

Recreational Water Reference Document, 2019

Ministry of Health and Long-Term Care

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1. Preamble

Reference Documents are program or topic-specific documents that provide information and best practices relevant to implementing the Ontario Public Health Standards: Requirements for Programs, Services, and Accountability (Standards), Protocols and Guidelines.¹ Reference Documents are not enforceable; the aim of Reference Documents is to provide professional staff employed by local boards of health support in operationalizing and implementing requirements outlined in the Standards, Protocols and Guidelines.

2. Introduction

Ontario Regulation 565 - Public Pools (Reg. 565 (Public Pools)) under the *Health Protection and Promotion Act R.S.O 1990* (HPPA) was modernized to include regulatory requirements for public pools, public spas and Class C facilities (wading pools, spray pads, splash pads and water slide receiving basins).^{2,3}

The Recreational Water Reference Document (RW-RD), represents generally accepted practices for the safe operation of a public recreational water facility and includes summary information about Reg. 565 (Public Pools).

The regulatory requirements are outlined and shaded to provide clarity on how they are stated in Reg. 565 (Public Pools).

Next to the headings, there is a legend with a “✓” (yes) or “✗” (no) indicating which facility the topic applies to.

The facilities are categorized as:

- A (Class A public pools)
- B (Class B public pools)
- C (Class C facilities)
- S (public spas).

Appendix A and B contain a summary of all regulatory requirements for Class C facilities.

The RW-RD does not provide all of the regulatory requirements, and is designed as an educational resource to assist with compliance to Reg. 565 (Public Pools). It should be used in conjunction with companion resource materials that together inform best practices in recreational water safety.

3. Purpose

The RW-RD is intended to assist recreational water facility owners and operators and public health inspectors (PHIs) to reduce the risk of recreational water users acquiring

recreational water illnesses or injuries, promote compliance with Reg. 565 (Public Pools) and promote best practices related to recreational water operations.

The RW-RD promotes safe recreational water operations by:

- Promoting communications and positive relationships between recreational water facility owners, operators and PHIs; and
- Identifying operational procedures that reduce the risk of recreational water injury and users acquiring illness.

PHIs are trained to provide education and practical advice with regard to recreational water. Throughout this document, recreational water operators are encouraged to consult with PHIs to work together toward shared safe recreational water outcomes.

4. Relevant Legislation

The Ministry of Health and Long-Term Care (ministry) establishes provincial priorities including the Standards for public health programs and services delivered through local boards of health. Boards of health are the delivery agencies for local public health programs and services. Through the application of legislation, boards of health across Ontario ensure recreational water facilities such as public pools, spas, spray and splash pads, wading pools, and water receiving basins are safe for bathers and users.

PHIs are responsible for monitoring and ensuring compliance with Reg. 565 (Public Pools) and the HPPA. Operators are responsible for ensuring they are in compliance with relevant legislation, and should speak with their local [board of health](#) for more information.

The requirements for public pools are outlined in the following legislation:

- **Health Protection and Promotion Act:** Legislation that governs safe water in premises which include recreational water facilities.
- **Ontario Regulation 565 - Public Pools:** Reg. 565 (Public Pools) is a regulation under the HPPA that has specific requirements for recreational water facilities and is enforced by PHIs in Ontario.
- **Provincial Offences Act (POA):** Provides authority in a regulation (Regulation 950) for provincial offence notices (tickets) for infractions under Reg. 565 (Public Pools), which came into effect July 1st, 2018.⁴ The POA Regulation 950, Schedule 39, includes short form wording and set fine amounts based on the severity of the infraction. For more information on POA tickets, refer to the [Guide for Defendants in Provincial Offences Cases](#).⁵
- Ontario Public Health Standards: Requirements for Programs, Services, and Accountability (Standards), and the Safe Water Standard: Section 7 of the HPPA provides that the Minister of Health and Long-term Care may publish Ontario Public Health Standards for the provision of mandatory programs and services that local boards of health shall comply with.
- **Recreational Water Protocol, 2019 (or as current)** and **Operational Approaches for Recreational Water Guideline, 2019 (or as current):** These

documents are enforceable under the Standards and outline specific requirements for delivering the recreational water safety program by a local board of health.^{6,7} For example, boards of health are responsible under the protocol to maintain surveillance data of public recreational water facilities, ensure availability of education and training materials, and for the timely investigation of water-borne illness or outbreaks.

5. Recreational Water Overview

Public health and safety

Recreational water facilities offer a wide range of health benefits including exercise, opportunities to socialize and help people keep cool on hot summer days. However if not operated properly they can also cause injury and/or illness. Reg. 565 (Public Pools) streamlines all of the regulated recreational water facilities into one regulation to provide consistency in health and safety standards.

Recreational water settings can be a host of bacteria, parasites, protozoa, and viruses that can cause enteric illnesses (illness in the stomach and intestines) as well as skin and ear infections. Adequate disinfection of water is one of the most important factors to help reduce risk of illness. Most disinfection equipment and procedures aim to reduce bacteria in the water, where free available chlorine or total bromine treatment is adequate. However, protozoa and parasites may require further treatment, like UV radiation to be completely deactivated. Without adequate treatment of the recirculated water stream, parasites such as Giardia and Cryptosporidium can present a hazard.

In addition to enteric illness, recreational water facilities can present a risk of drowning. Children have a higher susceptibility to swimming injuries, non-fatal and fatal drowning events in swimming pools. Other health risks associated with recreational water facilities include suction drain injuries, chemical injuries resulting in respiratory, skin, eye and ear conditions as well as injuries related to slipping and falling on wet surfaces.

6. Operation

When an owner or operator plans to open a recreational water facility regulated under Reg. 565 (Public Pools), it is important to initiate communication with the local board of health and local building and by-law departments early on in the planning phase. Early communication will ensure appropriate time is provided to:

- review the building design;
- identify any other applicable legislation including by-laws;
- discuss appropriate operational plans (i.e. swim tests); and
- ensure adequate operator training and education (i.e. training materials provided, or training course is taken), to assist in compliance with the regulation and ultimately the safe operation of a recreational water facility.

Prior to construction or alterations, owners or operators should contact the local building and municipal bylaw departments, the [Electrical Safety Authority](#) and/or [Technical Standards and Safety Authority](#) as applicable.

Notification



All operators of public pools, spas, and Class C facilities shall notify the local medical officer of health (MOH) or PHI of commencement of operation, a minimum of 14 days prior to (re)opening to allow time for inspection. This includes when the facility is reopening after being closed for more than four weeks, closed for construction, or is a new facility.

A letter, phone call, or online program (if available) may be acceptable processes for communication with the local board of health. Operators should speak to the PHI for more information on their process for notification. Refer to section 5 under Reg. 565 (Public Pool) for more information.

Permission in writing



Requirement 5. (2) A person who proposes to open or re-open a pool or spa for use as a public pool or public spa after construction or alteration shall not open or re-open the pool or spa without first obtaining permission in writing from the medical officer of health or a public health inspector for the health unit where the pool or spa is situated.

