that parameter for that purpose before this Regulation came into force; or
- (b) within that period of time or 12 months, whichever is shorter, after this Schedule begins to apply to the drinking water system, if clause (a) does not apply.

15-8. REVOKED: O. Reg. 249/03, s. 20 (2).

15-9. REVOKED: O. Reg. 253/05, s. 16.

O. Reg. 170/03, Sched. 15; O. Reg. 249/03, s. 20; O. Reg. 269/03, s. 15; O. Reg. 253/05, s. 16; O. Reg. 247/06, s. 26; O. Reg. 399/07, s. 7.

SCHEDULE 15.1
LEAD

Municipal: Large Residential
Small Residential

Non-Municipal: Year-Round Residential

Application

15.1-1. This Schedule applies to the following drinking water systems:

1. Large municipal residential systems.
2. Small municipal residential systems.
3. Non-municipal year-round residential systems.

Limited meaning of “serve”

15.1-2. For the purposes of this Schedule,

- (a) a drinking water system serves a population if its distribution system is directly connected to the plumbing that serves the population;
- (b) a drinking water system serves a private residence or other building if its distribution system is directly connected to the plumbing that serves the private residence or other building.

Definitions

15.1-3. In this Schedule,

“lead plumbing” and “lead service pipes” mean plumbing and service pipes with a lead content greater than 8 per cent; (“installation de plomberie en plomb”, “conduites de branchement en plomb”)

“lead solder” means solder with a lead content greater than 0.2 per cent; (“soudures de plomb”)

“Schedule 2 standard” means a standard prescribed for any substance in Schedule 2 to the Ontario Drinking Water Quality Standards; (“norme prescrite à l’annexe 2”)

“standard prescribed for lead” means the standard prescribed for lead in Schedule 2 to the Ontario Drinking Water Quality Standards; (“norme prescrite à l’égard du plomb”)

Standard sampling

15.1-4. (1) The owner of a drinking water system and the operating authority for the system shall ensure that, in accordance with sections 15.1-6 and 15.1-7, samples are taken during the periods described in subsection (2),

- (a) in plumbing that serves private residences, from at least the number of points set out in Column 3 of the Table to this section opposite the population served by the drinking water system;
- (b) in plumbing that does not serve private residences, from at least the number of points set out in Column 4 of the Table to this section opposite the population served by the drinking water system; and
- (c) in the drinking water system’s distribution system, from at least the number of points set out in Column 5 of the Table to this section opposite the population served by the drinking water system.

(2) The samples required by subsection (1) must be taken during each of the following periods:

1. The period from December 15, 2007 to April 15, 2008 and the corresponding period in every subsequent 12-month period.
2. The period from June 15, 2008 to October 15, 2008 and the corresponding period in every subsequent 12-month period.

(3) Despite subsection (1), if the population served by a drinking water system is less than 100 and if the number of buildings served by the system is less than five, the sampling requirements set out in subsection (1) do not apply and instead, one sample per building must be taken from plumbing that serves a private residence within the building, during the periods described in subsection (2) and in accordance with subsection 15.1-6 (1), paragraphs 1 and 2 of subsection 15.1-6 (2) and subsections 15.1-7 (1), (3) and (4).

TABLE
STANDARD SAMPLING — NUMBER OF SAMPLING LOCATIONS

Column 1 Item	Column 2 Population Served by Drinking Water System	Column 3 Number of Sampling Points in Plumbing that Serves Private Residences	Column 4 Number of Sampling Points in Plumbing that Does Not Serve Private Residences	Column 5 Number of Sampling Points in Distribution System
1.	1- 99	5	1	1
2.	100 - 499	10	1	2
3.	500 - 3,299	20	2	4
4.	3,300 - 9,999	40	4	8
5.	10,000 - 49,999	60	6	12
6.	50,000 - 99,999	80	8	16
7.	100,000 or more	100	10	20

Reduced sampling

15.1-5. (1) Section 15.1-4 ceases to apply to a drinking water system, and this section applies instead, if,

- (a) in the case of a system that serves a population of less than 50,000,
 - (i) in each of two consecutive periods described in subsection 15.1-4 (2),
 - (A) not more than 10 per cent of all the samples taken from plumbing under section 15.1-4 and tested for lead exceeded half the standard prescribed for lead, according to the results of the tests conducted under section 15.1-7, and
 - (B) no sample taken from plumbing under section 15.1-4 and tested for lead exceeded the standard prescribed for lead, according to the results of the tests conducted under section 15.1-7, or
 - (ii) in each of four consecutive periods described in subsection 15.1-4 (2), not more than 10 per cent of all the samples taken from plumbing under section 15.1-4 and tested for lead exceeded the standard prescribed for lead, according to the results of the tests conducted under section 15.1-7;
- (b) in the case of a system that serves a population of 50,000 or more, in each of four consecutive periods described in subsection 15.1-4 (2), not more than 10 per cent of all the samples taken from plumbing under section 15.1-4 and tested for lead exceeded the standard prescribed for lead, according to the results of the tests conducted under section 15.1-7.

(2) For the purpose of subsection (1), if two samples that are taken on the same day from a point in plumbing are tested for lead under section 15.1-7, the sample with the lower concentration of lead shall not be considered.

(3) If a drinking water system serves a population of less than 50,000 and, under subsection (1), section 15.1-4 does not apply to the system, the owner of the drinking water system and the operating authority for the system shall ensure that, in accordance with sections 15.1-6 and 15.1-7, samples are taken during the periods described in subsection (5) in every third 12-month period after samples were last taken under section 15.1-4 or this section,

- (a) in plumbing that serves private residences, from at least the number of points set out in Column 3 of the Table to this section opposite the population served by the drinking water system;
- (b) in plumbing that does not serve private residences, from at least the number of points set out in Column 4 of the Table to this section opposite the population served by the drinking water system; and
- (c) in the drinking water system's distribution system, from at least the number of points set out in Column 5 of the Table to this section opposite the population served by the drinking water system.

(4) If a drinking water system serves a population of 50,000 or more and, under subsection (1), section 15.1-4 does not apply to the system, the owner of the drinking water system and the operating authority for the system shall ensure that, in accordance with sections 15.1-6 and 15.1-7, samples are taken during the periods described in subsection (5), in every 12-month period after samples were last taken under section 15.1-4 or this section,

- (a) in plumbing that serves private residences, from at least the number of points set out in Column 3 of the Table to this section opposite the population served by the drinking water system;
- (b) in plumbing that does not serve private residences, from at least the number of points set out in Column 4 of the Table to this section opposite the population served by the drinking water system; and
- (c) in the drinking water system's distribution system, from at least the number of points set out in Column 5 of the Table to this section opposite the population served by the drinking water system.

(5) The samples required by subsections (3) and (4) must be taken during each of the following periods in the relevant 12-month period:

- 1. The period from December 15 to April 15.
- 2. The period from June 15 to October 15.

(6) This section ceases to apply to a drinking water system, and section 15.1-4 applies again, if in any period described in subsection (5), more than 10 per cent of all the samples taken from plumbing under that subsection and tested for lead exceeded the standard prescribed for lead, according to the results of the tests conducted under section 15.1-7.

(7) For the purpose of subsection (6), if two samples that are taken on the same day from a point in plumbing are tested for lead under section 15.1-7, the sample with the lower concentration of lead shall not be considered.

(8) Despite subsection (3), if the population served by the drinking water system is less than 100 and if the number of buildings served by the system is less than five, the sampling requirements set out in subsection (3) do not apply and instead, one sample per building must be taken from plumbing that serves a private residence within the building, during the periods described in subsection (2) and in accordance with subsection 15.1-6 (1), paragraphs 1 and 2 of subsection 15.1-6 (2) and subsections 15.1-7 (1), (3) and (4).

(9) The requirements for taking samples set out in clauses (3) (a) and (b) and subsection (8) cease to apply to a drinking water system if, in each of two consecutive periods described in subsection (5) not more than 10 per cent of all the samples from plumbing taken under clause (3) (a) or (b) or subsection (8), or taken in accordance with a condition imposed under subsection 38 (2), 46 (2) or 60 (2) of the Act with respect to a system that serves a population of less than 50,000, that were tested for lead exceed the standard prescribed for lead, according to the results of the tests conducted under clause 15.1-7 (3) (a) or under a condition imposed under subsection 38 (2), 46 (2) or 60 (2) of the Act.

(10) When the requirements for taking samples set out in clauses (3) (a) and (b) and subsection (8) cease to apply under subsection (9) to a drinking water system, the owner of the drinking water system and the operating authority for the system shall ensure that samples are taken as described in clause (3) (c), in accordance with subsection 15.1-7 (2),

- (a) to test for total alkalinity and for pH during each of the periods described in subsection (5) in every 12-month period; and
- (b) to test for lead during each of the periods described in subsection (5) in every third 12-month period.

