INTRODUCTION

The Public Swimming Pools Regulation (Regulation) AR 204/2014 repeals and replaces the current Swimming Pool, Wading Pool and Water Spray Park Regulation. The Regulation is intended to set outcomes and standards for the operation of pools including swimming pools, wading pools, whirlpools, and water spray parks so as to protect users of pools from infectious diseases which may be spread through the water. The Regulation is also intended to improve safety and reduce the risk of injury and drowning. The Regulation continues to require approval of new operations, a permit to track facilities, adequate disinfection and filtration of water, monitoring of water chemistry, bacteriological water quality, protection against entrapment and safety and supervision of patrons.

The Pool Standards July 2014 (Standards), referenced in the Regulation, sets specific technical standards pertaining to water quality and facility operation and replaces the Pool Standards 2006.

The following list highlights important changes to Alberta’s swimming pool regulation and standards and is for information purposes only. This list does not include all changes (e.g. general editing and relocation of sections).

Reference must be made to the Alberta Public Swimming Pools Regulation AR 204/2014 and the Alberta Pool Standards July 2014 for official wording and requirements.

Contact your local Public Health Inspector / Environmental Health Officer for more information. (http://www.albertahealthservices.ca/services.asp?pid=service&rid=1052209)

Link to Alberta Public Swimming Pools Regulation AR 204/2014 (http://www.qp.alberta.ca/1266.cfm?page=2014_204.cfm&leg_type=Regs&isbncIn=9780779783175)

a) **Changes concerning Water Quality Incident Response and Contamination Management:**

i) The Water Quality Incident Response Plan now also must include steps to be taken when standards of microbiological quality or clarity are not being met (Section 12.1.a) i).

ii) The CT value required to achieve treatment of diarrhea contaminated water is raised to 15,300 as recommended by the U.S. CDC (Schedule A).

iii) In pools containing cyanuric acid, treatment of diarrhea contaminated water requires that the pH be lowered to 6.5 and CT value raised to 72,000 (e.g. free chlorine residual shall be raised to 40 mg/L and maintained for at least 30 hours). This new requirement is in line with recommendations from U.S. CDC. Cyanuric acid greatly reduces the efficacy of chlorine. U.S. CDC continues to work on this issue and this requirement will be examined further as new information becomes available (Schedule A).

b) **Changes concerning anti-entrapment:**

i) There is a new requirement that owners and/or owner’s agents must assess anti-entrapment risks in their facilities, develop an appropriate anti-entrapment plan to meet the requirements of the standards, and have the plan implemented by November 30, 2017 (Section 9.1).

ii) The anti-entrapment requirements of the Standard have been revised to match the provisions of the U.S. Virginia Graeme Baker Pool and Spa Safety Act and the Association of Pool and Spa Professionals. At a minimum, every suction outlet, including a gravity-fed outlet, must have an approved cover. The intent is to protect against the 5 forms of entrapment including hair entanglement, limb, mechanical, body, and evisceration. Owners will have 3 years to plan and implement changes (Section 9).

iii) Schedule C of the Standards indicate how to calculate water velocity through a suction outlet cover.

iv) For single or interconnected submerged suction outlets, the Standards have been revised to be consistent with the U.S. Virginia Graeme Baker Pool and Spa Safety Act which requires a secondary system or permanent disablement for a single main drain (Section 9.4).

v) There is a new specific requirement that equalizer lines and suction outlets used for vacuuming have a cover to reduce the risk of entrapment. There is an ASME standard for vacuum outlets but it is not mandatory at this time – the operator may have alternative methods to keep bathers safe. Options must be discussed with the local Public Health Inspector (Section 9.5).
vi) There is a new requirement specifying regular inspection of suction outlet covers, of any anti-entrapment systems, and closure of pool by the operator if necessary (e.g. if suction outlet cover is damaged; if anti-entrapment system is not operating correctly) (Section 9.6.1 and 9.6.2).

c) Changes concerning chemical testing of water quality:

i) The total alkalinity and cyanuric acid concentrations must be measured at least once per week (Section 4.5.2 and 4.6.b).

ii) The Standard now specifies to manually test at least once per day for free chlorine, combined chlorine and pH (Section 5.2.1).

iii) Dip and read strips must not be used to measure chlorine, pH or alkalinity (Section 5.2.3).

d) Changes concerning record-keeping:

i) The total alkalinity and cyanuric acid concentrations must now be recorded at least once per week (Section 4.5.2 and 4.6.b).

ii) The automated readings and associated setpoints shall be monitored and recorded at least once per day (Section 5.2).

iii) New specific requirements to record the following (Section 5.1):