Following construction or alteration, permission in writing from the local MOH or PHI is required for all facilities under Reg. 565 (Public Pools) prior to operating. Operators are encouraged to notify the local board of health prior to construction or alteration of a facility to ensure regulatory compliance will not be affected by the planned modifications. Operators should also contact the local board of health for more information on policies and processes regarding notification and written permission.

Please note that if a facility has been closed for more than four weeks and has not had any construction or alteration, written permission from the board of health is not required to open, however under the *Recreational Water Protocol, 2019* (or as current), upon notification, boards of health are to conduct an inspection prior to opening after construction, alteration or closure of more than 4 weeks to determine compliance with the regulation. Early communication with the board of health for their notification and written permission policies is important to ensure a timely opening, whether after construction, alteration, or a seasonal closure.

Posting of inspection results

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Requirement 5. (4) Every operator of a public pool or public spa shall ensure that the results of any inspections conducted by a public health inspector are posted in accordance with the inspector's request.

This requirement provides information to the public that inspection results are available and how they can be accessed. Public disclosure of inspection results increases public transparency and allows the public to make informed decisions. The specifics of what operators are required to post on-site are provided by the PHI and based on direction from the board of health. All boards of health are also required under the *Recreational Water Protocol, 2019* (or as current) to post inspection results of various regulated settings on their website.

Designated operator

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Requirement 6. (1) Every owner of a public pool or public spa shall designate an operator.

The operator is a designated person who oversees the safe operation of the public pool, spa, or Class C facility. An operator will typically be a manager or someone who has care and custody of the recreational water facility during operation. More than one person may be designated as an operator of a facility. If an operator is not available on-site during an inspection, they should be easily accessible by an on-site employee or attendant.

Rendered inaccessible

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Requirement 6. (3) (b) Every owner and every operator shall ensure that during periods when the pool is not intended to be open for use it is rendered inaccessible to persons who are not involved with its operation or maintenance.

Operators of public pools and wading pools must ensure that the facility is not accessible to the public outside of operating hours. This may be achieved through the locking or gating of the facility to prevent public access, or by draining the water.

Operator training

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Requirement 6 (2) Every operator shall be trained in public pool and public spa operation and maintenance, filtration systems, water chemistry and all relevant safety and emergency procedures.

All operators of public pools and spas must be trained in the safe operation of the facility. Operators should consult their PHI as to how this requirement can be met. Existing training courses and resources available through many boards of health and sector providers may be used to meet this requirement.

As per the *Recreational Water Protocol, 2019* (or as current), boards of health are required to ensure training materials are available and to promote recreational water facility training to owners and operators. Training should include information on:

1. Public health legislation and regulations, as applicable;
2. Prevention of illness, injury or death;
3. Pool water chemistry;
4. Sanitary operation of other amenities in the facility;
5. Provision of safety equipment;
6. Emergency communication and procedures;
7. Safety supervision;
8. Admission Standards, as applicable; and
9. Record keeping.

PHIs may request additional training for operators if multiple infractions under Reg. 565 (Public Pools) are observed or if an operator cannot demonstrate the safe operation of the facility.

Operating as a Class A pool

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Requirement 6 (4) Despite paragraph 2 of section 2, a Class B pool may be operated as a Class A pool during periods when the pool is open solely for the uses stated in paragraph 1 of section 2 if the following conditions are met:

1. The medical officer of health or a public health inspector for the health unit where the pool is situate has been notified in advance of the intent to operate as a Class A pool.
2. All safety and supervision requirements in section 17 and subsections 20 (4) to (8) comply with those of a Class A pool.
3. The pool is able to increase rate of water turnover provided for in clause (3) (c) to that of a Class A pool.

Under certain conditions, a Class B pool can operate as a Class A supervised pool for short periods of time, such as for a special event or occasion.

A Class B pool may operate as a Class A pool if the operator can demonstrate to the PHI that they will comply with the regulatory requirements outlined in section 6(4) of Reg. 565 (Public Pools) for the uses stated in paragraph 1 of section 2. Requirements include the use of lifeguards and admission standards. Operators must notify the board of health of their intent to operate as a Class A pool.

With necessary modification

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The term “with necessary modification” in the regulatory requirement applies to a Class C facility [see section 26.1 of Reg. 565 (Public Pools)]. This term does not provide any authority for an operator, MOH, or PHI to modify any specific details of, or grant an exemption from, a regulatory requirement.

Example of necessary modification:

Requirement 26.1 (1) The following provisions of this Regulation apply, with necessary modification, to every owner and every operator of a Class C facility:

1. Section 5, other than clause 5 (1) (d).

[...]

For illustrative purposes only, the above requirements would be read as:

Notification 5. (1) At least 14 days before a [Class C facility] is put into use after construction or alteration, the owner or the owner’s agent shall notify, in writing, the medical officer of health or a public health inspector for the health unit where the [Class C facility] is situate,

- of the building permit number issued for the construction or alteration of the [Class C facility];
- whether or not all the preparations necessary to operate the [Class C facility] in accordance with this Regulation have been completed;
- of the date that the [Class C facility] is intended to be opened or re-opened for use;
- of the name and address of the operator.

7. Lifeguard Certification and Supervision

Public pools under Reg. 565 (Public Pools) are required to have lifeguard supervision as per the requirements in section 17. Reg. 565 (Public Pools) outlines specific lifeguard

requirements and ratios. Lifeguards are trained and certified to supervise bathers and their physical safety in a pool.

Lifeguard & assistant lifeguard certificates

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Recognized lifeguard and assistant lifeguard certificates include certificates issued by the Lifesaving Society, Canadian Red Cross or an equivalent certificate that is approved by the Minister of Health and Long-Term Care. Certificates that are currently recognized are listed in Appendix C. These certificates, or a copy of these certificates, must be available at any time for the pool owner, operator and/or PHI to examine. Electronic records are adequate if readily available to the PHI during an inspection.

Lifeguard training standard

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Ontario applies Lifeguard and Assistant Lifeguard Training Standards (Lifeguard Standard) based on currently accepted international and North American standards, for which lifeguard training certificates may be evaluated to determine equivalency. The Lifeguard Standard includes guiding principles and requirements for course quality, development, delivery and content. Examples of course requirements include, instructor to participant ratio, first aid and cardiopulmonary resuscitation (CPR) certification, physical standards and rescue skills, pool supervision, facility analysis, and communication.

Recognized lifeguard and assistant lifeguard certificates must meet or exceed the minimum requirements of the Lifeguard Standard. Organizations not listed in Reg. 565 (Public Pools), who wish to have a lifeguard and assistant lifeguard training program considered for equivalency by the Minister of Health and Long-Term Care, may submit an application to the ministry.

Lifeguard and assistant lifeguard supervision exemptions

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Public pools may be exempt from lifeguard supervision in Reg. 565 (Public Pools) based on one of the following two (2) scenarios:

- A Class B pool that is not operated in conjunction with a child care centre or day camp; and has the required notice from section 17 (19) of the public pools regulation posted in a conspicuous location, to notify the public that the pool is unsupervised.