(11) The requirements for taking samples set out in clauses (3) (a) and (b) and subsection (8) apply to a drinking water system again if the Director provides a written direction to the owner or operating authority of the system that the requirements apply to the system.

(12) The Director shall not provide a written direction under subsection (11) unless the Director has knowledge of water chemistry changes in the water of the drinking water system and in the Director's opinion the changes may increase levels of lead in the drinking water supplied by plumbing that is connected to the drinking water system.

TABLE
REDUCED SAMPLING — NUMBER OF SAMPLING LOCATIONS

Column 1 Item	Column 2 Population Served by Drinking Water System	Column 3 Number of Sampling Points in Plumbing that Serves Private Residences	Column 4 Number of Sampling Points in Plumbing that Does Not Serve Private Residences	Column 5 Number of Sampling Points in Distribution System
1.	1- 99	3	0	1
2.	100 - 499	5	1	1
3.	500 - 3,299	10	1	2
4.	3,300 - 9,999	20	2	3
5.	10,000 - 49,999	30	3	4
6.	50,000 - 99,999	40	4	8
7.	100,000 or more	50	5	10

Selection of sampling points

15.1-6. (1) The owner of a drinking water system and the operating authority for the system shall ensure that a sample taken from plumbing under section 15.1-4 or 15.1-5 is taken only with the consent of the occupant of the premises served by the plumbing.

(2) In selecting points in plumbing from which samples are to be taken under section 15.1-4 or 15.1-5, the owner of the drinking water system and the operating authority for the system shall ensure that the samples comply with the following rules:

1. Subject to paragraph 2, samples must be taken from,
 - i. plumbing that is connected or is suspected of being connected to lead service pipes, or
 - ii. lead plumbing or plumbing that is suspected of being lead plumbing.
2. To the extent that it is not reasonably possible to take samples from plumbing described in paragraph 1, samples may be taken from,

- i. plumbing that is connected or is suspected of being connected to service pipes that are not lead service pipes but have lead solder, or
 - ii. plumbing that is not lead plumbing but has or is suspected of having lead solder.
 - 3. Samples must not be taken from more than one point in the same building, unless the number of buildings served by the drinking water system is less than the number of sampling points set out in Column 3 of the Table to section 15.1-4 opposite the population served by the drinking water system.
 - 4. Subject to paragraphs 1 to 3, samples must be taken from plumbing that serves different kinds of premises, including,
 - i. single-family homes and multi-unit residential buildings, in the case of samples taken under clause 15.1-4 (1) (a) or 15.1-5 (3) (a) or (4) (a), and
 - ii. commercial properties, industrial properties, designated facilities and public facilities, in the case of samples taken under clause 15.1-4 (1) (b) or 15.1-5 (3) (b) or (4) (b).
 - 5. Subject to paragraphs 1 to 3, samples must be taken from different geographical areas that are served by the drinking water system.
- (3) The owner of a drinking water system and the operating authority for the system shall ensure that each sample taken from the system's distribution system under section 15.1-4 or 15.1-5 is taken,
- (a) on the same day that samples are taken from points in plumbing under that section; and
 - (b) from a point in the distribution system that is as close as reasonably possible to the points in plumbing from which samples are taken.

Sampling protocol and testing

15.1-7. (1) The owner of a drinking water system and the operating authority for the system shall ensure that samples taken from a point in plumbing under section 15.1-4 or 15.1-5 are taken in accordance with the following rules:

- 1. Two one-litre samples and the sample described in paragraph 12 must be taken.
 - 2. All three samples must be taken from the same tap.
- 2.1 The samples must be of cold water.
- 3. If the tap from which samples are to be taken has an aerator, the aerator must not be removed while the samples are being taken.
 - 4. The samples must be taken from,
 - i. a kitchen tap, if the sample is being taken from plumbing that serves premises that have a kitchen tap, or
 - ii. the tap that is most commonly used to provide water for human consumption, in any other case.
 - 5. If a filter or other water-treating device is installed on or near the tap specified in paragraph 4, the filter or other device must be bypassed without being removed, if it is reasonably possible to do so, while the samples are being taken.
 - 6. If a filter or other water-treating device is installed on or near the tap specified in paragraph 4 and it is not reasonably possible to bypass the filter or other device without removing it, the samples must be taken from another tap that is commonly used to provide water for human consumption.
 - 7. If a filter or other water-treating device is installed on or near every tap that provides water for human consumption and, in every case, it is not reasonably possible to bypass the filter or other device without removing it, the samples must be taken from the tap specified in paragraph 4, but the filter or other device must be removed before the step described in paragraph 8 is taken.
 - 8. Before the first sample is taken in accordance with paragraph 9, the tap must be turned on for at least five minutes and then turned off for the period described in subparagraph 9 i.
 - 9. The first sample to be taken must be taken in accordance with the following rules:
 - i. The sample must be taken immediately after a period of not less than 30 minutes but not more than 35 minutes during which the plumbing is not used and must include the first water that comes out when the tap is turned on to take the sample.
 - ii. The sample must be taken with water flowing at a rate that approximates normal use, without permitting water to splash out of the container in which the sample is being collected.
 - 10. The second sample to be taken must be taken immediately after the first sample, without turning off the tap or altering the flow rate of the tap.

11. Unless the laboratory directions referred to in section 6-8 of Schedule 6 provide otherwise, two or more containers may be used to take the first sample and to take the second sample, but in that case the time taken to switch from one container to the next must be kept to a minimum.
12. The third sample to be taken must be taken immediately after the second sample, without turning off the tap or altering the flow rate of the tap.
 - (2) The owner of a drinking water system and the operating authority for the system shall ensure that samples taken from a point in the system's distribution system under section 15.1-4 or 15.1-5 are taken in accordance with the following rules:
 1. Before the samples are taken, the point in the distribution system must be flushed until the quality of the water at the point is representative of the quality of the water in that part of the distribution system.
 2. Three samples must be taken.
 3. If a sample cannot be taken from a point in the system's distribution system, a sample of cold water may be taken instead from a point in plumbing connected to the distribution system, provided that before the sample is taken the point is flushed until the quality of the water at the point is representative of the quality of water in the part of the distribution system that is connected to the plumbing.
 4. Samples must not be taken from points in the distribution system where lead levels are likely to be elevated due to materials used in fixtures or appurtenances located at or near the sampling point.
 - (3) The owner of the drinking water system and the operating authority for the system shall ensure that,
 - (a) the samples taken under paragraphs 9 and 10 of subsection (1) and the first sample taken under subsection (2) are tested for lead;
 - (b) the second sample taken under subsection (2) is tested for total alkalinity; and
 - (c) the sample taken under paragraph 12 of subsection (1) and the third sample taken under subsection (2) are each tested for pH,
 - (i) immediately after the sample is taken, and
 - (ii) using a pH meter that measures pH to at least two significant digits.
 - (4) The owner of the drinking water system and the operating authority for the system shall ensure that samples are taken and pH tests are conducted under this section only by,
 - (a) a certified operator;
 - (b) a water quality analyst;
 - (c) a medical officer of health or public health inspector within the meaning of the *Health Protection and Promotion Act*;
 - (d) a trained person; or
 - (e) a person who,
 - (i) has been trained by a certified operator to take samples and conduct pH tests in accordance with this section,
 - (ii) works under the supervision of a certified operator, and
 - (iii) advises a certified operator of all pH test results within a reasonable period of time.

Drinking water tests

15.1-8. Every test of a sample taken from plumbing under section 15.1-4 or 15.1-5 is prescribed as a drinking water test for the purpose of the definition of "drinking water test" in section 2 of the Act.

Reporting requirements for samples taken from plumbing

15.1-9. (1) If the operating authority for a drinking water system or the owner of a drinking water system receives a report of a test result for a test conducted on any sample referred to in subsection (2.1), the operating authority or owner shall, within seven days after receiving the report, give the following to the occupant of the premises served by the tap from which the sample was taken and, if the sample was taken from a private residence within a multi-unit residential building, the owner of the building or their agent:

1. A copy of the report.
2. A statement of whether the report indicates a result that exceeds any Schedule 2 standard.
3. If the report indicates a result described in paragraph 2, any advice given by the medical officer of health to the operating authority or owner with respect to any steps that the occupant should take.
4. The telephone number of a person who is available to answer questions about the report.

(2) If a laboratory conducts a test of a sample referred to in subsection (2.1) and a result of the test exceeds any Schedule 2 standard, the laboratory shall, within 24 hours after the result is authorized pursuant to subsection 12 (1) or paragraph 4 of subsection 12.0.1 (3) of Ontario Regulation 248/03 (Drinking Water Testing Services) made under the Act, give a written report to,

- (a) the operating authority for the drinking water system, if an operating authority is responsible for the system;
- (b) the owner of the drinking water system, if no operating authority is responsible for the system;
- (c) the medical officer of health; and
- (d) the Ministry's Spills Action Centre.