  1. Total chlorine;
  2. Total alkalinity;
  3. Automated controller set points and readings for ORP, chlorine and pH;
  4. Clarity of the water;
  5. Equipment maintenance;
  6. Ambient temperature in sauna and steam room;
  7. Make and model, purchase and expiry date of suction outlet covers, and manufacturers’ recommended flow rate;
  8. Incident records with respect to patron injury; and
  9. Contamination events including the date of the event and the response.
e) Changes concerning water quality and treatment:

i) The acceptable upper limit for total alkalinity was raised from 120 mg/L to 180 mg/L, based on recommendations from the US CDC Model Aquatic Health Code (Section 4.5.1).

ii) Regarding conditions to allow the operation of a public swimming pool at lower free chlorine residuals:

(1) As low as 0.5 mg/L, the operator must be able to ‘consistently maintain’ an ORP value of no less than 700 mV (Section 4.2.a). The phrase ‘consistently maintain’ was added in order to ensure that the ORP of 700 mV is constant.

(2) As low as 0.3 mg/L, the operator must be able to ‘consistently maintain’ an ORP value of no less than 770 mV, a pH of no more than 7.3 and also be using supplemental disinfection (Section 4.2.b).

With improving treatment technology, operators have requested an option to operate at free chlorine residuals as low as 0.3 mg/L. This will be possible provided that the required conditions are met to ensure water quality.

f) Changes concerning automated controllers:

i) Automated controller readings must be consistent with any manual tests. This sets the requirement to calibrate the automated readings with manual test results (Section 5.3).

g) Changes concerning bather load:

i) The Standards require that if the maximum design bather load for a public swimming pool is not available, the owner or owners’ agent must calculate and apply a maximum bather load value in accordance with Schedule B of the Standards (Section 8.1.2).

ii) Bather loads are no longer based on square meter of pool surface area, but instead on 2m$^3$ of treated water per bather per day (or period of operation). See Schedule B of the Standards for details.
h) Changes concerning steam rooms and saunas:

i) New temperatures have been set for operating saunas and steam rooms to provide clear direction as many manufacturers do not provide guidance (Section 2.3.1 and 2.3.2).

(1) The ambient air temperature in a dry sauna must not be greater than 85°C.

(2) The ambient air temperature in a steam room must not be greater than 60°C.

ii) There is a new requirement that ambient air temperature in a sauna or a steam room must be measured and recorded at least once every 24 hours, when in use (Section 2.3.3).

iii) There are new requirements that the Pool Safety and Supervision Plan include (Section 10.1.h), i), j):

(1) Procedures to monitor patrons using special areas such as the steam room and sauna;

(2) Procedures to respond to medical emergencies such as entrapped patrons, overheated steam room or sauna users; and

(3) Measures to ensure the safety of patrons using a steam room or sauna in order to protect against burns and overheating which may include, but are not limited to:

   (a) thermostatic control of air temperature;

   (b) a working thermometer in each unit;

   (c) doors that open outwards with little resistance; and

   (d) a signaling device or process for emergencies.

i) Changes concerning recirculation of water:

i) The previous standard for 80% of the water to be circulated from the pool surface has been amended to the more general requirement of maximizing flow of water through the skimming devices (Section 3.2).

ii) A new section specifies that stand-alone, recirculating water spray parks constructed after November 30, 2014 are required to provide 100% filtered water with 2.0 mg/L of free chlorine at the point of contact with the bather (Section 3.4).
j) Changes concerning the pool operator:

i) The pool operator must be certified by an organization that is on the List of Pool Operator Education Organizations approved by the Minister. The list of approved organizations will be posted on the Alberta Health website and includes AARFP and NSPF (Section 1.1).

ii) Operators already meet this requirement if they were previously certified by AARFP, NSPF or AHS provided that the operator has been active in the field either through pool operation or teaching (Section 1.2).

iii) An executive officer may require a pool operator to obtain additional training in water treatment, disinfection, facility operation and safety where required (Section 1.3).

k) Changes concerning microbiological quality and microbiological testing of water:

i) The water quality standard for *Pseudomonas aeruginosa* is specified for public swimming pools operating at 30 degrees Celsius or greater (Section 6.2).

ii) Water sampling requirement for *Pseudomonas aeruginosa* is specified for public swimming pools operating at 30 degrees Celsius or greater (Section 7.1.2).

l) Changes concerning a pool’s written public safety policies:

i) The Standards now specify that a Pool Safety and Supervision Plan be based on current best practices developed by the Lifesaving Society of Canada, and specify new content that is required in the plan (Section 10.1).

m) Changes concerning a pool’s patron education policy and plan:

i) There is a new requirement that the patron education policy and plan address how information is shared with the public (Section 11.1.2).

ii) Some of the rules for use of the pool that are required to be posted have been reworded (Section 11.2).

iii) The rule for showering before entering the pool now indicates that bathers use soap (Section 11.2.1).

iv) There is a new rule that patrons wash hands using soap after using the washroom or changing diapers (Section 11.2.2).
n) Changes concerning the posting of pool safety information:

i) The maximum bather load must be posted, but an explanation of why bather load is limited is no longer required (Section 11.2.6).

ii) There is a new requirement to post the location of fire alarm, telephone or other emergency devices, as applicable (Section 11.2.9).

iii) For signage required when no lifeguard is on duty, the age of children requiring supervision has been lowered to 13 years (Section 11.2.10).

