Public Spas

Manual for owners and operators

2023 version



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Table of Contents

Introduction Definition of a spa	.3
Requirement to notify Public Health of public spa opening/re-opening	.3
Spa safety/operation	
General operation requirements	.4
Required safety fixtures	4

Handling and storage of chemicals

Record keeping

Notices, signage and markings

Caution notice	7
Shower sign	8
Emergency telephone	8
Emergency stop	8
Timing device	
Water depth markings	8

Calculations

Maximum bather load	
How do I calculate the area of the spa water surface?	
Calculating Bather Load	<u></u> 9
Draining the spa	
Dissolved solids and make-up water	
Spa water replacement interval (SWRI)	

Spa chemistry

Test kits and reagants1	11
Required test and inspections	11
Oxidation reduction potential (ORP)	12

Enforcement

Spa closure criteria	
Fines	
Appendix A	
Spa opening notification form	
Appendix B	
Spa parts	
Appendix C	
Sample spa records logs	
Appendix D	20
Spa incident report form	20
Appendix E	
Conversion chart	21

Introduction

This manual provides an overview of the requirements of operating a public spa; public spa requirements are detailed in the Ontario Regulation 565 - Public pools.

It is the responsibility of every owner and operator of a spa to maintain the spa and its equipment in a safe and sanitary condition. Compliance with relevant legislation and operating standards ensures that patrons can safely use the spa.

Ontario Regulation 565 - Public pools, made under the Health Protection and Promotion Act, sets out the following general responsibilities of spa operators:

- maintain the public spa and its equipment in a safe and sanitary condition
- ensure that all components of the public spa and its equipment are maintained in proper working order
- ensure that all emergency equipment required by
 this Regulation is maintained in proper working order
- ensure that all surfaces of the public spa deck and walls are maintained in a sanitary condition and free from potential hazards
- ensure that carpeting or other water-retentive material is not installed or used in any area that becomes or may become wet during the daily use period
- if they are provided, ensure that dressing rooms, water closets and shower facilities are available for use of the bathers before entering the deck, and maintained in a sanitary condition and free from potential hazards
- ensure that no person brings a glass container onto the deck or into the public spa
- ensure that no food or beverage except water is supplied or consumed in the public spa or on the deck
- ensure that the spa is rendered inaccessible to persons when not in use
- · ensure the safe storage and handling of chemicals

The Regulation requires that spa owners/operators be trained in spa operation and maintenance, filtration systems, water chemistry, and relevant safety and emergency procedures.

Disclaimer:

This document is provided for educational use and is not a complete or exact reproduction of the legislation. It is not intended to be used as legal advice about the legislation. Where there is a discrepancy, the legislation prevails. Both this manual and the Regulation do not address pool problems associated with unbalanced water chemistry, equipment, and maintenance or construction requirements. For problems associated with equipment maintenance and unbalanced water chemistry, contact a local swimming pool/spa company or your equipment manufacturer. Requirements related to spa construction are set out in the Ontario Building Code, please contact your local municipal office and ask for a building inspector for issues arise regarding construction.

Definition of a spa (Section 1)

A "public spa" means:

A hydro massage pool containing an artificial body of water that is intended primarily for therapeutic or recreational use that is not drained, cleaned or refilled before use by each individual AND that utilizes:

- hydrojet circulation
- air induction bubbles
- current flow OR
- a combination of these over the majority of the pool

Spa regulations apply to:

apartment buildings (that contain more than five dwelling units or suites); and mobile home parks

- facilities that serve a community of more than five single family private residences for the use of the residents and their visitors
- hotels
- campgrounds for the use of campground tenants and their visitors
- spas that are part of: i) a club or ii) a condominium, co- operative or commune property
- as part of a child care, a day camp or an establishment or facility for the care or treatment of persons who have special needs

Requirement to notify Public Health of public spa opening/re-opening (Section 5)

All public spa owner/operators must notify Public Health in writing, 14 days before a public spa is put into use.

Written permission from Public Health must be obtained before opening after construction or alterations.