OR

- A public pool operated in conjunction with a child care centre or day camp, with a water depth not exceeding 1.10 metres, and where the lifeguards or assistant lifeguards are replaced by one or more persons 16 years of age or over where each person has satisfied the operators that he or she is a competent swimmer, is trained in emergency procedures for the pool and is the holder of a current first-aid certificate referred to in section 17(11).

8. Admission Standards

In accordance with the recommendations of Ontario's Chief Coroner, Reg. 565 (Public Pools) includes admission standards and swimming competency tests to better protect children and bathers.

Guardian supervision of bathers under age ten (10) in Class A pools

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Requirement S. 17. (21) Every owner and every operator of a Class A pool shall ensure that there is a process in place to ensure a guardian or designated person supervises children under 10 years of age. The process must include a swimming competency test and a method of communicating the requirements of the process.

Class A pools are required to have a process in place to ensure a guardian* or designated person supervises children under 10 years of age, known as an admission standard. However, Reg. 565 (Public Pools) does not set out specific admission standard requirements. The intent is to allow owners and operators of pools to determine admission standards that reflect the conditions of their pool. The aim of the admission standard is to improve the ability of lifeguards to provide overall pool supervision and reduce the risk of drowning deaths and injuries.

Operators may consult with industry experts such as the Lifesaving Society and Canadian Red Cross on best practices (e.g., swimming competency tests) in order to meet the regulatory requirements.

Operators must communicate the requirements of the admission standard process to users that may be affected in advance. Operators may meet this requirement by posting information on the pool website, pool program guide, a recorded telephone message, pamphlets, and on-site signage.

Admission standards may not apply when a Class A pool is being used solely by one or more groups each not exceeding 25 in number for aquatic instruction, practice, or

* Note that guardian does not necessarily mean legal guardian. It can include a parent or caregiver or other adult supervising young children.

competition provided specific regulatory requirements are met. Refer to section 8 for more information.

Waterparks

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Given the unique design features of waterparks and premises with multiple recreational water facilities some of which may make traditional swim tests difficult to conduct, operators are required to assess the safety procedures in place for children under 10 years of age to ensure an adequate level of oversight for bather safety.

9. Supervision at Class C Facilities

Wading pools, which are commonly used by young children, may reach up to 0.75 meters deep and can present a risk of drowning and enteric illness. Ensuring the water is appropriately treated and maintained safely is important as wading pools can be a source of bacteria, viruses and parasites. Operators must ensure an attendant is present to supervise wading pool use and available to attend to any health and safety issues such as equipment failure or pool fouling. For recommended pool fouling responses by the Centers for Disease Control and Prevention (CDC), refer to Appendix D.⁸ An attendant is not required on-site for spray/splash pads, however guardians should be present to actively supervise and ensure the safety of those using the facility.

Wading pool supervision

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Requirement S. 26.3 Every operator of a public wading pool shall,
 (b) ensure attendant supervision at all times that the public wading pool is in operation and where the wading pool is operated in conjunction with a public pool, ensure that the required supervision of the wading pool is in addition to any required bathing supervision for the public pool.

Wading pool operators are required to have an attendant present at all times of operation. While not a requirement of Reg. 565 (Public Pools), attendants should be a minimum of 14 years of age and;

- Attired so as to be readily identified by the users;
- The holder of a standard level first aid certificate; and
- Trained in operational and emergency procedures.

Spray/splash pad signage

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Requirement S. 26.4 (2) Every operator of a public spray pad or public splash pad shall post clearly visible signage in a conspicuous place notifying parents or guardians to supervise their children at all times when using the public spray pad or public splash pad.

Spray/splash pad operators are not required to have active supervision at the facility, however they are required to have signage notifying parents or guardians that children must be supervised at all times when using the facility. Signage should be clearly visible. Sample messaging may include:

“Parents or guardians must continually supervise children”

For more information on signage, please refer to section 13.

10. Aquatic Instruction and Instructor Certification

A public pool may be exempt from the bather supervision (i.e., lifeguard) ratios when the pool is being used solely for aquatic instruction, practice, competition or display, provided certain requirements are met.

Requirement S. 17 (16) A public pool is exempt from the safety supervision requirements of subsections (2), (3) and (21) if an operator ensures adequate supervision is provided during a period when the pool is being used solely by one or more groups each not exceeding 25 in number for aquatic instruction, practice, competition or display under the direct supervision of a certified aquatic instructor or coach, and the requirements in subsection (17) are met.

When a public pool is used for aquatic instruction (e.g., swimming lessons), the following requirements apply:

Requirement S. 17 (17) The following applies for the purposes of subsection (16):

- Every aquatic instructor and every coach shall be at least 16 years of age and be a holder of an aquatic instructor certificate that is dated not more than two years prior to the date on which he or she is acting as an aquatic instructor or coach.
- Every aquatic instructor and every coach shall be a holder of either a lifeguard certificate or an assistant lifeguard certificate that is dated not more than two years prior to the date on which he or she is acting as an aquatic instructor or coach.
- Where an aquatic instructor or coach does not hold a lifeguard certificate or an assistant lifeguard certificate that is dated not more than two years prior to the date on which he or she is acting as an aquatic instructor or coach, the operator shall ensure a lifeguard is on duty on the deck during the period when the pool is being used for aquatic instruction, practice, competition or display.

To meet the above requirement, each class requires a certified instructor or coach holding a current lifeguard or assistant lifeguard certification or a lifeguard must be providing direct supervision of that class.

Requirement S. 17 (17) The following applies for the purposes of subsection (16):

4. In the case of underwater aquatic instruction, the instructor certificate mentioned in paragraph 1 must be issued by,
 - i. The National Association of Underwater Instructors,
 - ii. The Professional Association of Diving Instructors, or
 - iii. The Association of Canadian Underwater Councils.

For the purposes of Reg. 565 (Public Pools), a certificate from the National Coaching Certification Program (NCCP) from one of the aquatic sports is recognized as “certified aquatic instructor”. A pool is exempt from providing lifeguards or assistant lifeguards if the aquatic coach also holds a recognized assistant lifeguard or lifeguard certificate. Aquatic coaches do not need to become certified lifeguards or assistant lifeguards if the operator ensures a lifeguard is on duty on the deck during the aquatic instruction, practice or competition.

11. First Aid

First aid certificate requirements have been harmonized across Reg. 565 (Public Pools) and *Ontario Regulation 503/17 (Recreational Camps)* under the HPPA.⁹

Certification

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Requirement 17. (11) For the purpose of subsection (10), “current first aid certificate” means a standard or higher first aid certificate that is dated not more than three years prior to the date on which the holder is on duty and that is issued by one of the following agencies:

1. St. John Ambulance.
2. Canadian Red Cross.
3. Lifesaving Society.
4. Canadian Ski Patrol.
5. An organization whose certificate the medical officer of health considers equivalent to a certificate referred to in paragraph 1, 2, 3 or 4.

Organizations not listed who wish to have their first aid certificate considered for equivalency may submit an application to the local MOH. The ministry will, if requested by the local MOH, assist with the review to determine equivalency.

