



ALBERTA PUBLIC POOL

# Safety Standards

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The Lifesaving Society is Canada's lifeguarding expert. The Society works to prevent drowning and water-related injury through its training programs, Water Smart® public education initiatives, water-incident research, aquatic safety management services, and lifesaving sport.

Annually, well over 1,200,000 Canadians participate in the Society's swimming, lifesaving, lifeguard, and leadership training programs. The Society sets the standard for aquatic safety in Canada and certifies Canada's National Lifeguards.

The Society is an independent, charitable organization educating Canadian lifesavers since the first Lifesaving Society Bronze Medallion Award was earned in 1896.

The Society represents Canada internationally as an active member of the Royal Life Saving Society and the International Life Saving Federation. The Society is the Canadian governing body for lifesaving sport - a sport recognized by the International Olympic Committee and the Commonwealth Games Federation.

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LIFESAVING SOCIETY®

*The Lifeguarding Experts*

# Canada's Lifeguarding Experts

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## Saving Lives for More Than 100 Years

The Lifesaving Society is a full service provider of programs, products, and services designed to prevent drowning. The Society saves lives and prevents water-related injuries through its training programs, Water Smart® public education, drowning research, aquatic safety management and lifesaving sport. The Society is a national volunteer organization and registered charity composed of ten provincial/territorial branches, tens of thousands of individual members, and over 4,000 affiliated swimming pools, waterfronts, schools, and clubs. The Lifesaving Society has a long and proud history of teaching swimming and lifesaving to Canadians.

The Society has been teaching swimming, water safety and water rescue in Canada since 1896. Established in England (1891) as the Swimmers' Lifesaving Society, it became The Royal Lifesaving Society in 1904. Today, it is known simply as the Lifesaving Society. The Lifesaving Society is a leader and partner in the delivery of water safety education throughout Canada and around the world.

## Teaching Canadians to Save Themselves and Rescue Others

Annually 1,200,000 Canadians participate in the Lifesaving Society's swimming, lifesaving, lifeguard, first aid, and leadership programs. Each year, the Society certifies thousands of instructors who provide the leadership for its training programs. Over 30,000 Canadians earn the Society's Bronze Medallion each year. As Canada's lifeguarding experts, the Lifesaving Society sets the standard for lifeguard training and certifies Canada's National Lifeguards.

## Making Canadians Water Smart

The Lifesaving Society focuses Water Smart® drowning prevention efforts on people most at risk — like men fishing in small boats — or on those who can make a significant difference, such as parents of young children. The Society delivers Water Smart® messages through its swim program, through the media and community action. The Society's Swim to Survive® Program provides the essential minimum skills required to survive an unexpected fall into deep water.

## Drowning Research

The Lifesaving Society conducts research into fatal and non-fatal drowning, aquatic injury and rescue interventions. Ongoing research and analysis supports the Society's evidence-based water rescue training and Water Smart® drowning prevention education.

## Setting the Standard

The Lifesaving Society establishes aquatic safety standards and consults on aquatic safety issues for the aquatic industry, government and the judiciary. The Society offers a suite of services to help aquatic facility operators maintain and improve safe pool and waterfront operations. The Society performs aquatic safety audits and serves as experts in legal cases involving aquatic safety.

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# Introduction

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Every owner/owner's agent of a public aquatic facility has an obligation to provide a safe environment for all user's of the pool. As the lifeguarding experts, the Lifesaving Society is the authority in aquatic standards and safety. Our standards are in accordance with current legislations/regulations and our expertise is based on extensive research, legal cases, industry standards, best practices and more than 100 years of public safety education and service.

Purpose: The Society developed and published the Alberta Public Pool Safety Standards (previously, Lifesaving Society Public Aquatic Facility Safety Standards) as a resource for public aquatic facility owners/owner's agents on safe facility operation practices. In addition to the Society's recommendations, this document also refers public aquatic facility owners/owner's agents to other legislation, regulations, standards or guidelines that

should be considered when developing safe operating policies and practices. This document does not, in any way, replace or supersede current legislation. Owners/owner's agents must obey all provincial and municipal legislation, regulations and bylaws specific to their public aquatic facility and community.

Application: The information in the Alberta Public Pool Safety Standards applies to all facilities that contain as least one swimming pool that is generally available to the public and should be made available to all aquatic facility personnel with a safety role.

Contact the Lifesaving Society for assistance to understand, interpret and implement the recommendations in the Standards.



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# Forward

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The Alberta Public Pool Safety Standards are compilations of aquatic safety guidance from Lifesaving Society research that has been published over many years in a variety of Society manuals and publications as well as external publications. This publication is the first edition, and has been adapted from the previous Public Aquatic Facility Safety Standards which was first published in 2004. The scope of Society research into public safety and risk management practices includes research and real operational experience from across Canada and around the world. In turn, the Society's expertise is shared internationally with the Royal Life Saving Society Branches throughout the Commonwealth and with the International Life Saving Federation (ILS).

The Alberta Public Pool Safety Standards outlines the Lifesaving Society's recommendations for minimum safety requirements for public aquatic facilities. All facility personnel are encouraged to go beyond the minimum requirements in their mandate to provide a safe environment. The Lifesaving Society recognizes that the recommendations provided in the Alberta Public Pool Safety Standards are not the only solutions that public aquatic facility owners/owner's agents may use to provide a safe environment. The Lifesaving Society also recognizes that each aquatic facility has unique features. No single document can address every situation and need. In situations where owners/owner's agents implement alternative safety measures, the Society recommends that they thoroughly evaluate and document these measures along with rationale.