- The following information must be provided at least 14 days prior to the intended date of opening/reopening:
- 1. Facility name and address
- 2. Owner and/or designated operator name, home address and phone number
- 3. Intended opening or re-opening date
- 4. Building Permit number (applicable for new construction or alteration)

See **Appendix A** for a Spa opening notification form. Submit the form when all preparations necessary to operate in accordance with the regulation have been completed.

Spa safety/operation

General operation requirements

(Sections 6, 10, 11, 19.1-26)

Every owner and every operator shall ensure that the spa, deck and where provided, the dressing and locker rooms, toilets, showers and connecting corridors are maintained:

- in a sanitary condition
- · free of potential hazards
- that no food or beverage except water is supplied or consumed in the spa or on the deck
- that no glass container is brought onto the deck or into the spa

Required safety fixtures

(Sections 16 and 20 to 26)



Emergency stop button	 located within the immediate vicinity of the spa deactivates all spa pumps separate from the spa's timing device activates an audible and visual signal tested once a month and recorded
Emergency telephone	 a land line within 30 metres of the public spa connects directly to: A) an emergency service or B) the local telephone utility to be fully operational, and tested each day before opening and recorded
First aid kit	 conveniently located and well marked must contain the following: current copy of a standard first aid manual safety pins adhesive dressings, individually wrapped sterile gauze pads, each 7.5 cm square rolls of gauze bandages 5 cm in width rolls of gauze bandages 10 cm in width sterile surgical pads suitable for pressure dressings, individually wrapped triangular bandages rolls of splint padding at least one roll up splint at least one pair of scissors non-permeable gloves resuscitation pocket mask
Ground fault detector	 required if spa has underwater lights or electrical outlets within 3 metres of the pool surface activated during the daily use period tested either monthly or according to manufacturer's instructions, whichever is more frequent

Required safety fixtures continued

Tamper proof upper limit temperature cut-off switch	 limits the maximum temperature of the spa water to 40° C (104° F) independent of the spa's water temperature thermostat 	
Timing device	 controls the operation of the jet pump can be set to a maximum of 15 minutes requires a bather to exit the spa to reset it 	
Suction system	 must have one or more of the following: a vacuum release system a vacuum limit system another engineered system designed, constructed and installed to conform to good engineering practice appropriate to the circumstances tested once a month and recorded see Appendix B – Spa parts 	
Clock	located so that it can be viewed from anywhere in the public spa	
Steps	equipped with a handrailnon slip surface on the treadsa band of contrasting colour on side and top edges	

In addition to the above, when the spa has a diameter or width of more than three metres, you also need:

Reaching pole	3.65 m long, electrically insulated or non-conductingavailable on deck
Buoyant throwing aid	 securely attached to a rope that is 6mm in diameter rope length to be 3 m plus half the width of the spa available on deck
Spine board	 device designed for lifting from the pool a person who may have incurred a spinal injury to be in good condition and on deck



Spa owner and operator manual

Handling and storage of chemicals

(Sections 6, 11, 13)

Chemicals are necessary to support a sanitary spa. When used, stored and handled properly, chemical products can be both safe and effective. Failure to understand the hazards of chemical products can lead to damage and injuries. It is important to:

- Train staff on the importance of handling chemicals safely
- Follow manufacturer's recommendations
- Store in a cool, dry and well-ventilated space
- Keep corrosive materials such as metals and combustibles such as paper and rags away from other chemicals
- Keep all chemicals away from hot surfaces and flame
- Wear appropriate personal protective equipment and clothing (gloves, respirators, apron, footwear etc.)
- Keep Material safety data sheets (MSDS) available to employees for every chemical in use
- Do not eat, drink or smoke in the chemical storage area
- Ensure the chemical storage room is inaccessible to unauthorized persons
- Handle chemicals with clean, dry scoops only. Each chemical should have its own scoop. Use scoops provided by the manufacturer
- Store chemical in original containers and keep containers closed when chemicals are not in use
- Never re-use empty chlorine containers for storage of other chemicals and never mix contaminated chemicals with your fresh supply
- Cover all chlorine cylinder containers with a valve protection hood except the ones in use
- Ensure chlorine cylinders are anchored at all times
- When mixing chemicals, add them slowly. Never add water to the chemicals, always add the chemical to the water (unless explicitly instructed to do so on the container label)