(2.1) The requirements set out in subsections (1) and (2) apply in respect of any sample taken from plumbing under subsection 15.1-4 (1) or (3) or subsection 15.1-5 (3), (4) or (8), in accordance with sections 15.1-6 and 15.1-7, whether or not the sample is taken in a period specified in subsection 15.1-4 (2) or 15.1-5 (5).

(3) The report required by subsection (2) shall specify,

- (a) the result that requires the report; and
- (b) the particular Schedule 2 standard that the result exceeds.

(4) If a laboratory reports a test result to the operating authority for a drinking water system under subsection (2), the operating authority shall, within 24 hours after receiving the report, give a copy of the report to the owner of the system.

(5) If a laboratory reports a test result to the operating authority for a drinking water system or the owner of a drinking water system under subsection (2), the operating authority or owner shall, within 24 hours after receiving the report, give a copy of the report to the medical officer of health.

(6) If a copy of a report is given to the operator of a designated facility under subsection (1), the operator shall provide a copy of the report to the interested authority for the facility, as soon as reasonably possible and preferably within 24 hours after the operator receives the copy.

(6.1) If, during a period described in subsection 15.1-4 (2) or subsection 15.1-5 (5), any sample is taken from plumbing under subsection 15.1-4 (1) or (3) or subsection 15.1-5 (3), (4) or (8), in accordance with sections 15.1-6 and 15.1-7, the owner of a drinking water system and the operating authority for the system shall submit a report to the Director within 30 days after the end of the period specifying the number of points sampled during the period, the number of samples taken, and the number of points where a sample exceeded the prescribed standard for lead.

(7) A written document that is given under subsection (2), (4), (5), (6) or (6.1) may be delivered personally or sent by fax or by electronic mail.

(8) Despite subsection (7), the Ministry's Spills Action Centre may require that a report that is given to the Centre under subsection (2) be given in an electronic format specified by the Director.

(9) Section 18 of the Act and Schedule 16 to this Regulation do not apply to a test of a sample taken from plumbing under section 15.1-4 or 15.1-5.

Corrective action for adverse results

15.1-10. If a report is made under subsection 15.1-9 (2), the owner of the drinking water system and the operating authority for the system shall take such steps as are directed by the medical officer of health, including, if directed by the medical officer of health, providing information to occupants of the premises served by the plumbing from which the sample was taken that is in addition to the information provided under paragraph 3 of subsection 15.1-9 (1).

Corrosion control

15.1-11. (1) This section applies to a large municipal residential system if,

- (a) in two of the three most recent periods described in section 15.1-4 or 15.1-5, more than 10 per cent of all the samples taken from plumbing under that section and tested for lead exceed the standard prescribed for lead, according to the results of the tests conducted under section 15.1-7; and
- (b) in each of the two periods mentioned in clause (a), the number of samples that exceed the standard prescribed for lead is at least two.

(2) For the purpose of subsection (1), if two samples that are taken on the same day from a point in plumbing are tested for lead under section 15.1-7, the sample with the lower concentration of lead shall not be considered.

(3) Within one year after the last day of the period mentioned in subsection (1) during which the test results are such as to cause this section to apply, the owner of the system and the operating authority for the system shall ensure that a plan that complies with subsection (5) is prepared and submitted to a Director appointed by the Minister under section 6 of the Act in respect of section 32 of the Act.

- (4) The plan shall be prepared and submitted in a form and manner approved by the Director.
- (5) The plan shall,
 - (a) analyze the potential for lead leaching into water as a result of corrosion that occurs in the system's distribution system or in plumbing that is connected to the system's distribution system;
 - (b) list and analyze possible measures to reduce the potential for lead leaching;
 - (c) identify the preferred measure or measures;
 - (d) set out an implementation schedule; and
 - (e) include a program for monitoring the effectiveness of the preferred measure or measures.
- (6) If subsection (3) applies to a drinking water system that obtains treated water from another drinking water system,
 - (a) subsection (3) also applies to the owner of the other system and to the operating authority for the other system;
 - (b) the plan mentioned in subsection (3) shall be a joint plan; and
 - (c) the owner and operating authority mentioned in clause (a) shall, jointly with the owner of the system that obtains the treated water and the operating authority for that system, ensure that the plan is prepared and submitted.
- (7) If the drinking water system referred in clause (6) (a) itself obtains treated water from another system, subsection (6) also applies to that other system.
- (8) If the plan mentioned in subsection (3) requires the owner or the operating authority to do anything in connection with implementing measures under the plan or monitoring their effectiveness, the owner shall, at the same time as the plan is submitted to the Director, apply to the Director to amend the system's approval or municipal drinking water licence to reflect the requirements of the plan.
- (9) If the Director has amended the system's approval or municipal drinking water licence under subsection (8) and the owner or operating authority is carrying out the monitoring program described by clause (5) (e), the requirements for taking samples set out in subsection 15.1-4 (1), subsection 15.1-4 (3), subsections 15.1-5 (3) and (4) and subsection 15.1-5 (8) cease to apply to the drinking water system.

Non-municipal year-round residential system: certified operators

15.1-12 If, pursuant to subsection 2-11 (1) or (2) of Schedule 2, the owner of a non-municipal year-round residential system is not required to comply with provisions of that Schedule, a reference in this Schedule to a certified operator shall be deemed, with respect to that system, to be a reference to any person.

O. Reg. 399/07, s. 8; O. Reg. 418/09, s. 21.

**SCHEDULE 15.2
LEAD**

Municipal: Large Non-Residential
Small Non-Residential

Non-Municipal: Seasonal Residential
Large Non-Residential
Small Non-Residential

Application

15.2-1. This Schedule applies to the following drinking water systems:

1. Large municipal non-residential systems.
2. Small municipal non-residential systems.
3. Non-municipal seasonal residential systems.
4. Large non-municipal non-residential systems.
5. Small non-municipal non-residential systems.

Distribution samples

15.2-2. (1) The owner of a drinking water system and the operating authority for the system shall ensure that at least one distribution sample is taken every 12 months, from a point in the drinking water system's distribution system or in plumbing that is connected to the drinking water system that is likely to have an elevated concentration of lead.

(1.1) If none of the samples taken under subsection (1) in the most recent 24-month period and tested for lead exceed the prescribed standard for lead, then subsection (1) ceases to apply and instead the owner of the drinking water system and the

operating authority for the system shall ensure that at least one distribution sample is taken every 36 months, from a point in the drinking water system's distribution system or in plumbing that is connected to the drinking water system that is likely to have an elevated concentration of lead.

(2) The owner of the drinking water system and the operating authority for the system shall ensure that each of the samples taken under subsection (1) or (1.1) is tested for lead.

Schools, private schools and day nurseries

15.2-3. This Schedule does not apply to a drinking water system that serves only a school, private school or day nursery to which Ontario Regulation 243/07 (Schools, Private Schools and Day Nurseries) made under the Act applies.

O. Reg. 399/07, s. 8; O. Reg. 418/09, s. 22.

**SCHEDULE 16
REPORTING ADVERSE TEST RESULTS AND OTHER PROBLEMS**

Application

16-1. This Schedule applies to the following drinking water systems:

1. Large municipal residential systems.
2. Small municipal residential systems.
3. Large municipal non-residential systems.
4. Small municipal non-residential systems.
5. Non-municipal year-round residential systems.
6. Non-municipal seasonal residential systems.
7. Large non-municipal non-residential systems.
8. Small non-municipal non-residential systems.

Exemption

16-2. (1) Subsection 18 (1) of the Act does not apply to a drinking water test unless,

- (a) the test is required by this Regulation, an approval, municipal drinking water licence or order, including an OWRA order;
 - (b) the test,
 - (i) is conducted by or pursuant to the direction of the owner of a drinking water system, the operating authority for a drinking water system or a certified operator or trained person employed by the owner or operating authority, and
 - (ii) does not relate to water that is supplied exclusively for,
 - (A) agricultural operations,
 - (B) landscaping operations,
 - (C) industrial or manufacturing operations, including food manufacturing or processing operations, or
 - (D) swimming pool or skating rink maintenance operations;
 - (c) the test is conducted pursuant to the direction of a provincial officer;
 - (d) the test is conducted pursuant to the direction of the medical officer of health or a member of the staff of the medical officer of health;
 - (e) the test is conducted pursuant to the direction of a person employed in the Ministry of Health and Long-Term Care or the Ministry of Labour; or
 - (f) the test is conducted by continuous monitoring equipment or microbiological in-line testing equipment.
- (2) Despite subsection (1), subsection 18 (1) of the Act does not apply to the following drinking water tests:
1. A drinking water test that is conducted to ensure compliance with corrective action required by paragraph 1 of section 17-4 of Schedule 17 or paragraph 1 of section 18-4 of Schedule 18.
 2. A drinking water test that is conducted on a sample that was taken from plumbing, if the test is conducted solely for the purpose of determining the quality of the water in the plumbing.