First aid kits

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In order to allow flexibility for operators, Reg. 565 (Public Pools) sets out the first aid supplies for the first aid kit. Operators should ensure a sufficient quantity of each to meet the needs of their facility. Note, operators are required to also comply with minimum requirements for workplace first aid kits under the *Workplace Safety and Insurance Act, 1997* (see Reg. 1101, s. 1.).¹⁰ Though the specific contents listed below are not required for wading pools, wading pools do need a first-aid kit, and it is recommended that the prescribed content set out below also be included.

Requirement 20. (2) Every owner and every operator of a public pool or public spa shall ensure that, subject to subsection (3), there is provided, in places conveniently located for emergency use, a first aid kit containing at a minimum,

- (a) a current copy of a standard first aid manual;
- (b) safety pins;
- (c) adhesive dressings individually wrapped;
- (d) sterile gauze pads, each 75 millimetres square;
- (e) 50 millimetre gauze bandages;
- (f) 100 millimetre gauze bandages;
- (g) sterile surgical pads suitable for pressure dressings individually wrapped;
- (h) triangular bandages;
- (i) rolls of splint padding;
- (j) at least one roll-up splint;
- (k) at least one pair of scissors;
- (l) non-permeable gloves, and
- (m) resuscitation pocket masks.

Operators may wish to refer to the Canadian Standards Association (CSA) standard for Workplace First Aid Kits (CSA Z1220 -17) which was developed in 2017.¹¹ This standard is part of an initiative to create a national system for workplace first aid in Canada. It specifies a classification system for workplace first aid kits and provides minimum requirements for their contents. It also includes guidance to organizations in carrying out a workplace first aid risk assessment to augment the minimum requirements as applicable. Below is an excerpt from the standard.

Figure 1: Excerpt from CSA standard for Workplace First Aid Kits 1 Z1220-17¹¹

0.2 Classification system

This Standard defines a new workplace first aid kit classification system. It follows a "scalability approach" that will allow organizations improved flexibility in meeting the unique needs of their specific worksites, while still ensuring minimum requirements are set forth based on the number of workers.

Three main classifications of workplace first aid kits are included:

Type 1: Personal; Type 2: Basic; Type 3: Intermediate.

Note: The intermediate kit is intended to be utilized within workplaces with a higher risk environment.

To allow for organizational variability the Type 2 and Type 3 kits have been further classified into small, medium and large. The sub-classifications of small, medium and large correspond to the number of workers at the worksite per shift ensuring a larger organization has more supplies on hand to satisfy the needs of a larger population

For more information see: <http://shop.csa.ca/en/canada/first-aid-in-the-workplace/z1220-17/inv/27042102017>

12. Water Parameters, Testing, Monitoring and Recording Frequencies

Operational checks and recordings of water parameters, equipment, and procedures are important in maintaining a safe recreational water facility. Many factors, including temperature, bather use, sunlight, and equipment failure can contribute to a change in water chemistry and ability to disinfect the water, provide bather comfort, and water clarity. It is important that an operator actively monitors these aspects of water quality throughout the day to address the variation of chemical balance that may occur.

Operators must ensure that these records are available for PHI viewing for up to one year. Records can help operators provide due diligence in the event of a waterborne illness outbreak investigation.

Water chemistry parameters

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The following table displays requirements of Reg. 565 (Public Pools) and ranges.

Requirement (where applicable)	Range
Alkalinity	80-120ppm
pH	7.2-7.8
FAC for a pool	0.5-10.0ppm
FAC for a pool with cyanuric acid	1.0-10.0ppm
Bromine for a pool	2.0-4.0 ppm
FAC for a spa	5.0-10.0ppm
Bromine for a spa	5.0-10.0ppm
ORP	600-900mV
Cyanuric acid	Max. 60ppm

Frequency of operational checks for record keeping

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The following two tables display the frequency of operational checks as per Reg. 565 (Public Pools)[†].

Operational Check	Frequency
Water clarity Spa water temperature Alkalinity pH FAC/TC Bromine	30 minutes prior to opening + every two hours or 30 minutes prior to opening + every four hours with automatic sensing device
ORP	Daily
Cyanuric acid	Weekly
Outlet covers	30 days

[†] The following tables do not apply to spray/splash pads.

Operational Check	Frequency
Emergency stop button	30 days
GFCI test button	Min. 30 days or more often if manufacturer directions state
Emergency phone test	Daily (before opening)

Additional record keeping

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The following table displays additional records as per Reg. 565 (Public Pools).

Estimated # bathers	Daily
Any emergencies, rescues or equipment breakdowns	Daily
Make-up water meter reading for pools, and if applicable for spas	Daily
Spa drainage, inspection and refill, if applicable	As required
Amount of chemicals added manually, if applicable	As required

Frequency of operational checks

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Requirement 7(12) Where the pool or spa has an automatic sensing device, the requirements provided for in subsection (11) must be further checked and recorded at least every four hours until the daily use period has ended. For pools and spas without an automatic sensing device, the requirements provided for in subsection (11) must be further manually checked and recorded at least every two hours until the daily use period has ended.

The following requirements have been streamlined for operators of both public pools and spas.

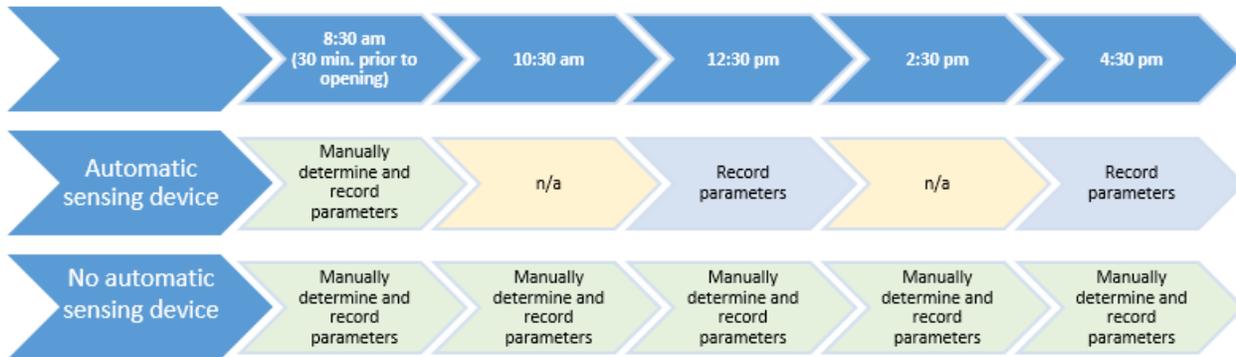
- Every operator of a pool and spa shall manually test and record the required parameters 30 minutes prior to operating. This will verify that the facility's water parameters are within the correct range prior to bather use, or will provide time to resolve any water quality issues.

- Following the initial testing, operators with automatic sensing devices will determine all of the parameters a minimum of once every four hours. Where automatic sensing devices are capable of displaying the specific levels (i.e. pH and sanitizer residual in ppm), manual testing may not be required for the displayed values. These observations must be recorded every four hours, either in a log book or by a record output provided by the automatic sensing device. Values not displayed (i.e. total alkalinity) are to be manually recorded every 4 hours.
- Operators who do not have an automatic sensing device shall manually determine and record all of the test results of the required parameters a minimum of every two hours.