See also the **Centers for Disease Control and Prevention Pool Chemical Safety Factsheet.**

Record keeping (Section 8)

Ontario Regulation 565 requires that every operator keep and sign daily records. The daily record shall be retained for a period of one year from the date of making the record and shall be available for viewing by the Medical Officer of Health or a Public Health Inspector at any time. The Regulation requires that every operator keep and sign a daily record that sets out, in relation to an operating day:

- the free available chlorine AND total chlorine residuals
- total bromine residual if the pool uses brome instead of chlorine
- the pH value of the spa water
- · the total alkalinity of the spa water
- the clarity of the pool
- · emergency telephone operation
- the total number of bathers admitted to the spa each day
- the reading of the make-up water meter
- any emergencies, rescues or breakdowns of equipment that have occurred
- the time of day that the actions required under subsection 16 (2) have been taken
- the type and amount of chemicals added manually to the public spa
- the results of all inspections and tests required and the times they were performed
- the time of day that the emergency stop button test was performed
- whether the public spa was drained, inspected and refilled

See **Appendix C** for sample record keeping logs, and **Appendix D** for pool and spa incident form.



Notices, signage and markings

(Section 19)

The following signs must be posted in the spa area:

- 1. Caution notice
- 2. Shower sign
- 3. Emergency telephone
- 4. Emergency stop
- 5. Timing device
- 6. Exemption
- 7. Water depth markings

1. Caution notice

The following notice must be posted at each entrance to the spa with the word CAUTION in letters not less than 50 millimetres high and all other lettering not less than 10 millimetres high with a five millimetre stroke. This information can be found in Section 19.1(1) of Ont. Reg. 565.





50 millimeters

CAUTION

Children under the age of 12 are not allowed in the spa unless supervised by a person who is 16 years of age or older.

Pregnant women and persons with known health or medical conditions should consult with a physician before using a spa.

Do not use the spa if you have an open sore or rash, or are experiencing nausea, vomiting or diarrhea.

Overexposure may cause fainting. 10 to 15 minutes may be excessive for some individuals. Cool down periodically and leave the spa if nausea or dizziness occurs.

Enter and exit the spa slowly, to prevent slipping.

Do not play or swim near drains or suction devices. Your body, body parts, hair, jewelry and other objects may become trapped and cause injury or drowning. People with long hair should be especially careful.

Do not enter or remain in a spa if a drain cover or suction fitting is loose, broken or missing. Immediately notify the spa operator.

No food or beverage except water is permitted within the deck or spa. No glass containers of any kind are permitted within the deck or spa.

Maximum bather capacity of a public spa is

2. Shower sign

The following notice (recommend to be in letters 25 millimetres or higher with a minimum five millimetre stroke) is to be posted at every entrance to the spa deck. This information can be found in Section 19 of Ont. Reg. 565.



NOTICE

Every bather shall take a shower, using warm water and soap and thoroughly rinse off all soap before entering the deck.

3. Emergency telephone

A notice identifying the location of the emergency telephone, in letters not less than 25 millimetres high with a minimum 5 millimetre stroke, in a conspicuous location near the entrance to the public spa.

A notice must be posted at the phone identifying it as the emergency telephone

Emergency telephone procedure

A notice at the emergency telephone:

- to call 911 for emergency services
- the full name and address of the public pool and all of the pools' emergency telephone numbers

4. Emergency stop

The following sign must be posted above the emergency stop button, in letters at least 25 millimetres high with a minimum five millimetre stroke . This information can be found in Section 14 of Ont. Reg. 565.



IN THE EVENT OF AN EMERGENCY PUSH EMERGENCY STOP BUTTON AND USE EMERGENCY PHONE. AUDIBLE AND VISUAL SIGNAL WILL ACTIVATE.

