LIFESAVING SOCIETY®
SOCIÉTÉ DE SAUVETAGE
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Safety Standards
for Canadian Swimming Pools and Waterfronts
Swimming Pool Standard

Pool Contamination Standard

Standard

Every owner and every operator shall ensure that there are written procedures to be implemented in the event of pool contamination, and that all lifeguards and other appropriate facility personnel are trained in these procedures.

Definitions

C_T Value: the product of the concentration of a disinfectant (e.g. Free Available Chlorine) and the contact time with the water being disinfected. It is typically expressed in units of mg-min/L.

Operator: the trained individual designated by the owner to be responsible for the day-to-day operation of an aquatic facility.

Owner: the person or corporation who is the owner of an aquatic facility.

Pool Contamination: the introduction of an unwanted/harmful human substance such as blood, vomit, or feces into a swimming pool.

Recreational Water Illness (RWI): any illness caused by a bather swallowing water that has been contaminated with fecal matter or other substances that contains pathogens detrimental to human health such as e. coli, giardia, cryptosporidium, etc.

Rationale

- Pool contaminations increase the risk of bathers contracting Recreational Water Illness (RWI) in public pools.
- There are established and broadly accepted procedures to deal with pool contamination as written by Provincial health authorities and the United States Centers for Disease Control and Prevention (CDC).
- Pool operators should ensure these procedures are documented and staff are trained and prepared to respond to pool water contamination.

Implementation

Operators of public pools should:

- Establish a public education campaign that can be provided to reduce the risk of pool contamination incidents from occurring,

- Establish a contamination response logbook to document:
  - Date and time of incident
  - Type of incident
  - Concentration of chlorine (FAC), pH and ORP value at the time of the incident
  - The procedures followed, including C_T value tracking
  - Concentration of chlorine (FAC), pH and ORP value upon reopening the pool
  - Name of person(s) involved in response
- Ensure that adequate equipment is on-site to allow staff to respond immediately upon any contamination incident occurring.

General Response Protocols

Vomit or Formed Stool Contamination Response

1. If free chlorine residual is below the required minimum residual level, the operator should immediately close the pool until the free residual chlorine is verified to be at or above the required minimum.
2. Direct everyone to leave the pool.
3. Remove as much of the contaminant as possible using a net or scoop.
4. Dispose of the contaminant in a sanitary matter.
5. Clean or disinfect the net or scoop. Do not vacuum the stool from the pool.
6. Raise the free available chlorine (FAC) to 2 parts per million (ppm), if less than 2 ppm, and ensure a pH of 7.5 or less and a temperature of 77°F (25°C) or higher. This chlorine concentration was selected to keep the pool closure time to approximately 30 minutes. Other concentrations or closure times can be used as long as the contact time (C_T) inactivation value is achieved.
7. Complete pool contamination report.

Diarrheal Contamination Response

1. Direct everyone to leave the pool.
2. Remove as much of the fecal material as possible using a net or scoop.
3. Dispose of the fecal material in a sanitary matter.
4. Clean or disinfect the net or scoop. Do not vacuum the diarrhea from the pool.
5. Raise the free available chlorine (FAC) concentration to 20 ppm and maintain a pH of 7.5 or less and a temperature of 77°F (25°C) or higher. The free available chlorine and pH should remain at these levels for at least 12.75 hours to achieve the C_T inactivation value of 15,300.
6. Sample and test pool water in at least three locations to confirm concentrations throughout the pool.
7. Backwash the filter after reaching the C_T inactivation value. Be sure the water is discharged directly to waste and in accordance with all regulations.
8. Do not reopen the pool before the free available chlorine level has returned to a normal operating level.
9. Complete pool contamination report.

If these procedures vary from the requirements of a provincial/territorial regulation, the provincial/territorial legislation or regulation shall prevail.

References

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Approval

- Approved by the Lifesaving Society Canada Board of Directors on 8 May 2016.
- Revised and approved by the Lifesaving Society Canada Board of Directors on 26 January 2026.

Disclaimer

Lifesaving Society Canada's National Safety Standards are developed using Coroners' recommendations, the latest evidence-based research, and reflect the aquatics industry's best practices at the time the publication was approved.

The purpose of these standards is to encourage swimming pool, waterpark and waterfront owners, managers, operators and regulators to adopt these standards, in order to prevent drownings in aquatic environments.

Lifesaving Society Canada's National Safety Standards do not replace or supersede local, provincial/territorial or federal legislation or regulations, but they are considered the standard to which aquatic facility operators should work towards, in order to enhance safety within their operations and to prevent drowning.