An overview of the above requirements is found in the scenario for a pool that is open at 9:00am and closes at 6:00pm. Operators are encouraged to speak to the local board of health if they have any questions regarding the operation of their facility.

If the pool uses an Oxidation-Reduction Potential (ORP) sensing device, operators should record the ORP reading at the same time and frequency that the pH and sanitizer residual (ppm) are determined. The ORP reading must be between 600-900 mV.

Figure 2: Example frequency of operational checks



Electronic Records



The decision to permit electronic pool records, subject to the requirements of Reg. 565 (Public Pools), is left to the discretion of the local board of health. During inspections, the PHI may find that regulatory requirements set by Reg. 565 (Public Pools) are met by the electronic pool records.

13. Recirculating & Non-recirculating Spray/Splash Pads

Spray/splash pads may vary in design and construction. Some splash pads have recirculating water systems in which water is filtered and disinfected and fresh make-up water added. Other systems do not recirculate water and instead it is drained as it is used. All operators must ensure that make-up water and source water is clean and free from contamination.

Recirculating splash pads

AxBxC✓Sx

Requirement S. 26.4 (1) Every operator of a public spray pad or public splash pad shall ensure that, where water is recirculating, the water is filtered and disinfected as approved by the local medical officer of health or a public health inspector for the health unit where the public spray pad or public splash pad is situate.

The filtration and disinfection process for spray/splash pads must be approved by the MOH or PHI. The frequency at which the operator should test the water quality to confirm the system is working should also receive approval. Operators and PHIs should work together to implement a water monitoring plan appropriate for the facility. It is recommended that the following steps be implemented as part of a water monitoring plan:

1. The water is filtered;
2. Chemically disinfected with chlorine or bromine;
3. Retained in a storage tank for the appropriate period of time to allow effective disinfection to occur; and
4. Treated with ultraviolet light capable of rendering cysts and oocysts inactive before water enters the spray/splash pad. Proper turbidity monitoring should be in place to ensure the UV treatment device is effective. UV treatment units should have a mechanism in place to prevent water from being directed to the spray pad/splash pad in the event of equipment malfunction.

Local MOH or PHI approval

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Where an operator is seeking approval from the MOH or PHI on a new or emerging treatment system, the operator should consult with recreational water industry experts on a proposed design and other relevant information to bring forward to the MOH or PHI.

Non-recirculating splash pads

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Requirement S. 7(1) Every owner and every operator of a public pool or public spa shall ensure that the clean water and the make-up water are free from contamination that may be injurious to the health of the bathers.

Requirement S. 7(2) For the purposes of applying subsection 7 (1) to public spray pads or public splash pads without a circulation system, “make-up water” shall be read as “source water”.

For splash pads that are non-recirculating, operators must ensure that the source water is safe for bather use. Operators may use a municipal water supply or other reliable source approved by the PHI.

Where the water is non-recirculating and held in a basin for more than 15 minutes, it should be treated and discharged directly to waste within a minimum of four hours.

14. Safety Equipment

The presence of safety equipment at recreational water facilities is important in protecting bather safety, preventing accidents and assisting in emergency situations should they occur.

A top priority is to prevent accidents or injury from occurring at a recreational water facility and to be prepared when they do occur. Being prepared in the case of an emergency will allow for a quick response that may save a life or avoid significant injury. Reg. 565 (Public Pools) provides for adequate supervision, provision of safety equipment, first aid supplies, and emergency signage. Operators may also decide whether additional equipment is appropriate to ensure a high level of safety at the facility. It is important to maintain safety equipment in good condition and to inspect it regularly to ensure it is functioning appropriately. The availability of functioning life-saving equipment, including a phone, is key to ensuring a fast, effective response.

Anti-entrapment devices

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A public pool, spa and wading pool designed with one singular drain (outlet) may pose a very serious hazard. One drain design increases the risk of a suction hazard that traps bathers below water level, and has led to serious injury and drowning.

The Ontario Building Code no longer permits the construction of pools and spas with a single main drain due to the risk of suction entrapment and drowning. If a public pool

contains only one main drain, pool operators should equip the pool with an anti-entrapment barrier to eliminate this dangerous condition.

Industry experts recommend additional anti-entrapment barriers or systems such as an unblockable drain, anti-entrapment outlet covers, a suction limiting vent system, or an automatic pump shut-off.

It is recommended that owners or operators speak with an industry expert and PHI if the pool has only one drain that can cause entrapment.

Daily inspection of working emergency phone

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Requirement S. 16 (2) Every operator shall ensure, before the public pool or spa is opened for use each day, that,

- (a) in the case of a Class A pool, the emergency telephone required under clause (1) (a) is tested to confirm that the system is in operating condition; and
- (b) in the case of a Class B pool, the telephone required under clause (1) (b) is tested to confirm that it is in operating condition; and
- (c) in the case of a public spa, the telephone required under clause (1) (c) is tested to confirm that it is in operating condition.

Public pool and spa operators are required to ensure that the emergency phone is tested and in working condition for every day the pool or spa is operating. This test is to be performed prior to opening, to confirm it is working for the operating day. A test may include direct communication with a test number, or if necessary a direct communication with emergency services. Operators shall demonstrate to the PHI that the emergency phone system is working.

Class B pools emergency phone and location

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Requirement S. 16(1) Every owner and every operator shall ensure that,

- (b) in the case of a class B pool, a telephone for emergency use is accessible no farther than 30 metres from the pool.

A Class B pool, should have a working emergency phone within 30 meters from the pool to ensure contact with emergency services is not delayed. Operators should also be able to demonstrate the accessibility and operation of the phone at all times while the pool is in operation.

Back-up emergency communication devices

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As part of the pool operation plan, owners and operators should consider including additional back-up communication devices for additional safety. To enhance the ability to communicate with emergency services in the event of an emergency, a cellular phone or other alarm system may be used to ensure emergency services are contacted as quickly as possible. This is not a substitute for the requirement of a telephone for emergency use. Operators who choose to have additional communication devices should also ensure they are operational similarly to the regulatory requirements. Staff on duty should be trained in the use of the emergency phone and additional devices.

Buoy line in Class B pools where the slope is 8% or greater

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Requirement S. 20. (1) Subject to subsection (3), every owner and every operator of a public pool other than an owner or operator of a wave action pool, and every owner and operator of a public spa that has an inner horizontal dimension greater than three metres, shall ensure that there are provided in places conveniently located for emergency use,

(c) in the case of a Class B pool that is in operation and has a slope of more than eight per cent, a buoy line;

This requirement came from the Chief Coroner recommendation following a 2009 triple drowning at a Class B pool. The Ontario Building Code requires that pools with a slope of greater than 8% be equipped with the fittings for a safety buoy line. A buoy line has been identified as a measure to prevent a future drowning in an unsupervised Class B pool.

If a pool was built prior to the Ontario Building Code requirement for fittings and the original pool plans are not available, operators should calculate the slope to determine if it is greater than 8% (1:12).¹² To calculate the slope of the steepest part of the pool, divide the difference in depth between the shallow and deep end by the distance between the two points.

$$\text{Slope \%} = \frac{(\text{pool depth at deep end of slope}) - (\text{pool depth at shallow end of slope})}{\text{distance between deep and shallow end of slope}} \times 100$$

Frequency and recording of inspections for additional safety related equipment

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The following regulatory requirement applies to all operators of recreational water facilities.