5. Timing device

A notice must be posted at the timing device; in letters at least 25 millimetres high with a minimum five millimetre stroke, is posted at the timing device that identifies it as a timing device.

TIMING DEVICE

6. Exemption notice

For a public spa on the premise of a hotel that contains five or fewer units or suites for the use of its guests and their visitors the following notice must be displayed within the public spa enclosure, printed in letters at least 25 millimetres high with a minimum five millimetre stroke. This information can be found in Section 4.1 of Ont. Reg. 565.

CAUTION

USE SPA AT YOUR OWN RISK

SPA IS NOT SUBJECT TO THE REQUIREMENTS OF ONTARIO REGULATION 565 (PUBLIC POOLS)

7. Water depth markings

When the depth of a spa is the same throughout, depth markings of the actual depth should be provided at either end.

When the spa has a diameter or width of more than three metres, depth markings are needed in letters of at least 10 millimeters high. Markings that set out the water depths on the deck need to indicate:

- deep points where the water depth exceeds 2.5 metres
- break points between shallow and deep areas
- breaks between gentle and steep bottom slopes
- DEEP AREA and SHALLOW AREA at their respective locations

Calculations

The following formulas can be used to calculate the surface area of the spa and bather load. See **Appendix E** for a conversion chart.

Maximum bather load

The maximum bather load is the lower number of:

a) The manufacturer of the spa AND

b) One person for every square metre of water.

How do I calculate the area of the spa water surface?

Determine the shape of the spa

a) Square or rectangular:

Length = ____metres

Width = _____metres

Area of spa water surface = Length x Width

_____metres x _____ metres = _____square metres

b) Circle:

Radius = $1/2 \times \text{diameter}$

1/2 x ___ metres = ____ metres

Area of spa water surface = ____x radius x radius

3.14 x _____ metres x ______ metres = ______ square metres



Calculating bather load

The total number of bathers permitted in your spa is identified by the manufacturer of the spa or complete the following calculation:

Maximum bather load = for every square metre of water, one bather is permitted

____ square metres x one bather = __ bathers

For example if there are seven square metres of water, only seven bathers are permitted. Therefore the bather load would be seven.

To calculate volume of a spa

1) Determine the shape of the spa

- a) square/rectangular OR
- b) circular

2) Determine the volume

a) If square / rectangular: Length =____metres Width =____metres

Area of spa water surface = Length x Width x Depth

_____ metres x _____ metres x _____ metres = _____ metres³

b) If circular:

Radius = $1/2 \times \text{diameter}$

1/2 x ___ metres = ____ metres

Volume of spa = 3.14 x radius x radius x depth

3.14 x ____ metres x _____ metres x _____ metres = _____ metres³





3) Determine the flow meter reading

A flow meter is required to determine if the correct turnover period is achieved. See **Appendix B** – Spa parts.

When the volume (as calculated above):

a) Exceeds than 6m3

Flow meter reading =

volume in m3 x 1000 litres/m3

30 minutes x 60 seconds/minute

=	litres	
	seconds	
_	litres/second	

OR

b) Is between 4m3 - 6m3

Flow meter reading = volume in m3 x 1000 litres/m3 20 minutes x 60 seconds/minute

=	litres	
	seconds	
=	litres/second	

OR

c) Does not exceed 4m3

Flow meter reading = volume in m3 x 1000 litres/m3 15 minutes x 60 seconds/minute

=	litres	
	seconds	
=	litres/second	

The flow meter reading is measured by a flow meter. The number calculated ensures that the turnover period is achieved.

Draining the spa

How do I calculate when to drain the spa?

Volume of spa = litres

Number of users each day = the total number of users each day =

when to drain spa = Volume

10 x Number of Users

= Litres

10 x ____

number of days between draining

This is the number of days before the tub needs to be drained.

For example:

If the spa volume = 1000 litres

The number of users each day = 30

Then $\frac{1000 \text{ litres}}{10 \times 30} = \frac{1000}{300} = 3 \text{ days}$

Therefore the tub needs to be drained every three days.