2) In the Public Swimming Pools Regulation AR 204/2014

a) Changes concerning water treatment and quality:

i) References to specific values of chlorine, pH, and alkalinity were moved from the regulation to the new Standards. The Standards may be revised more quickly than a regulation, allowing more timely changes in policy to address new developments in pool equipment and treatment technology (Section 14(1)).

ii) There are new sections which refer to the Standards for requirements related to use of non-chlorination oxidation products, and cyanuric acids levels in a pool (Section 14(2), (3), and (4)).

iii) References to specific bacteriological levels were moved from the regulation to the new Standards. The Standards may be revised more quickly than a regulation, allowing more timely changes in policy to address new developments in pool equipment and treatment technology (Section 18).

iv) A new subsection on water clarity cross references the existing requirement to monitor turbidity as needed in the Standards. This addresses a gap in the Regulation to allow for monitoring of turbidity when water clarity issues persist in a pool (Section 20 (3)).

b) Changes concerning maximum bather load:

i) There are new sections to ensure that the maximum bather load is not exceeded and to provide an option to calculate bather load (found in the Standards), where the engineer’s calculation from the original plan is not available. Management of bather load is key to maintaining water quality. Bathers contribute organic pollutants and microbes to the water and the capacity of a treatment system is based on the loading from the bathers (Section 21(1), (2)).
c) Changes concerning the pool operator:

i) The definition “Pool operator” has been added to make it clear that a qualified operator must oversee day-to-day operations. The pool operator may or may not be the owner or the owner’s agent (Section 1(h)).

ii) A section has been moved from the Pool Standards 2006 to the new Regulation which allows an executive officer to require a pool operator to obtain additional training as needed. Operators who are not competent or unfamiliar with new treatment technology may be required to take additional training (Section 6(a)).

iii) A new section allows the owner to employ an untrained pool operator provided that training is undertaken within 90 days. This provision is needed as there are areas of the province where it is difficult to find trained operators and it may take time to find and complete an approved course (Section 6(b)).

iv) A modified section allows the owner to contract with a third party pool operator who may oversee several operations. This allows more flexibility for owners to hire a private contractor to oversee several pools. This works well for hotel chains (Section 6 (c)).

d) Changes concerning responsibilities:

i) In Definitions, “Responsible person” has been replaced with two terms: “owner”, and “owner’s agent”. The delegation of authority remains the same and continues to allow an owner to designate a person or ‘agent’ to act on their behalf. Owners living out of province need an agent or operator based in Alberta to oversee the operation (Section 1(d) and (e)).

e) Changes concerning application for a permit to operate:

i) The requirements for permit application now include the name of the owner, the name of the owner’s agent and the name of the pool operator. This ensures that the appropriate people may be contacted regarding the permit and later, the operation of the pool. This is helpful when the owner is located in another country or province (Section 7(3)(m), (n), (o)).

f) Changes concerning definitions:

i) In definitions (Section 1), there are some revisions and removal of terms, and addition of new terms (new terms are bolded below):
(1) “Drain” has been replaced with the term “**suction outlet**”, to more accurately describe the components of a drain cover and sump which must be assessed to reduce the risk of entrapment.

(2) “**Natural pool**” means an artificially created ecosystem that reproduces the conditions of a natural body of water where water is purified by biological and physical treatment.

(3) “**Patron**” means an individual who enters the public swimming pool premises and might or might not enter or use the public swimming pool.

(4) “**Pool**” now also includes the pool premise.

(5) “**Pool premise**” means the buildings and equipment used in connection with a public swimming pool.

(6) “**Public swimming pool**” refers to any structure that contains water that is used for recreational, therapeutic or other similar purposes.

(7) “**Whirlpool**” has been changed to include a water temperature of 30°C or above (Section 1(p)).

g) **Changes concerning rental mobile hot tubs:**

i) The requirements for an owner of a rental mobile hot tub have been removed as they are not within the mandate of the Public Health Act. Rental mobile hot tubs will continue to be regulated and subject to the approval of a Public Health Inspector / Environmental Health Officer in locations where they are used by the public (e.g. a bar rents a mobile hot tub for the use of bar patrons).

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For more information, please contact your nearest Environmental Public Health office.

- Edmonton Main Office 780-735-1800
- Calgary Main Office 403-943-2295
- Grande Prairie Main Office 780-513-7517
- Lethbridge Main Office 403-388-6689
- Red Deer Main Office 403-356-6366
- Grande Prairie Main Office www.albertahealthservices.ca/eph.asp

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