Requirement S. 26.5 Every operator of a facility to which this Regulation applies shall record the results of inspections of safety-related equipment present in the facility at a frequency determined by a public health inspector for the health unit where the facility is situate.

Where safety equipment is available, operators should develop a schedule to ensure regular monitoring and maintenance of safety equipment. The schedule can range from daily to weekly, should meet the needs of the specific equipment used by the facility and should be available for the PHI to review. If any equipment is found to be unsafe or not operational, it should be fixed or replaced immediately. In some cases this may require the closure of the facility.

Class C facilities are encouraged to be equipped with safety related equipment in order to protect the health and safety of bathers. Examples of equipment for operators to inspect include:

- Operation of vacuum relief mechanism,
- Operation of ground fault circuit interrupters,
- Placement and operation of emergency equipment in addition to the emergency phone and first aid kit, such as non-conducting reaching poles and drain coverings; and
- Placement of signage.

First aid kit and emergency communications device

AxBxC✓Sx

Requirement S. 26.3 Every operator of a public wading pool shall,
(a) provide a first aid kit, a device for emergency communications and emergency equipment which is appropriate for use in the public wading pool;

Wading pool operators are required to have a first aid kit as well as a device for emergency communications.

15. Signage

The use of signage is an important component of maintaining safe aquatic facilities. Public pool and spa signage requirements shall be posted in accordance with section 19 of Reg. 565 (Public Pools).

Other information or photos

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Requirement S. 19. (1) vii Every owner and every operator of a public pool or public spa shall ensure that, at a minimum, the following notices and markings are displayed in the indicated places:

- vii. any other information or photos that the owner or operator determines is necessary to maintain the health and safety of the persons using the pool.

Pool operators may choose to provide additional signage to ensure the health and safety of those using the facility. Signs should not conceal or distract from information required by Reg. 565 (Public Pools). Additional signage should be in English and any other language that may be common to the location, including brail or photos. Examples of additional signage may include:

- location of the first aid kit;
- notification of site specific hazards;
- the prohibition of facility use while under intoxication; and
- CPR posters when lifeguard is not present.

Spray/splash pad signage

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Requirement 26.4 (2) Every operator of a public spray pad or public splash pad shall post clearly visible signage in a conspicuous place notifying parents or guardians to supervise their children at all times when using the public spray pad or public splash pad.

Spray/splash pad operators are required to have signage notifying parents or guardians that children must be supervised at all times when using the facility. Signage should be clearly visible. Example messaging may include:

“Parents or guardians must continually supervise children”

In addition to the required signage under Reg. 565 (Public Pools) section 26.4 (2), operators of public wading pools and splash pads may wish to communicate facility rules or additional safety issues. Examples (for illustrative purposes only):

“WADING POOL RULES”

- Children should be appropriately attired for their age and continence ability to prevent fouling of the pool (e.g., swim diapers recommended).
- No glass container, food, or beverage is allowed in the wading pool or in the area immediately surrounding the wading pool.
- Recreational water is not intended for drinking.
- Do not enter the wading pool if you have an open sore or rash, or are experiencing nausea, vomiting or diarrhea.
- No person shall pollute the water in the wading pool in any manner or on the area immediately surrounding the wading pool.
- No person shall engage in boisterous play in or about the wading pool.

“SPRAY/SPLASH PAD POOL RULES”

- Children should be appropriately attired for their age and continence ability to prevent fouling of the spray pad/splash pad (e.g., swim diapers recommended).
- No glass container, food, or beverage is allowed on the spray pad/splash pad or in the area immediately surrounding the spray pad/splash pad.
- Recreational water is not intended for drinking.
- Do not use the spray/splash pad if you have an open sore or rash, or are experiencing nausea, vomiting or diarrhea.
- No person shall pollute the water or surface of the spray pad/splash pad in any manner or on the immediate area surrounding the spray pad/splash pad.
- No person shall engage in boisterous play in or about the spray pad/splash pad.

Additional signage recommended for Class C facilities include



- List of the names, telephone numbers and addresses of persons who are available for resuscitation, medical aid and fire services;
- List of the full name and address of the wading pool location, nearest main intersection and emergency telephone number;
- Bather capacity;
- Hours of operation; and
- Location of first-aid kit

References

1. Ontario. Ministry of Health and Long-Term Care. Ontario public health standards: requirements for programs, services, and accountability, 2018. Toronto, ON: Queen's Printer for Ontario; 2018. Available from: http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/default.aspx
2. *Health Protection and Promotion Act*, RSO 1990, c H.7. Available from: <https://www.ontario.ca/laws/statute/90h07>
3. *PUBLIC POOLS*, O. Reg. 565. Available from: <https://www.ontario.ca/laws/regulation/900565>
4. Provincial Offences Act, RSO c.P.33. Available from: <https://www.ontario.ca/laws/statute/90p33>
5. Ontario Court of Justice. Guide for Defendants in Provincial Offences Cases. Available from: <http://www.ontariocourts.ca/ocj/self-represented-parties/guide-for-defendants-in-provincial-offences-cases/guide/>
6. Ontario. Ministry of Health and Long-Term Care. Recreational water protocol, 2019. Toronto, ON: Queen's Printer for Ontario; 2019. Available from: http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/protocolsguidelines.aspx
7. Ontario. Ministry of Health and Long-Term Care. Operational approaches for recreational water guideline, 2019. Toronto, ON: Queens Printer for Ontario; 2019. Available from: http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/protocolsguidelines.aspx
8. U.S. Department of Health and Human Services Centers for Disease Control and Prevention, (2016) Fecal Incident Response Recommendations for Aquatic Staff [Fact sheet]. Available from: <https://www.cdc.gov/healthywater/swimming/aquatics-professionals/fecalresponse.html>
9. *RECREATIONAL CAMPS*, O. Reg. 503/17. Available from: <https://www.ontario.ca/laws/regulation/r17503>
10. *FIRST AID REQUIREMENTS* R.R.O. 1990, Reg. 1101. Available from: <https://www.ontario.ca/laws/regulation/901101>
11. Canadian Standards Association. 2017 First Aid Kits for the Workplace (CSA Z1220-17). Available from: <https://store.csagroup.org>
12. *BUILDING CODE*, O Reg. 332/12, s. 3.11.3.1. Available from: <https://www.ontario.ca/laws/regulation/120332>

Appendix A: Summary of Wading Pool Regulatory Requirements

Notification

5. (1) At least 14 days before a wading pool is put into use after construction or alteration, the owner or the owner's agent shall notify, in writing, the medical officer of health or a public health inspector for the health unit where the wading pool is situate,

- (a) of the building permit number issued for the construction or alteration of the wading pool;
- (b) whether or not all the preparations necessary to operate the wading pool in accordance with this Regulation have been completed;
- (c) of the date that the wading pool is intended to be opened or re-opened for use;
- (d) of the name and address of the operator.