Dissolved solids and make-up water

Total dissolved solids are the total amount of dissolved material in the water, and can include organics material, minerals and salts, and pool chemicals. Evaporation of spa water and water removed from splashing will increase the level of total dissolved solids in the pool/spa which can represent a health hazard. High total dissolved solids can reduce the activity of pool/spa chemicals such as, disinfectants, algaecides and other chemicals, and contributes to turbidity (cloudiness) of the water.

To reduce the effects of total dissolved solids, a public spa operator must meet makeup water requirements. Refer to **Appendix B** for make up water meter information and other mechanical spa parts.

If the volume of the public spa is 4,000 litres of water or more each day you must:

add 15 litres of make-up water for each bather

add no more than 20 per cent of the total spa volume

have a make-up water meter to determine the amount of water added

Or

Spa water replacement interval (SWRI)

If the volume of the public spa is 4,000 litres of water or less you must:

- 1. Drain all the water to waste as per the calculations: (see calculation section to determine frequency)
- 2. Inspect the spa including:
 - ° a.drain covers
 - ° b.suction fittings
 - ° c.all emergency equipment
- 3. Ensure all parts are properly secured and in working condition
- 4. Refill the spa

Spa Chemistry

Test kits and reagents (Section 7)

It is important that you be able to measure and record:

- free available chlorine (FAC) or total bromine;
- total alkalinity
- total chlorine (TC); and
- pH
- take the water sample away from any jets
- submerge the comparator tub at least 18 inches from the water surface
- the manufacturer should provide detailed advice on the management of their spa

There are many types of test kits commercially available from a pool and spa supply company. In addition, service providers are also available to conduct tests and inspection. Always follow the manufacturer's instructions and always use the correct manufacturer's reagents with a kit; do not mix and match. It is recommended that spa test reagents be replaced as per manufacturer's recommendation (i.e. expiry date). Reagents lose their strength over time. Storing them in direct sunlight and in filter/equipment rooms where the conditions are warm and humid will ruin the reagents. Storing them in cold temperature (i.e. outdoor shed in winter) may destroy the reagents. Mixing various reagents from other kits will not provide accurate results either.

Required tests and inspections (Section 7)

All tests must be recorded daily and the operator should sign the records (see Appendix C for Sample record keeping logs). Records must be kept for a minimum of one year from the date of making the record and must be available for auditing by a Public Health Inspector. See the following tables for lists of required chemical tests and inspections.

Frequency	Chemical test/inspection	Requirement
Daily 1/2 hour before opening and every 2 hours while open (When there is no ORP/automatic sensing device)	Free available chlorine (FAC)	5 - 10 mg/L
	Total chlorine (TC)	TC - FAC = combined chlorine (CC) Shock treatment should be considered when combine chlorine reaches 0.2 ppm or above
	Total bromine	5 - 10 mg/L
	Total alkalinity	80 ppm – 120 ppm
	рН	7.2 - 7.8
	Water clarity	Must be able to see the lowest water outlet drain in a non-turbulent state
	Water temperature	Not to exceed 40° C (104° F)

Table A. Required chemical tests without ORP

Spa chemistry

Oxidation reduction potential (ORP) (Section 7)

Oxidation reduction potential (ORP) measures the effectiveness of the spa sanitizer (i.e. chlorine or bromine) and its ability to destroy harmful organic matter, namely bacteria and viruses. ORP is measured on an automatic sensing device/controller. ORP value must be between 600-900 milli-volts (mV).

Table B. Required chemical tests with ORP

Readings should be taken and recorded when sanitizer tests are taken.

Refer to manufacturer instructions for proper installation and maintenance of measuring equipment to ensure an accurate ORP reading. See **Appendix B** - Spa parts for more information.