Duty to report under s. 18 of the Act

16-3. (1) The following are prescribed as adverse results of a drinking water test for the purpose of section 18 of the Act:

1. A result that exceeds any of the standards prescribed by Schedule 1, 2 or 3 to the Ontario Drinking Water Quality Standards, other than the standards for fluoride and trihalomethanes, if the result is from a sample of drinking water.

Note: On January 1, 2020, paragraph 1 of subsection 16-3 (1) of Schedule 16 to the Regulation is amended by striking out “the standards for fluoride and trihalomethanes” and substituting “the standards for fluoride, haloacetic acids and trihalomethanes”. (See: O. Reg. 374/15, s. 5 (2))

2. A result indicating the presence of *Aeromonas* spp., *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Clostridium* spp. or fecal *streptococci* (Group D *streptococci*) in a sample of drinking water.
3. A result indicating the presence of a pesticide not listed in Schedule 2 to the Ontario Drinking Water Quality Standards in a sample of drinking water, at any concentration.
4. If the drinking water system is required to take free chlorine residual tests under clause 7 (2) (a) or to provide secondary disinfection in accordance with section 1-5 of Schedule 1 or section 2-5 of Schedule 2, the system provides chlorination, the system does not provide chloramination and a report under subsection 18 (1) of the Act has not been made in respect of free chlorine residual in the preceding 24 hours, a result indicating that the concentration of free chlorine residual is less than 0.05 milligrams per litre in,
 - i. a distribution sample that is a grab sample, or
 - ii. two distribution samples that are tested by continuous monitoring equipment, if the two samples were taken 15 minutes or more apart and the later of the two samples was the first sample that was taken 15 minutes or more after the earlier sample.
5. If the drinking water system is required to take combined chlorine residual tests under clause 7 (2) (b) or to provide secondary disinfection in accordance with section 1-5 of Schedule 1 or section 2-5 of Schedule 2, the system provides chloramination and a report under subsection 18 (1) of the Act has not been made in respect of combined chlorine residual in the preceding 24 hours, a result indicating that the concentration of combined chlorine residual is less than 0.25 milligrams per litre and the concentration of free chlorine residual is less than 0.05 milligrams per litre in,
 - i. a distribution sample that is a grab sample, or
 - ii. two distribution samples that are tested by continuous monitoring equipment, if the two samples were taken 15 minutes or more apart and the later of the two samples was the first sample that was taken 15 minutes or more after the earlier sample.
6. If the drinking water system is required to provide filtration and a report under subsection 18 (1) of the Act has not been made in respect of turbidity in the preceding 24 hours, a result indicating that turbidity exceeds 1.0 Nephelometric Turbidity Units (NTU) in,
 - i. a grab sample of water taken from a filter effluent line, or
 - ii. two samples of water from a filter effluent line that are tested by continuous monitoring equipment, if,
 - A. two samples were taken 15 minutes or more apart and the later of the two samples was the first sample that was taken 15 minutes or more after the earlier sample, and
 - B. the filter effluent line is directing water to the next stage of the treatment process.
7. If an approval, municipal drinking water licence or order, including an OWRA order, identifies a parameter as a health-related parameter and establishes a maximum concentration for the parameter, a result indicating that the parameter exceeds the maximum concentration in a sample of drinking water.
8. A result indicating that the concentration of sodium exceeds 20 milligrams per litre in a sample of drinking water, if a report under subsection 18 (1) of the Act has not been made in respect of sodium in the preceding 57 months.
9. A result indicating that the concentration of fluoride exceeds 1.5 milligrams per litre in a sample of drinking water, if,
 - i. the drinking water system provides fluoridation and a report under subsection 18 (1) of the Act has not been made in respect of fluoride in the preceding 24 hours, or
 - ii. the drinking water system does not provide fluoridation and a report under subsection 18 (1) of the Act has not been made in respect of fluoride in the preceding 57 months.
10. A result indicating that the running annual average of quarterly results with respect to samples tested for trihalomethanes under subsection 13-6 (2) of Schedule 13 and calculated in accordance with subsection 13-6 (3) of Schedule 13 exceeds 0.100 milligrams per litre.

Note: On January 1, 2020, subsection 16-3 (1) of Schedule 16 to the Regulation is amended by adding the following paragraph: (See: O. Reg. 374/15, s. 5 (4))

11. A result indicating that the running annual average of quarterly results with respect to samples tested for haloacetic acids under subsection 13-6.1 (2) of Schedule 13 and calculated in accordance with subsection 13-6.1 (3) of Schedule 13 exceeds 0.080 milligrams per litre.

(2) Despite subsection (1), a result is not an adverse test result of a drinking water test for the purpose of section 18 of the Act if,

- (a) the result indicates compliance with a condition in an approval or licence that was imposed under clause 38 (2) (b), 46 (2) (b) or 60 (2) (b) of the Act; and
- (b) the test was conducted at the drinking water system or the owner or operating authority for the system gave written notice of the condition referred to in clause (a) to the laboratory that conducted the test.

Duty to report other observations

16-4. If an observation other than an adverse test result prescribed by section 16-3 indicates that a drinking water system that provides or is required to provide disinfection is directing water to users of water from the system that has not been disinfected in accordance with the Ministry's *Procedure for Disinfection of Drinking Water in Ontario*,

- (a) the owner of the system shall report to the Ministry and the medical officer of health immediately after the observation is made; or
- (b) if an operating authority is responsible for the operation of the system, the operating authority shall report to the Ministry, the medical officer of health and the owner of the system immediately after the observation is made.

Report to designated facilities

16-5. (1) An owner of a drinking water system who is required to report under subsection 18 (1) of the Act or clause 16-4 (a) or who receives a report under clause 16-4 (b) shall report to the operator of each designated facility served by the system immediately after making the report under subsection 18 (1) of the Act or clause 16-4 (a) or receiving the report under clause 16-4 (b).

- (2) Subsection (1) does not apply to the owner of a large municipal residential system.
- (3) Subsection (1) does not apply if the owner of the drinking water system is also the operator of the designated facility.

Manner of making immediate report

16-6. (1) A person who is required to report immediately under section 16-4 or 16-5 or under section 18 of the Act shall do so in accordance with this section and section 16-8.

(2) An immediate report required under section 16-4 or 16-5 or under subsection 18 (1) of the Act, except for an immediate report that relates to an adverse test result prescribed by paragraph 10 of subsection 16-3 (1), must be given by speaking in person or by telephone with a person referred to in subsection (3).

Note: On January 1, 2020, subsection 16-6 (2) of Schedule 16 to the Regulation is amended by striking out "paragraph 10" and substituting "paragraph 10 or 11". (See: O. Reg. 374/15, s. 6 (3))

- (3) For the purpose of subsection (2), the immediate report must be given,
 - (a) to a medical officer of health, by speaking with a person at the office of the medical officer of health or, if the office is closed, by speaking with a person at the on-call system of the health unit;
 - (b) to the Ministry, by speaking with a person at the Ministry's Spills Action Centre; and
 - (c) if the report is required under section 16-5, by speaking with a responsible individual at the designated facility.

(3.1) Subject to subsection (3.2), an immediate report required under section 16-5 or under section 18 of the Act that relates to an adverse test result prescribed by paragraph 10 of subsection 16-3 (1) must be given by providing a written notice in accordance with sections 16-7 and 16-8.

Note: On January 1, 2020, subsection 16-6 (3.1) of Schedule 16 to the Regulation is amended by striking out "paragraph 10" and substituting "paragraph 10 or 11". (See: O. Reg. 374/15, s. 6 (4))

(3.2) Subsection (3.1) does not apply to a person referred to in paragraph 2 of subsection 18 (1) of the Act who operates a laboratory and is required to report immediately under subsection 18 (1) of the Act an adverse test result prescribed by paragraph 10 of subsection 16-3 (1) if the person complies with the requirements set out in subsections 12 (2) and (3) of Ontario Regulation 248/03 (Drinking Water Testing Services) made under the Act within 48 hours after the reporting of the individual test result is authorized pursuant to subsection 12 (1) of that regulation.

Note: On January 1, 2020, subsection 16-6 (3.2) of Schedule 16 to the Regulation is amended by striking out "paragraph 10" and substituting "paragraph 10 or 11". (See: O. Reg. 374/15, s. 6 (5))

(4) An immediate report required under subsection 18 (3) of the Act must be given by speaking in person or by telephone with a person designated for that purpose by the owner of the drinking water system.

(5) An immediate notice required under subsection 18 (4) of the Act must be given by speaking in person or by telephone with a person designated for that purpose by,

- (a) the owner of the system and the operating authority for the system, if an operating authority is responsible for the system; or
- (b) the owner of the system, if no operating authority is responsible for the system.