(2) A person who proposes to open or re-open a wading pool for use as a public wading pool after construction or alteration shall not open or re-open the wading pool without first obtaining permission in writing from the medical officer of health or a public health inspector for the health unit where the wading pool is situate.

(3) At least 14 days before the re-opening of a wading pool after any closure that lasts for more than four weeks, the owner or operator shall notify in writing the medical officer of health or a public health inspector for the health unit where the wading pool is situate,

- vii. of the date that the wading pool is to be re-opened; and
- viii. of the name and address of the operator;

(4) Every operator of a wading pool shall ensure that the results of any inspections conducted by a public health inspector are posted in accordance with the inspector's request.

(5) In this section, "alteration" does not include routine maintenance or repair or replacement of existing equipment.

Operation

- 6. (1)** Every owner of a wading pool shall designate an operator.
- (3)** Every owner and every operator shall,
- (a) maintain the wading pool and its equipment in a safe and sanitary condition;
 - (b) ensure that, except during the daily use period, the wading pool is rendered inaccessible to persons who are not involved with its operation, inspection or maintenance;
- (6)** Every owner and every operator shall ensure that,
- (a) all components of the wading pool are maintained in proper working order;

Water quality

- 7.(1)** Every owner and every operator of a wading pool shall ensure that the clean water and the make-up water are free from contamination that may be injurious to the health of the bathers.
- (3)** Every owner and every operator of a wading pool shall ensure that the wading pool water is maintained free from visible matter that may be hazardous to the health or safety of the bathers.
- (8)** Every owner and every operator of a wading pool shall ensure that the wading pool water is treated with chlorine, a chlorine compound or a bromine compound by means of a chemical feeder, and is maintained so that in every part of the wading pool, at all times during the daily use period,
- (a) the total alkalinity is maintained in the range of 80 ppm to 120 ppm;
 - (b) the pH value is within the range of 7.2 to 7.8;
 - (c) there is a residual of free available chlorine or total bromine in every part of a wading pool of at least 5 ppm but not more than 10 ppm;
 - (f) if the wading pool is equipped with an automatic sensing device, the Oxidation Reduction Potential value is not less than 600 mV and not greater than 900 mV; and
 - (g) where the medical officer of health determines that the health of the bathers may be affected, there is such higher minimum or maximum chlorine or bromine residual than required under clause (c), (d) or (e) as the medical officer of health may require in writing.

(9) The method used in determining the free available chlorine residual referred to in clause (8) (c) and, if applicable, paragraph 1 of subsection (10), shall be such that chloramines or other compounds that may be present in the pool or spa do not affect the determination.

(11) Every operator of a public wading pool shall test and record the following regarding the wading pool water each operating day, by means of manual test methods, a minimum of 30 minutes prior to opening:

1. Total alkalinity
2. pH value.
3. Free available chlorine and total chlorine or bromine residual.
4. Water clarity.

(12) Where the wading pool has an automatic sensing device, the requirements provided for in subsection (11) must be further checked and recorded at least every four hours until the daily use period has ended. For wading pools without an automatic sensing device, the requirements provided for in subsection (11) must be further manually checked and recorded at least every two hours until the daily use period has ended.

Wading pool safety

26.3 Every operator of a public wading pool shall,

- (a) provide a first aid kit, a device for emergency communications and emergency equipment which is appropriate for use in the public wading pool; and
- (b) ensure attendant supervision at all times that the public wading pool is in operation and where the wading pool is operated in conjunction with a public pool, ensure that the required supervision of the wading pool is in addition to any required bathing supervision for the public pool.

Safety-related equipment record keeping

26.5 Every operator of a facility to which this Regulation applies shall record the results of inspections of safety-related equipment present in the facility at a frequency determined by a public health inspector for the health unit where the facility is situate.

Appendix B: Summary of Spray/Splash Pad Regulatory Requirements Notification

5. (1) At least 14 days before a public spray pad or public splash pad is put into use after construction or alteration, the owner or the owner's agent shall notify, in writing, the medical officer of health or a public health inspector for the health unit where the public spray pad or public splash pad is situate,

- (a) of the building permit number issued for the construction or alteration of the public spray pad or public splash pad;
- (b) whether or not all the preparations necessary to operate the public spray pad or public splash pad in accordance with this Regulation have been completed;
- (c) of the date that the public spray pad or public splash pad is intended to be opened or re-opened for use;
- (e) of the name and address of the operator.

(2) A person who proposes to open or re-open a public spray pad or public splash pad for use as a public spray pad or public splash pad after construction or alteration shall not open or re-open the public spray pad or public splash pad without first obtaining permission in writing from the medical officer of health or a public health inspector for the health unit where the public spray pad or public splash pad is situate.

(3) At least 14 days before the re-opening of a public spray pad or public splash pad after any closure that lasts for more than four weeks, the owner or operator shall notify in writing the medical officer of health or a public health inspector for the health unit where the public spray pad or public splash pad is situate,

- (a) of the date that the public spray pad or public splash pad is to be re-opened;
- (b) of the name and address of the operator; and

(4) Every operator of a public spray pad or public splash pad shall ensure that the results of any inspections conducted by a public health inspector are posted in accordance with the inspector's request.

(5) In this section, "alteration" does not include routine maintenance or repair or replacement of existing equipment.

Operation

- 6. (1)** Every owner of a public spray pad or public splash pad shall designate an operator.
- (3)** Every owner and every operator shall,
- (a) maintain the public spray pad or public splash pad and its equipment in a safe and sanitary condition;
- (6)** Every owner and every operator shall ensure that,
- (a) all components of the public spray pad or public splash pad are maintained in proper working order;

Water quality

- 7.(1)** Every owner and every operator of a public spray pad or public splash pad shall ensure that the clean water and the make-up water are free from contamination that may be injurious to the health of the bathers.
- (2)** For the purposes of applying subsection 7 (1) to public spray pads or public splash pads without a circulation system, “make-up water” shall be read as “source water”.
- (3)** Every owner and every operator of a public spray pad or public splash pad shall ensure that the public spray pad or public splash pad water is maintained free from visible matter that may be hazardous to the health or safety of the bathers.

Splash pad water quality and signage

- 26.4 (1)** Every operator of a public spray pad or public splash pad shall ensure that, where water is recirculating, the water is filtered and disinfected as approved by the local medical officer of health or a public health inspector for the health unit where the public spray pad or public splash pad is situate.
- (2)** Every operator of a public spray pad or public splash pad shall post clearly visible signage in a conspicuous place notifying parents or guardians to supervise their children at all times when using the public spray pad or public splash pad.

Safety-related equipment record keeping

- 26.5** Every operator of a facility to which this Regulation applies shall record the results of inspections of safety-related equipment present in the facility at a frequency determined by a public health inspector for the health unit where the facility is situate.