Frequency	Chemical test/inspection	Requirement		
Daily: 1/2 hour before opening and every 4 hours during operation (When there is an ORP/ automatic sensing device)	Free available chlorine (FAC)	5 - 10 mg/L		
	Total chlorine (TC)	TC - FAC = combined chlorine (CC) Shock treatment should be considered when combine chlorine reaches 0.2 ppm or above		
	Total bromine	5 - 10 mg/L		
	Total alkalinity	80 ppm – 120 ppm		
	рН	7.2 - 7.8		
	Water clarity	Must be able to see the lowest water outlet drain in a non-turbulent state		
	Water temperature	Not to exceed 40° C (104° F)		
	Oxidation reduction potential (ORP) sensor reading	600 mV - 900mV		

Table C. Other required testing

Frequency	Chemical test/inspection	Requirement		
Daily: 1/2 hr before opening	Emergency telephone	5 - 10 mg/L		
Daily	Make up water (when applicable) > 4,000 litres : each operating day in an amount that is a minimum of 15 litres per bather use, to a maximum of 20 per cent of the total spa volume < 4,000 litres: dump and fill according to the following calculation: WRI=V / (10 x U)	Record make up water meter reading Record when completed		
	Bather load	Record total number of bathers		
	Safety equipment including first aid box	Must contain required supplies		
As they occur	Chemical added	Record details including the time		
	When spa drained, inspected and refilled	Record details including the time		
	Equipment breakdowns	Record details including the time		
	Emergencies and rescues	Record details on an Incident report form (see Appendix D)		
Every 30 days	Suction outlets (drain covers/skimmer lids)	Must be secure and operational		
	Emergency stop button	Labelled and tested - Must be operational		
	Vacuum release mechanism	Labelled and tested - Must be operational		
Each month (every 30 operating days) or according to manufacturer's instructions, whichever is more frequent	Ground fault circuit interrupter (GFCI) detector	Include time check made Must be operational		

Enforcement

Spa closure criteria

A Public Health Inspector has the authority under the Health Protection and Promotion Act (Section 13) to close a spa when an existing condition is identified that poses an immediate health threat or safety hazard. The public spa must be inaccessible to users when the spa is closed. The criteria for closure of a public spa can include:

- lack of water clarity
- fouling faecal, vomit or chemical (visit the Centre for Disease Control and Prevention website at http://www.cdc.gov/healthywater/swimming for information on disinfection and remediation of spas)
- filtration or circulation system inoperative or malfunctioning
- no free available sanitizer
- outlet covers not secured properly
- failure of operator to demonstrate the suction vacuum relief system (SVRS) test competently or, the test itself fails
- · emergency telephone missing or not working
- emergency stop button inoperable/malfunctioning
- audible and visual signal inoperable/ malfunctioning
- ground fault circuit interrupter missing or malfunctioning
- spa temperature greater than 40°C (104°F)
- a swimming pool that has been closed and access to the spa is in the same room
- any other conditions that may constitute a health hazard

Fines

Public Health Inspectors can issue fines for noncompliance with the Public Pools Regulation ranging from \$55 to \$465. Fines can be greater for continued non-compliance.



Spa opening notification form

(Ontario Regulation 565, Section 5)

Date:	
Spa name:	
Site address:	
Phone number:	
Owner name:	
Address:	
Phone number:	
Designated one	prator name:
Home address:	
Home/cell phone	number:
riome/cell prione	
Intended openi	ng date (dd/mm/yyyy):
Building Permit	number:

(applicable to construction or alteration)

Please note: A spa that has been closed more than four weeks or undergoes construction/alteration is required to provide opening notification. Spas that are newly constructed or altered may not open/ reopen without written permission from the Medical Officer of Health.



Health Protection and Investigation 150 Main Street, 3rd Floor Cambridge Ontario N1R 6P9 Phone: 519-575-4400 Fax: 519-622-1235

Spa parts

The following table provides a list and description of mechanical parts that are typically f ound in public spas.