(6) If an immediate report is required to be given under section 16-5 to the operator of a designated facility that is not open, the report must be given not later than the time the designated facility re-opens.

Written notice

16-7. (1) A person who is required to report immediately in accordance with subsection 16-6 (2) shall, in addition to speaking in person or by telephone with a person referred to in subsection 16-6 (3), provide a written notice in accordance with this section and section 16-8 within 24 hours after the immediate report is given under section 16-4 or 16-5 or under subsection 18 (1) of the Act.

(2) A person who is required to report immediately by written notice in accordance with subsection 16-6 (3.1) shall give the written notice in accordance with this section and section 16-8 no later than seven days after the last day of the calendar quarter in which the test that produced the adverse test result was conducted.

(3) A written notice required by subsections (1) and (2) must be given to,

- (a) the medical officer of health, by delivering the written notice to the office of the medical officer of health;
- (b) the Ministry, by delivering the written notice to the Ministry's Spills Action Centre; and
- (c) the operator of a designated facility, by delivering the written notice to the facility.

(4) A person who is required to give a written notice to a designated facility under subsection (1) shall also give a copy of the notice to,

- (a) the minister responsible for the ministry or a person designated by the minister, if the interested authority is a ministry; or
- (b) the head of the interested authority, if the interested authority is not a ministry.

(5) Subsection (4) does not apply to a designated facility that is,

- (a) a private school;
- (b) a children's camp; or
- (c) a residence for seniors or retired persons, or any other similar residence, where attainment of a mature age is a factor in being accepted for occupancy.

Content of report and notice

16-8. (1) An immediate report given under section 16-4 or 16-5 or under section 18 of the Act must specify the adverse test result or observation that requires the report.

(1.1) Subsection (1) does not apply to an immediate report given by the owner of a drinking water system if the report relates to an adverse test result from a test that was not conducted at the system.

(1.2) If the person operating a laboratory gives an immediate report under section 18 of the Act in respect of a result that exceeds any of the standards prescribed by Schedule 1 to the Ontario Drinking Water Quality Standards for a water sample that was required, by this Regulation or an approval, municipal drinking water licence or order, including an OWRA approval or OWRA order, to be tested for a microbiological parameter, and the laboratory received notice of the test result for the other sample that, under section 6-3 of Schedule 6, was required to be taken and tested for free chlorine residual or combined chlorine residual, the immediate report must also specify that test result.

(2) An immediate report given under section 16-4 or 16-5 or under subsection 18 (1) of the Act must indicate,

- (a) what actions are being taken in response to the adverse test result or observation that requires the report; and
- (b) if Schedule 17 or 18 requires that a corrective action be taken in respect of the adverse test result or observation, whether the corrective action is being taken.

(3) Subsection (2) does not apply to a report given under paragraph 2 of subsection 18 (1) of the Act by a person operating a laboratory.

(4) Subject to subsection (3), subsections (1) to (2) also apply, with necessary modifications, to the written notice given under section 16-7.

Notice of issue resolution

16-9. (1) If an immediate report or a written notice is given under this Schedule and the issue that gave rise to the notice is resolved, the owner of the drinking water system shall, within seven days after the issue is resolved, give a written notice summarizing the action taken and the results achieved to,

- (a) the medical officer of health, by delivering the written notice to the office of the medical officer of health; and
- (b) the Ministry, by delivering the written notice to the Ministry's Spills Action Centre.

(2) If an immediate report or a written notice is given under this Schedule to the interested authority for a designated facility and the issue that gave rise to the notice is resolved, the owner of the drinking water system shall, within 30 days after the issue is resolved, give a written notice summarizing the action taken and the results achieved to the interested authority.

Operating authorities

16-10. An operating authority that has agreed with the owner of a drinking water system to give reports or notices on behalf of the owner under section 18 of the Act or this Schedule shall comply with the agreement.

O. Reg. 170/03, Sched. 16; O. Reg. 249/03, s. 21; O. Reg. 269/03, s. 16; O. Reg. 165/04, s. 5; O. Reg. 253/05, s. 17; O. Reg. 247/06, s. 27; O. Reg. 399/07, s. 9; O. Reg. 326/08, s. 11; O. Reg. 418/09, s. 23; O. Reg. 374/15, s. 5 (1, 3), 6 (1, 2), 7.

**SCHEDULE 17
CORRECTIVE ACTION**

Large Municipal Residential

Application

17-1. This Schedule applies to large municipal residential systems.

Improper disinfection

17-2. If a report is required to be made under section 16-4 of Schedule 16 in respect of water that has not been properly disinfected, the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

- 1. Immediately restore the proper disinfection.
- 2. Take such other steps as are directed by the medical officer of health.

Turbidity

17-3. If a report is required to be made under section 18 of the Act in respect of turbidity, the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

- 1. Immediately check all the drinking water system's filters and turbidity monitoring equipment.
- 2. Review upstream operational processes and correct any faulty processes that are identified.
- 3. Take such other steps as are directed by the medical officer of health.

Chlorine residual

17-4. If a report is required to be made under section 18 of the Act in respect of free chlorine residual or combined chlorine residual, the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

- 1. Immediately flush the watermains and restore secondary disinfection to ensure that,
 - i. a free chlorine residual of at least 0.05 milligrams per litre is achieved at all points in the affected parts of the distribution system, if the drinking water system provides chlorination and does not provide chloramination, or
 - ii. a combined chlorine residual of at least 0.25 milligrams per litre is achieved at all points in the affected parts of the distribution system, if the drinking water system provides chloramination.
- 2. Take such other steps as are directed by the medical officer of health.

***Escherichia coli* (E. coli)**

17-5. If a report is required to be made under section 18 of the Act in respect of *Escherichia coli* (E. coli), the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

- 1. Immediately resample and test.
- 2. Immediately increase the chlorine or chloramine dose and flush the watermains to ensure that,
 - i. a free chlorine residual of at least 0.2 milligrams per litre is achieved at all points in the affected parts of the distribution system, if the drinking water system provides chlorination and does not provide chloramination, or

- ii. a combined chlorine residual of at least 1.0 milligrams per litre is achieved at all points in the affected parts of the distribution system, if the drinking water system provides chloramination.
- 3. Maintain the free chlorine residual or combined chlorine residual concentration referred to in paragraph 2 in the affected parts of the distribution system, and continue to resample and test, until *Escherichia coli* (*E. coli*) is not detected in any of the samples from two consecutive sets of samples taken 24 to 48 hours apart or as otherwise directed by the medical officer of health.
- 4. Take such other steps as are directed by the medical officer of health.

Total coliforms

17-6. If a report is required to be made under section 18 of the Act in respect of total coliforms, the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

- 1. Resample and test as soon as reasonably possible.
- 2. If total coliforms are detected under paragraph 1, immediately increase the chlorine or chloramine dose and flush the watermains to ensure that,
 - i. a free chlorine residual of at least 0.2 milligrams per litre is achieved at all points in the affected parts of the distribution system, if the drinking water system provides chlorination and does not provide chloramination, or
 - ii. a combined chlorine residual of at least 1.0 milligrams per litre is achieved at all points in the affected parts of the distribution system, if the drinking water system provides chloramination.
- 3. Maintain the free chlorine residual or combined chlorine residual concentration referred to in paragraph 2 in the affected parts of the distribution system, and continue to resample and test, until total coliforms are not detected in any of the samples from two consecutive sets of samples taken 24 to 48 hours apart or as otherwise directed by the medical officer of health.
- 4. Take such other steps as are directed by the medical officer of health.

17-7., 17-8. REVOKED: O. Reg. 247/06, s. 28 (5).

***Aeromonas* spp., etc.**

17-9. If a report is required to be made under section 18 of the Act in respect of *Aeromonas* spp., *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Clostridium* spp. or fecal *streptococci* (Group D *streptococci*), the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

- 1. Resample and test as soon as reasonably possible.
- 2. If *Aeromonas* spp., *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Clostridium* spp. or fecal *streptococci* (Group D *streptococci*) are detected under paragraph 1, immediately increase the chlorine or chloramine dose and flush the watermains to ensure that,
 - i. a free chlorine residual of at least 0.2 milligrams per litre is achieved at all points in the affected parts of the distribution system, if the drinking water system provides chlorination and does not provide chloramination, or
 - ii. a combined chlorine residual of at least 1.0 milligrams per litre is achieved at all points in the affected parts of the distribution system, if the drinking water system provides chloramination.
- 3. Maintain the free chlorine residual or combined chlorine residual concentration referred to in paragraph 2 in the affected parts of the distribution system, and continue to resample and test, until *Aeromonas* spp., *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Clostridium* spp. or fecal *streptococci* (Group D *streptococci*) are not detected in any of the samples from two consecutive sets of samples taken 24 to 48 hours apart or as otherwise directed by the medical officer of health.
- 4. Take such other steps as are directed by the medical officer of health.