Appendix C- Recognized Certifications

Current accepted lifeguard certificates:

- National Lifeguard (Lifesaving Society)
- Canadian Red Cross Pool Lifeguard Certificate
- Canadian Red Cross Waterfront Lifeguard Certificate

Current accepted assistant lifeguard certificates

- Lifesaving Society Bronze Cross
- Canadian Red Cross Assistant Lifeguard Certificate

Appendix D- Pool Fouling Responses[‡]

Formed fecal matter in the water:

Formed fecal incidents pose a risk for spreading germs, including moderately chlorine tolerant *Giardia*. To disinfect the water following a formed fecal incident, aquatic staff should follow the steps below, which are based on killing or inactivating *Giardia*.

Step 1:	Close the aquatic venue to swimmers. If you have multiple venues that use the same filtration system—all of the venues will have to be closed to swimmers. Do not allow anyone to enter the venue(s) until the disinfection process is completed.
Step 2:	Remove as much of the fecal matter as possible (for example, using a net or bucket) and dispose of the fecal matter in a sanitary manner. Clean and disinfect the item used to remove the fecal matter (for example, after cleaning, leave the net or bucket immersed in the water during disinfection). VACUUMING FECAL MATTER FROM THE WATER IS NOT RECOMMENDED.
Step 3:	Using unstabilized chlorine (for example, sodium hypochlorite), raise the water’s free chlorine concentration to 2 parts per million (ppm), if less than 2 ppm. Maintain free chlorine concentration at 2 ppm and water at pH 7.5 or less for 25–30 minutes. Other concentrations or closure times can be used (see table below). Higher free chlorine concentration may be required in the presence of chlorine stabilizers, which are known to slow the rate at which free chlorine inactivates or kills germs.
Step 4:	Confirm that the filtration system is operating while the water reaches and is maintained at the proper free chlorine concentration and pH for disinfection.
Step 5:	Allow swimmers back into the water only after the disinfection process has been completed and the free chlorine concentration and pH are within the operating range.

Giardia Kill or Inactivation Time for a Formed Fecal Incident

Free Chlorine Concentration (ppm)	Disinfection Time
1.0	45 minutes
2.0	25–30 minutes
3.0	19 minutes

[‡] Appendix D is a summary of information originally provided by the Centers for Disease Control and Prevention, 2016.

Diarrhea in water when chlorine stabilizer is NOT in the water:

A diarrheal incident is a high-risk event for contamination caused by *Cryptosporidium* (or “Crypto”), an extremely chlorine-tolerant parasite. Therefore, it is important that aquatic staff educate patrons not to swim when ill with diarrhea. To disinfect the water following a diarrheal incident, aquatic staff should hyperchlorinate, or raise the free chlorine concentration to a high concentration for a long period of time. If necessary, before attempting to hyperchlorinate, consult an aquatic professional to determine the feasibility, the most optimal and practical methods, and needed safety considerations.

Step 1:	Close the aquatic venue to swimmers. If you have multiple venues that use the same filtration system—all of the venues will have to be closed to swimmers. Do not allow anyone to enter the venue(s) until the hyperchlorination process is completed.
Step 2:	Remove as much of the fecal matter as possible (for example, using a net or bucket) and dispose of the fecal matter in a sanitary manner. Clean and disinfect the item used to remove the fecal matter (for example, after cleaning, leave the net or bucket immersed in the water during hyperchlorination). <u>VACUUMING FECAL MATTER FROM THE WATER IS NOT RECOMMENDED.</u>
Step 3:	Using unstabilized chlorine (for example, sodium hypochlorite), raise the water’s free chlorine concentration (see Table below) and maintain water at pH 7.5 or less.
Step 4:	Achieve a concentration × time (CT) inactivation value of 15,300 to inactivate or kill Crypto. The CT inactivation value refers to the concentration of free chlorine in parts per million (ppm) multiplied by time in minutes at a specific pH and temperature.
Step 5:	Confirm that the filtration system is operating while the water reaches and is maintained at the proper free chlorine concentration and pH for hyperchlorination.
Step 6:	Backwash the filter thoroughly after reaching the CT inactivation value. Be sure to discharge directly to waste and according to state or local regulations. Do not return the backwash through the filter. Where appropriate, replace the filter media.
Step 7:	Allow swimmers back into the water only after the required CT inactivation value has been achieved and the free chlorine concentration and pH are within the operating range.

Use the formula below to calculate the time required to inactivate or kill Crypto

Concentration × time (CT) inactivation value	÷	Free chlorine concentration (parts per million [ppm])	Time (in minutes)
15,300	÷	20	= 765 (or 12.75 hours)
15,300	÷	10	= 1,530 (or 25.5 hours)

Diarrhea in water when chlorine stabilizer IS in the water:

A diarrheal incident is a high-risk event for contamination caused by *Cryptosporidium* (or “Crypto”), an extremely chlorine-tolerant parasite. Therefore, it is important that aquatic staff educate patrons not to swim when ill with diarrhea. To disinfect the water following a diarrheal incident, aquatic staff should hyperchlorinate, or raise the free chlorine concentration to a high concentration for a long period of time. If necessary, before attempting to hyperchlorinate, consult an aquatic professional to determine the feasibility, the most optimal and practical methods, and needed safety considerations.

Step 1	Close the aquatic venue to swimmers. If you have multiple venues that use the same filtration system—all of the venues will have to be closed to swimmers. Do not allow anyone to enter the venue(s) until the hyperchlorination process is completed.
Step 2	Remove as much of the fecal matter as possible (for example, using a net or bucket) and dispose of the fecal matter in a sanitary manner. Clean and disinfect the item used to remove the fecal matter (for example, after cleaning, leave the net or bucket immersed in the water during hyperchlorination). VACUUMING FECAL MATTER FROM THE WATER IS <u>NOT</u> RECOMMENDED.
Step 3	Using unstabilized chlorine (for example, sodium hypochlorite), raise the water’s free chlorine concentration and maintain water at pH 7.5 or less.
Step 4	Hyperchlorinate. Chlorine stabilizer slows the rate at which free chlorine inactivates or kills Crypto, and the more stabilizer there is in the water the longer it takes to kill Crypto. If the cyanuric acid concentration is 1–15 parts per million (ppm) <ul style="list-style-type: none"> • Raise the free chlorine concentration to 20 ppm for 28 hours or • Raise the free chlorine concentration to 30 ppm for 18 hours or • Raise the free chlorine concentration to 40 ppm for 8.5 hours If the cyanuric acid concentration is more than 15 ppm, lower the concentration to 1–15 ppm by draining partially and adding fresh water without chlorine stabilizer before attempting to hyperchlorinate.

Step 5	Confirm that the filtration system is operating while the water reaches and is maintained at the proper free chlorine concentration and pH for hyperchlorination.
Step 6	Backwash the filter thoroughly after hyperchlorination has been completed. Be sure to discharge directly to waste. Do not return the backwash through the filter. Where appropriate, replace the filter media.
Step 7	Allow swimmers back into the water only after hyperchlorination has been completed and the free chlorine concentration and pH are within the operating range.

Acronyms

MOH: Medical officer of health

MOHLTC: Ministry of Health and Long-Term Care

PHI: Certified Public Health Inspector

PHU: Public health unit

PPM: parts per million

POA: Provincial Offences Act

Reg. 565: Ontario Regulation 565- Public Pools

RW-BP: Ontario Recreational Water Facilities Best Practices Reference Document