Make-up water meter



- · measures the amount of fresh water added to spa every day
- fresh water prevents cyanuric acid build-up and dilutes swimmer pollutants
- 15 L of fresh water per bather must be added to the spa daily (see page 10 for more information about make-up water and calculations)

Filter



- removes dirt, debris and undissolved solids from the spa water
- two types of filters: sand and diatomite
- some water is wasted to make room for fresh water

is used to calculate turnover period of the water

filter is cleaned by backwashing

the rate of water flow

Flow meter



Pressure gauges



- two gauges are located on top of the filter tank
- one measures the amount of water flowing into the tank
- the other measures how much flows out of the tank
- when too much dirt collects in the filter medium, the water flow rate drops
- the difference is indicated on the gauges; if you notice a difference between the gauges, consult or refer to the manufacturers' directions as filters vary in backwashing and pressure requirements

Table continued on next _ page

Recirculation system Image: System system	 a system that maintains circulation of water through a public spa by pumps, and that provides continuous treatment that includes filtration and chlorination or bromination and any other process that may be necessary for the treatment of the water
Suction system/vacuum release system	 prevents high vacuum occurrences that cause human body or body part suction entrapment test according to manufacturer recommendations please note: this is one example of SVRS safety vacuum relief systems include a vacuum relief system, a vacuum limit system or engineered system; one of these systems must be equipped on the spa
Automatic sensing device	 oxidation reduction potential (ORP) measured in milli-volts (mV) monitors the sanitizers ability to work maintaining the probe is critical for accuracy manual tests conducted ½ hour before opening and every 4 hours; need to reflect the device reading
Tamper-proof upper limit temperature cut-off switch Image: second	 limits the temperature of the spa water to a maximum of 40°C (104°F) switch is to be independent of the spa water's temperature thermostat

Spa daily inspection records

To be inspected/tested 1/2 hour before opening

Date: _

Spa location: _

	Requirements	Time	Signature	
Water clarity	□ Yes □ No			
Emergency telephone properly functioning	□ Yes □ No			
First aid kit fully stocked	□ Yes □ No			
Spa rule notice posted	□ Yes □ No			
Ground fault detector de-energizing device activated	□ Yes □ No			
Spa tank drained	□ Yes □ No			
Spa tank refilled	□ Yes □ No			
If the spa has an inner ho that the following safety e	rizontal dimension gre quipment is convenier	ater than three n htly located for er	neters, the operators shall ensure nergency use:	
Non-conducting reaching pole on deck	□ Yes □ No			
Spine board on deck	□ Yes □ No			
Buoyant throwing aid on deck	□ Yes □ No			
Water meter	reading	Becords of any emergencies rescues or		
Reading at beginning of day	Reading at end of day	breakdowns of ad	equipment, maintenance, chemicals ded etc.; note the time:	
Make-up water added	15 L per bather/day			

Spa hourly water tests

Tests shall be conducted every 1/2 hour before opening and every 4 hours for spas with an automatic sensing device (ORP) or every 2 hours for spas without an automatic sensing device (ORP).

Time:	am/pm 1/2 hour before opening	am/ pm										
Free available chlorine 5 – 10 mg/L												
Total chlorine TC-FAC= combined chlorine (CC) Shock treatment should be considered when combined chlorine reaches 0.2 ppm or above												
Total bromine 5 – 10 mg/L												
pH 7.2 – 7.8												
Total alkalinity 80 – 120 mg/L												
Water clarity												
Temperature <40°C/104°F												
Total number of bathers												
O.R.P (if applicable) 600mV – 900mV												
Operator's initials												