Chemical and radiological parameters in O. Reg. 169/03

17-10. (1) If a report is required to be made under section 18 of the Act in respect of a chemical or radiological parameter set out in Schedule 2 or 3 to the Ontario Drinking Water Quality Standards, the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

- 1. Subject to subsection (2), resample and test as soon as reasonably possible.
- 2. If a concentration that exceeds the standard prescribed for the parameter by Schedule 2 or 3 to the Ontario Drinking Water Quality Standards is detected under paragraph 1, take such other steps as are directed by the medical officer of health.

(2) Paragraph 1 of subsection (1) does not apply to a report that is required to be made in respect of trihalomethanes.

Note: On January 1, 2020, subsection 17-10 (2) of Schedule 17 to the Regulation is amended by adding “or haloacetic acids” at the end. (See: O. Reg. 374/15, s. 8 (3))

Pesticide not listed in Schedule 2 to O. Reg. 169/03

17-11. If a report is required to be made under section 18 of the Act in respect of a pesticide not listed in Schedule 2 to the Ontario Drinking Water Quality Standards, the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

1. Resample and test as soon as reasonably possible.
2. If the pesticide is detected under paragraph 1, take such other steps as are directed by the medical officer of health.

Health-related parameters in an approval or order

17-12. If an approval, municipal drinking water licence or order identifies a parameter as a health-related parameter and a report is required to be made under section 18 of the Act in respect of the parameter, the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

1. Resample and test as soon as reasonably possible.
2. If a concentration that exceeds the maximum concentration established for the parameter by the approval or order is detected under paragraph 1, take such other steps as are directed by the medical officer of health.

Sodium

17-13. If a report is required to be made under section 18 of the Act in respect of sodium, the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

1. Resample and test as soon as reasonably possible.
2. If a concentration of sodium that exceeds 20 milligrams per litre is detected under paragraph 1, take such steps as are directed by the medical officer of health.

Corrective action that requires report under s. 18 of the Act

17-14. If a report is required to be made under section 18 of the Act as a result of a drinking water test that is a component of corrective action taken with respect to a parameter in accordance with this Schedule, it is not necessary to start the corrective action with respect to that parameter over again, but the owner of the drinking water system and the operating authority for the system shall ensure that any remaining components of the corrective action are completed.

O. Reg. 170/03, Sched. 17; O. Reg. 165/04, s. 6; O. Reg. 247/06, s. 28; O. Reg. 418/09, s. 24; O. Reg. 374/15, s. 8 (1, 2).

**SCHEDULE 18
CORRECTIVE ACTION**

Municipal: Small Residential
Large Non-Residential
Small Non-Residential

Non-Municipal: Year-Round Residential
Seasonal Residential
Large Non-Residential
Small Non-Residential

Application

18-1. This Schedule applies to the following drinking water systems:

1. Small municipal residential systems.
2. Large municipal non-residential systems.
3. Small municipal non-residential systems.
4. Non-municipal year-round residential systems.
5. Non-municipal seasonal residential systems.
6. Large non-municipal non-residential systems.
7. Small non-municipal non-residential systems.

Improper disinfection

18-2. If a report is required to be made under section 16-4 of Schedule 16 in respect of water that has not been properly disinfected, the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

1. Immediately restore the disinfection.
2. If the disinfection cannot be quickly restored, immediately take all reasonable steps to notify all users of water from the system to use an alternate source of drinking water or, if no alternate source is available, to bring water to a rapid rolling boil for at least one minute before use.
3. Take such other steps as are directed by the medical officer of health.

Turbidity

18-3. If a report is required to be made under section 18 of the Act in respect of turbidity, the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

1. Immediately check the drinking water system's turbidity monitoring equipment and correct any problems that are identified.
2. If no problems are identified under paragraph 1,
 - i. immediately backwash the nearest filter upstream of the location where the sample that gave rise to the report under section 18 of the Act was taken or immediately replace the filter cartridges or filter elements of the nearest filtration equipment upstream of that location, and
 - ii. immediately review other upstream operational processes and correct any faulty processes that are identified.
3. Immediately after taking the steps required by paragraphs 1 and 2, resample and test.
4. If turbidity that exceeds 1.0 Nephelometric Turbidity Units (NTU) is detected under paragraph 3,
 - i. immediately take all reasonable steps to notify all users of water from the system to use an alternate source of drinking water or, if no alternate source is available, to bring water to a rapid rolling boil for at least one minute before use,
 - ii. follow the manufacturer's recommendations for servicing the filtration equipment upstream of the location where the sample that gave rise to the report under section 18 of the Act was taken, and
 - iii. flush the distribution system and any plumbing owned by the owner of the drinking water system.
5. Take such other steps as are directed by the medical officer of health.

Chlorine residual

18-4. If a report is required to be made under section 18 of the Act in respect of free chlorine residual, the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

1. Immediately flush the distribution system and any plumbing owned by the owner of the drinking water system, and restore secondary disinfection to ensure that,
 - i. a free chlorine residual of at least 0.05 milligrams per litre is quickly achieved at all points in the affected parts of the distribution system and plumbing, if the drinking water system provides chlorination and does not provide chloramination, or
 - ii. a combined chlorine residual of at least 0.25 milligrams per litre is quickly achieved at all points in the affected parts of the distribution system and plumbing, if the drinking water system provides chloramination.
2. If the drinking water system provides chlorination, the system does not provide chloramination and a free chlorine residual of at least 0.05 milligrams per litre cannot be quickly achieved at all points in the affected parts of the distribution system and plumbing, immediately take all reasonable steps to notify all users of water from the system to use an alternate source of drinking water or, if no alternate source is available, to bring water to a rapid rolling boil for at least one minute before use.
- 2.1 If the drinking water system provides chloramination and a combined chlorine residual of at least 0.25 milligrams per litre cannot be quickly achieved at all points in the affected parts of the distribution system and plumbing, immediately take all reasonable steps to notify all users of water from the system to use an alternate source of drinking water or, if no alternate source is available, to bring water to a rapid rolling boil for at least one minute before use.
3. Take such other steps as are directed by the medical officer of health.

***Escherichia coli* (E. coli)**

18-5. If a report is required to be made under section 18 of the Act in respect of *Escherichia coli* (E. coli), the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

1. Immediately take all reasonable steps to notify all users of water from the system to use an alternate source of drinking water or, if no alternate source is available, to bring water to a rapid rolling boil for at least one minute before use.
2. Immediately resample and test.
3. Immediately increase the chlorine dose and flush the distribution system and any plumbing owned by the owner of the drinking water system to ensure that,
 - i. a free chlorine residual of at least 0.2 milligrams per litre is achieved at all points in the affected parts of the distribution system and plumbing, if the drinking water system provides chlorination and does not provide chloramination, or
 - ii. a combined chlorine residual of at least 1.0 milligrams per litre is achieved at all points in the affected parts of the distribution system and plumbing, if the drinking water system provides chloramination.
4. If the drinking water system provides chlorination or chloramination, maintain the free chlorine residual or combined chlorine concentration referred to in paragraph 3 in the affected parts of the distribution system and plumbing, and continue to resample and test, until *Escherichia coli* (*E. coli*) is not detected in any of the samples from two consecutive sets of samples taken 24 to 48 hours apart or as otherwise directed by the medical officer of health.
5. If the drinking water system does not provide chlorination or chloramination, immediately take the relevant corrective action steps described in the Ministry's *Procedure for Corrective Action for Systems Not Currently Using Chlorine*.
6. Take such other steps as are directed by the medical officer of health.

Total coliforms

18-6. If a report is required to be made under section 18 of the Act in respect of total coliforms, the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

1. Resample and test as soon as reasonably possible.
2. If total coliforms are detected under paragraph 1, immediately increase the chlorine dose and flush the distribution system and any plumbing owned by the owner of the drinking water system to ensure that,
 - i. a free chlorine residual of at least 0.2 milligrams per litre is achieved at all points in the affected parts of the distribution system and plumbing, if the drinking water system provides chlorination and does not provide chloramination, or
 - ii. a combined chlorine residual of at least 1.0 milligrams per litre is achieved at all points in the affected parts of the distribution system and plumbing, if the drinking water system provides chloramination.
3. If total coliforms are detected under paragraph 1 and the drinking water system provides chlorination or chloramination, maintain the free chlorine residual or combined chlorine concentration referred to in paragraph 2 in the affected parts of the distribution system and plumbing, and continue to resample and test, until total coliforms are not detected in any of the samples from two consecutive sets of samples taken 24 to 48 hours apart or as otherwise directed by the medical officer of health.
4. If total coliforms are detected under paragraph 1 and the drinking water system does not provide chlorination or chloramination, immediately take the relevant corrective action steps described in the Ministry's *Procedure for Corrective Action for Systems Not Currently Using Chlorine*.
5. Take such other steps as are directed by the medical officer of health.

18-7., 18-8. REVOKED: O. Reg. 247/06, s. 29 (5).

***Aeromonas* spp., etc.**

18-9. If a report is required to be made under section 18 of the Act in respect of *Aeromonas* spp., *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Clostridium* spp. or fecal *streptococci* (Group D *streptococci*), the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

1. Resample and test as soon as reasonably possible.
2. If *Aeromonas* spp., *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Clostridium* spp. or fecal *streptococci* (Group D *streptococci*) are detected under paragraph 1, immediately increase the chlorine dose and flush the distribution system and any plumbing owned by the owner of the drinking water system to ensure that,
 - i. a free chlorine residual of at least 0.2 milligrams per litre is achieved at all points in the affected parts of the distribution system and plumbing, if the drinking water system provides chlorination and does not provide chloramination, or
 - ii. a combined chlorine residual of at least 1.0 milligrams per litre is achieved at all points in the affected parts of the distribution system and plumbing, if the drinking water system provides chloramination.

3. If *Aeromonas* spp., *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Clostridium* spp. or fecal *streptococci* (Group D *streptococci*) are detected under paragraph 1 and the drinking water system provides chlorination or chloramination, maintain the free chlorine residual or combined chlorine concentration referred to in paragraph 2 in the affected parts of the distribution system and plumbing, and continue to resample and test, until *Aeromonas* spp., *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Clostridium* spp. or fecal *streptococci* (Group D *streptococci*) are not detected in any of the samples from two consecutive sets of samples taken 24 to 48 hours apart or as otherwise directed by the medical officer of health.
4. If *Aeromonas* spp., *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Clostridium* spp. or fecal *streptococci* (Group D *streptococci*) are detected under paragraph 1 and the drinking water system does not provide chlorination or chloramination, immediately take the relevant corrective action steps described in the Ministry's *Procedure for Corrective Action for Systems Not Currently Using Chlorine*.
5. Take such other steps as are directed by the medical officer of health.

Chemical and radiological parameters in O. Reg. 169/03

18-10. (1) If a report is required to be made under section 18 of the Act in respect of a chemical or radiological parameter set out in Schedule 2 or 3 to the Ontario Drinking Water Quality Standards, the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

1. Subject to subsection (2), resample and test as soon as reasonably possible.
 2. If a concentration that exceeds the standard prescribed for the parameter by Schedule 2 or 3 to the Ontario Drinking Water Quality Standards is detected under paragraph 1, take such other steps as are directed by the medical officer of health.
- (2) Paragraph 1 of subsection (1) does not apply to a report that is required to be made in respect of trihalomethanes.

Note: On January 1, 2020, subsection 18-10 (2) of Schedule 18 to the Regulation is amended by adding "or haloacetic acids" at the end. (See: O. Reg. 374/15, s. 9 (3))

Pesticide not listed in Schedule 2 to O. Reg. 169/03

18-11. If a report is required to be made under section 18 of the Act in respect of a pesticide not listed in Schedule 2 to the Ontario Drinking Water Quality Standards, the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

1. Resample and test as soon as reasonably possible.
2. If the pesticide is detected under paragraph 1, take such other steps as are directed by the medical officer of health.

Health-related parameters in an approval or order

18-12. If an approval, municipal drinking water licence or order identifies a parameter as a health-related parameter and a report is required to be made under section 18 of the Act in respect of the parameter, the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

1. Resample and test as soon as reasonably possible.
2. If a concentration that exceeds the maximum concentration established for the parameter by the approval or order is detected under paragraph 1, take such other steps as are directed by the medical officer of health.

Sodium

18-13. If a report is required to be made under section 18 of the Act in respect of sodium, the owner of the drinking water system and the operating authority for the system shall ensure that the following corrective action is taken:

1. Resample and test as soon as reasonably possible.
2. If a concentration of sodium that exceeds 20 milligrams per litre is detected under paragraph 1, take such other steps as are directed by the medical officer of health.

Corrective action that requires report under s. 18 of the Act

18-14. If a report is required to be made under section 18 of the Act as a result of a drinking water test that is a component of corrective action taken with respect to a parameter in accordance with this Schedule, it is not necessary to start the corrective action with respect to that parameter over again, but the owner of the drinking water system and the operating authority for the system shall ensure that any remaining components of the corrective action are completed.

O. Reg. 170/03, Sched. 18; O. Reg. 165/04, s. 7; O. Reg. 247/06, s. 29; O. Reg. 326/08, s. 12; O. Reg. 418/09, s. 25; O. Reg. 374/15, s. 9 (1, 2).

SCHEDULE 19
WARNING NOTICE OF POTENTIAL PROBLEMS

Municipal: Small Residential
Large Non-Residential
Small Non-Residential

Non-Municipal: Year-Round Residential
Seasonal Residential
Large Non-Residential
Small Non-Residential

Application

19-1. This Schedule applies to the following drinking water systems:

1. Small municipal residential systems.
2. Large municipal non-residential systems.
3. Small municipal non-residential systems.
4. Non-municipal year-round residential systems.
5. Non-municipal seasonal residential systems.
6. Large non-municipal non-residential systems.
7. Small non-municipal non-residential systems.

Warning notice to be posted

19-2. (1) The owner of a drinking water system and the operating authority for the system shall ensure that warning notices are posted in accordance with this section if,

- (a) the owner or operating authority is required under Schedule 18 to take all reasonable steps to ensure that all users of water from the system are notified to use an alternate source of drinking water or, if no alternate source is available, to bring water to a rapid rolling boil for at least one minute before use; or
- (b) the owner or operating authority is not complying with Schedule 11, 12 or 18.

(2) The warning notices required by subsection (1) must be posted in prominent locations where they are likely to come to the attention of users of water from the system.

(3) As part of complying with subsection (2), if the drinking water system serves a designated facility, the warning notices required by subsection (1) must be posted,

- (a) at every entrance to every building and every structure that is part of the designated facility; or
- (b) if the designated facility does not have any building or structure, at a location where the warning notices are likely to come to the attention of all persons who enter the facility.

(4) If the drinking water system serves a designated facility that is not owned by the owner of the drinking water system, the owner of the system and the operating authority for the system shall be deemed to have ensured that warning notices are posted in accordance with subsection (3) if the operator of the facility is provided with,

- (a) sufficient copies of the warning notices required by subsection (3); and
- (b) instructions to post the warning notices in accordance with subsection (3).

Posting by others

19-3. (1) If warning notices are not posted in accordance with section 19-2, the warning notices may be posted by,

- (a) a provincial officer; or
- (b) a public health inspector under the *Health Protection and Promotion Act*, or a person acting under the supervision of a public health inspector.

(2) If warning notices are not posted in accordance with section 19-2 at a designated facility, the warning notices may also be posted by an officer or agent of the interested authority for the designated facility.

(3) Subsection (2) does not apply to the following designated facilities:

1. A private school.
2. A children's camp.

3. A residence for seniors or retired persons, or any other similar residence, where attainment of a mature age is a factor in being accepted for occupancy.

O. Reg. 170/03, Sched. 19; O. Reg. 249/03, s. 22; O. Reg. 247/06, s. 30.

SCHEDULE 20 REVOKED: O. Reg. 247/06, s. 31.

SCHEDULE 21 ENGINEERING EVALUATION REPORTS

Municipal: Large Non-Residential
Small Non-Residential

Non-Municipal: Year-Round Residential
Seasonal Residential
Large Non-Residential
Small Non-Residential

Application

21-1. (1) This Schedule applies to the following drinking water systems:

1. Large municipal non-residential systems.
2. Small municipal non-residential systems.
3. Non-municipal year-round residential systems.
4. Non-municipal seasonal residential systems.
5. Large non-municipal non-residential systems.
6. Small non-municipal non-residential systems.

(2) This Schedule does not apply to a drinking water system if the system has an approval with a condition that provides relief from compliance with all of the requirements of the following provisions:

1. Paragraph 2 of subsection 2-2 (1) of Schedule 2.
2. Subsection 2-2 (2) of Schedule 2.
3. Sections 2-3 to 2-6 of Schedule 2.

Systems that commenced operation before this Regulation

21-2. (1) The owner of a drinking water system that commenced operation before this Regulation came into force shall ensure that a licensed engineering practitioner who has experience in sanitary engineering related to drinking water systems prepares a report that complies with section 21-5 not later than 30 days after paragraph 2 of subsection 2-2 (1) begins to apply to the system.

(2) If, before this Regulation came into force, a report on a drinking water system was prepared and given to the Director in accordance with section 5 of Ontario Regulation 505/01 (Drinking Water Protection — Smaller Water Works Serving Designated Facilities), the owner of the system shall be deemed to have complied with subsection (1) and with the owner's first obligation to give a notice to the Director under section 21-7, and, for the purpose of this Schedule, the report required by subsection (1) shall be deemed to have been required to be prepared not later than the date it was required to be prepared and given under Ontario Regulation 505/01.