Spa monthly test Ontario Regulation 565, Section 16.1						
Month	Inspection of gravity and suction outlet covers, etc.	Emergency stop button	Vacuum release mechanism	Ground fault circuit interrupter		
	Month/day/year	Month/day/year	Month/day/year	Month/day/yea		
January	Signature	Signature	Signature	Signature		
	Action taken	Action taken	Action taken	Action taken		
	Month/day/year	Month/day/year	Month/day/year	Month/day/yea		
February	Signature	Signature	Signature	Signature		
	Action taken	Action taken	Action taken	Action taken		
	Month/day/year	Month/day/year	Month/day/year	Month/day/yea		
March	Signature	Signature	Signature	Signature		
	Action taken	Action taken	Action taken	Action taken		
	Month/day/year	Month/day/year	Month/day/year	Month/day/yea		
April	Signature	Signature	Signature	Signature		
	Action taken	Action taken	Action taken	Action taken		
	Month/day/year	Month/day/year	Month/day/year	Month/day/yea		
Мау	Signature	Signature	Signature	Signature		
	Action taken	Action taken	Action taken	Action taken		
	Month/day/year	Month/day/year	Month/day/year	Month/day/yea		
June	Signature	Signature	Signature	Signature		
	Action taken	Action taken	Action taken	Action taken		
	Month/day/year	Month/day/year	Month/day/year	Month/day/yea		
July	Signature	Signature	Signature	Signature		
-	Action taken	Action taken	Action taken	Action taken		
	Month/day/year	Month/day/year	Month/day/year	Month/day/yea		
August	Signature	Signature	Signature	Signature		
	Action taken	Action taken	Action taken	Action taken		
	Month/day/year	Month/day/year	Month/day/year	Month/day/yea		
September	Signature	Signature	Signature	Signature		
	Action taken	Action taken	Action taken	Action taken		
	Month/day/year	Month/day/year	Month/day/year	Month/day/yea		
October	Signature	Signature	Signature	Signature		
	Action taken	Action taken	Action taken	Action taken		
November	Month/day/year	Month/day/year	Month/day/year	Month/day/yea		
	Signature	Signature	Signature	Signature		
	Action taken	Action taken	Action taken	Action taken		
December	Month/day/year	Month/day/year	Month/day/year	Month/day/yea		
	Signature	Signature	Signature	Signature		
	Action taken	Action taken	Action taken	Action taken		

Appendix D: Sample incident report form

Pool and spa incident report form

Date of report:						
Facility name:						
Date and time of incident:						
Location of incident: (check	all that apply)					
 outside pool grounds fence diving board other 	□ dressing rooms □ pool □ wading pool	□ pool/spa deck □ shallow end □ spa	□ open lawn □ deep end □ water slide			
Name of person involved:			Age:			
Address:						
Phone number:						
Details of incident (include a	ctivity at time of incident):					
	·, ···································					
Description of injuries (inclus	ding exact location of body	•				
	ang exact location of body	·				
Tuestment or estimately a h	, staff (in sluda if trastrast					
freatment of action taken by	/ stan (include il treatment	reiused)				
	. ,					
Ireatment given by emerger	ncy services (ambulance, p	olice, fire etc.):				
Emergency contacted/notifie	ed: □ Yes □ No					
Environmental conditions: W	later (temperature, visibility	r, etc.)				
Air (t	temperature, wind, etc.)					
Decl	k (condition etc.)					
Victim followed all rules and	safety procedures: □ Yes	🗆 No				
Witness name:			Age:			
Address:						
Phone number:						
Name of staff involved:						
Name of person completing	report:					

Appendix E: Conversion chart

Conversion chart

ounces to pounds	grams to kilos		
ounces ÷ 16 = pounds	grams ÷ 1000 = kilos		
fluid ounces to gallons	metres to feet		
fluid ounces ÷ 128 = gallons	metres x 3.28 = feet		
litres to gallons	cubic metres to litres		
litres ÷ 3.785 = gallons	cubic metres x 1000 = litres		
cups to fluid ounces	millilitres to litres		
cups $x 8 =$ fluid ounces	millilitres ÷ 1000 = litres		
yards to feet	parts per million and milligrams per litre		
yards x 3 = feet	1 ppm = 1 mg/L		
cubic feet to gallons cubic feet x 7.5 = gallons	1 ppm = 8.33 pounds of chemical in one million gallons of water		
quarts to gallons	celsius (C) to fahrenheit (F)		
quarts ÷ 4 = gallons	°F = (9/5 x °C) + 32		
pints to quarts	fahrenheit (F) to celsius (C)		
pints ÷ 2 = quarts	° C = 5/9 x (°F - 32)		
gallons to pounds	square inches to square feet		
gallons x 8.33 = pounds	square inches ÷ 144 = square feet		



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