(3) If an OWRA approval was granted after August 1, 2000 in respect of the system and the owner of the system gives the Director a written statement by a licensed engineering practitioner who has experience in sanitary engineering related to drinking water systems stating that,

- (a) the licensed engineering practitioner or a person under his or her supervision has visited the system; and
- (b) in the licensed engineering practitioner's opinion,
 - (i) all equipment required in order to ensure compliance with Schedule 2 is being provided, and
 - (ii) all equipment required in order to ensure compliance with Schedules 6, 8 and 9 is being provided,

the owner of the system shall be deemed to have complied with subsection (1) and with the owner's first obligation to give a notice to the Director under section 21-7, and, for the purpose of this Schedule, the report required by subsection (1) shall be deemed to have been required to be prepared not later than the date the OWRA approval was granted.

(4) Subsection (1) does not apply if, before the date the report is required to be prepared under that subsection, a report is prepared under section 21-3 in respect of the drinking water system.

New and altered systems

21-3. (1) If, after this Regulation comes into force, a drinking water system commences operation or an alteration is made to a drinking water system, the owner of the system shall ensure that, not later than 30 days after the system commences operation or the alteration is completed, a licensed engineering practitioner who has experience in sanitary engineering related to drinking water systems prepares a report that complies with section 21-5.

(2) Subsection (1) does not apply to,

- (a) the establishment or alteration of or a change to a service pipe;
- (b) the establishment or alteration of or a change in an appurtenance of a watermain, if the appurtenance does not disrupt the operation of the drinking water system that the watermain is part of;
- (c) the relining of a watermain, if the new lining does not disrupt the operation of the drinking water system that the watermain is part of;
- (d) the replacement of an existing watermain with a new watermain that has similar dimensions and performance criteria and that is in the same or approximately the same location, if,
 - (i) the existing watermain was established or previously altered in accordance with an approval, or
 - (ii) after the existing watermain was established or previously altered,
 - (A) a report was prepared in accordance with this section and a notice was given to the Director in accordance with section 21-7 with respect to the establishment or alteration, or
 - (B) a report was prepared and given to the Director in accordance with section 5 of Ontario Regulation 505/01 (Drinking Water Protection — Smaller Water Works Serving Designated Facilities) with respect to the establishment or alteration.

(3) Subsection (1) does not apply to a non-municipal year-round residential system if, pursuant to subsection 2-11 (2) of Schedule 2, paragraph 2 of section 2-2 of Schedule 2 does not apply to the system immediately after it commences operation, but, if that paragraph later applies to the system, the owner of the system shall ensure that, not later than 30 days after the date that paragraph begins to apply, a licensed engineering practitioner who has experience in sanitary engineering related to drinking water systems prepares a report that complies with section 21-5.

21-4. REVOKED: O. Reg. 247/06, s. 32 (4).

Contents of engineer's report

21-5. For the purposes of this Schedule, a report complies with this section if,

- (a) the report specifies which type of drinking water system listed in subsection 21-1 (1) the report deals with;
- (b) the licensed engineering practitioner who prepares the report states in the report that the licensed engineering practitioner or a person under his or her supervision has visited the drinking water system and that, in the licensed engineering practitioner's opinion,
 - (i) all equipment required in order to ensure compliance with Schedule 2 is being provided, and
 - (ii) all equipment required in order to ensure compliance with Schedules 6, 8 and 9 is being provided;
- (c) the report sets out the licensed engineering practitioner's reasons for the opinion referred to in clause (b), along with the technical and other information he or she relied on in reaching that opinion; and
- (d) the report includes a maintenance schedule that sets out requirements relating to the frequency with which the following equipment must be inspected, tested and replaced:
 - (i) the water treatment equipment that is provided by the drinking water system, and
 - (ii) the equipment that is provided by the drinking water system in order to ensure compliance with Schedules 6, 8 and 9.

Report to be delivered to owner

21-6. The licensed engineering practitioner who prepares a report under section 21-2 or 21-3 shall immediately deliver the report to the owner of the system.

Notice to Director

21-7. (1) The owner of the drinking water system shall, within seven days after a report is required to be prepared under this Schedule, give a notice to the Director and to the interested authority for each designated facility served by the system that specifies which type of drinking water system listed in subsection 21-1 (1) the report deals with and includes a copy of the opinion referred to in clause 21-5 (b).

(2) The owner of a drinking water system shall promptly give a notice to the Director that describes any changes that occur with respect to information that was given in an earlier notice under subsection (1) or this subsection.

(3) The obligation to ensure that a notice be given to the interested authority for a designated facility under subsection (1) does not apply to the following designated facilities:

1. A private school.
2. A children's camp.
3. A residence for seniors or retired persons, or any other similar residence, where attainment of a mature age is a factor in being accepted for occupancy.

O. Reg. 170/03, Sched. 21; O. Reg. 249/03, s. 23; O. Reg. 247/06, s. 32; O. Reg. 418/09, s. 1 (5).

SCHEDULE 22
SUMMARY REPORTS FOR MUNICIPALITIES

Municipal: Large Residential
Small Residential

Application

22-1. This Schedule applies to the following drinking water systems:

1. Large municipal residential systems.
2. Small municipal residential systems.

Report

22-2. (1) The owner of a drinking water system shall ensure that, not later than March 31 of each year after 2003, a report is prepared in accordance with subsections (2) and (3) for the preceding calendar year and is given to,

- (a) in the case of a drinking water system owned by a municipality, the members of the municipal council;
- (b) in the case of a drinking water system owned by a municipal service board established under section 195 of the *Municipal Act, 2001*, the members of the municipal service board; or
- (c) in the case of a drinking water system owned by a corporation, the board of directors of the corporation.

(2) The report must,

- (a) list the requirements of the Act, the regulations, the system's approval, drinking water works permit, municipal drinking water licence, and any orders applicable to the system that were not met at any time during the period covered by the report; and
- (b) for each requirement referred to in clause (a) that was not met, specify the duration of the failure and the measures that were taken to correct the failure.

(3) The report must also include the following information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and planned uses of the system:

1. A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows.
2. A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system's approval, drinking water works permit or municipal drinking water licence, or if the system is receiving all of its water from another system under an agreement pursuant to subsection 5 (4), to the flow rates specified in the written agreement.

(4) If a report is prepared under subsection (1) for a system that supplies water to a municipality under the terms of a contract, the owner of the system shall give a copy of the report to the municipality by March 31.

(5) REVOKED: O. Reg. 253/05, s. 18.

OWRA approvals

22-3. A provision of an OWRA approval that requires the completion and presentation of a compliance report does not apply to a drinking water system if the owner of the system complies with section 22-2.

O. Reg. 170/03, Sched. 22; O. Reg. 249/03, s. 24; O. Reg. 253/05, s. 18; O. Reg. 418/09, s. 26.

SCHEDULE 23
INORGANIC PARAMETERS

Item	Parameter
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Item	Parameter
1.	Antimony
2.	Arsenic
3.	Barium
4.	Boron
5.	Cadmium
6.	Chromium
7.	Mercury
8.	Selenium
9.	Uranium

O. Reg. 170/03, Sched. 23.

SCHEDULE 24
ORGANIC PARAMETERS

Item	Parameter
1.	Alachlor
2.	Atrazine + N-dealkylated metabolites
3.	Azinphos-methyl
4.	Benzene
5.	Benzo(a)pyrene
6.	Bromoxynil
7.	Carbaryl
8.	Carbofuran
9.	Carbon Tetrachloride
10.	Chlorpyrifos
11.	Diazinon
12.	Dicamba
13.	1,2-Dichlorobenzene
14.	1,4-Dichlorobenzene
15.	1,2-Dichloroethane
16.	1,1-Dichloroethylene (vinylidene chloride)
17.	Dichloromethane
18.	2,4-Dichlorophenol
19.	2,4-Dichlorophenoxy acetic acid (2,4-D)
20.	Diclofop-methyl
21.	Dimethoate
22.	Diquat
23.	Diuron
24.	Glyphosate
25.	Malathion
26.	2-Methyl-4-chlorophenoxyacetic acid
27.	Metolachlor
28.	Metribuzin
29.	Monochlorobenzene
30.	Paraquat
31.	Pentachlorophenol
32.	Phorate
33.	Picloram
34.	Polychlorinated Biphenyls (PCB)
35.	Prometryne
36.	Simazine
37.	Terbufos
38.	Tetrachloroethylene (perchloroethylene)
39.	2,3,4,6-Tetrachlorophenol
40.	Triallate
41.	Trichloroethylene
42.	2,4,6-Trichlorophenol
43.	Trifluralin
44.	Vinyl Chloride

O. Reg. 374/15, s. 10.

Français

[Back to top](#)