# The Drowning Problem

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## Drowning Report 2019

Drowning is the second-leading cause of unintentional death in Canada. The great tragedy is that the vast majority of these deaths are preventable. Over a 10-year period from 2007 to 2016, less than 3% of fatal drownings in Alberta occurred in lifeguard supervised settings, meaning that more than 97% of these fatalities occurred in aquatic environments without lifeguard supervision. To the Society 3% is still too high and we need to work together to bring this number to zero. Public pools that are supervised by certified National Lifeguards are the safest locations for Canadians to enjoy aquatic activities.

Public pools have a drowning-prevention role both within the facility as well as within the larger community to identify potential hazards and take effective steps to prevent bathers from both injury and drowning. This includes Water Smart® education to educate the public to protect themselves and be safe while in, on, and around water.

## Children & Aquatics

While all age groups are at risk around water, deaths involving children are of particular concern. A major contributing factor in these deaths is the lack of adult supervision. Over a 10-year period from 2007 to 2016, 8% of all fatal drownings in Alberta were children under the age of five (5), and in 100% of these cases supervision was absent or distracted. This is an alarming statistic, and speaks volumes to the need for “Within Arm’s Reach” supervision.

## Diving & Shallow Water

Lifesaving Society Drowning Research has found that shallow water presents risks that the public aquatic facility owner/owner’s agent should be aware of. For shallow water (less than 2.5m deep), the only safe entry method is feet first. Patrons who dive into shallow water or engage in dangerous play around the pool (e.g. diving off shoulders, boosting into the air, diving from heights, etc.) are at great risk. They risk hitting the pool bottom, sides, or another bather head-first and injuring their spine from the impact. Research tells us that many of these injuries occur more often to young men. The consequences are tragic, and can range from paralysis to death.

## Impairment

Alcoholic beverages are involved in approximately 40% of all Alberta water-related fatalities, and half (53%) of fatalities where the victim was 18 to 34 years of age. This is important for the aquatic facility owner/owner’s agent to keep in mind. Many Canadian adults do not understand the increased risk from mixing alcohol/drugs and aquatic activities. The effects of alcohol/drugs can include impaired judgment and physical coordination. Impaired bathers may not recognize hazards and may engage in dangerous behaviour, increasing their risk of injury. Using the aquatic facility while under the influence of alcohol or drugs should be prohibited.

# Risk Management

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## Introduction

Faced with the potential for multi-million dollar lawsuits, aquatic facility owners/owner's agents need to be proactive in assessing and managing risk in the aquatic environment. The Lifesaving Society believes that many incidents are foreseeable and therefore preventable.

## Who's Responsible

The owner/owner's agent of a public aquatic facility has the obligation to ensure the safe operation of the facility by creating and implementing a Risk Management process. This responsibility may be further delegated to individuals such as, Pool Operators, Supervisors, Lifeguards or other designated personnel who may be left in charge of the facility. When the owner is not present, the person in-charge, regardless of title, assumes the role of owner's agent and full responsibility for the safe operation of the facility.

## Risk Management Process

Risk Management is an ongoing process that is used to identify and evaluate risks then implementing controls to eliminate or reduce risk with the intent to prevent injury. The process includes the following steps:

- Risk Assessment - Conduct facility inspections and audits
- Identify hazards - these could be both physical and/or behavioral
- Evaluate the hazards - determine the source, frequency, exposure, and severity of potential injuries
- Develop and establish controls and strategies to minimize or eliminate risk which may include education to facility patrons
- Implement controls
- Monitor and evaluate results

## Insurance

The owner/owner's agent of an aquatic facility must obtain an insurance policy and liability coverage to cover the facility, personnel, volunteers and patrons. Check with your insurance broker or agent to make certain that you have the appropriate insurance coverage and understand any requirements, limitations or exclusions that may be conditions of the insurance policy.

# Definitions

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**Active Supervision:** Being able to touch, see and hear the person(s) being supervised.

**Amenity:** A feature in an aquatic facility such as a diving board, waterslide, climbing wall, rope swing.

**Amenity Attendant:** A person that is not a certified National Lifeguard, but assists with the monitoring of Amenities within an aquatic facility and holds the Amenity Attendant certification.

**Anti-Entrapment Device:** Any device used for the purpose of preventing body entrapment, hair entrapment or entanglement, limb entrapment, mechanical entrapment, evisceration incidents and death including but not limited to: certified ANSI / APSP - 16 2011 suction outlets, a Safety Vacuum Release System (SVRS), a suction-limiting vent system or an automatic pump shut off system.

**Aquatic Facility:** Any swimming pool, wading pool, waterpark, waterfront, or similar location that is used for aquatic activities such as swimming, wading, diving or aquatic sports.

**Assistant Lifeguard:** A person holding a current Bronze Cross certification designated by the owner or owner's agent to assist a National Lifeguard to supervise bathers.

**Bather:** A patron who enters or uses the swimming pool.

**Caregiver:** A person who is legally responsible for the safety and direct care of another person such as a child.

**Current Award:** A training certification which is valid for a specified period from the date of certification. The length of time that a certificate is current for is set by the certifying body and/or government regulation.

**Deep Water:** Is specific to the individual and is considered to be chest deep.

**Equalizer Line:** An outlet in the swimming pool used to provide an alternate source of water for the filter system linked to the skimmer basket system.

**Facility Manager:** A person designated by the facility owner or owner's agent as being responsible for the management and operation of the facility.

**General Sanitization Plan:** A written document that outlines the chemicals used for cleaning, disinfection, and the routine sanitization schedule as per the Alberta Health Pool Standards.

**Instructional Period:** Any period of time where bathers' activities in the pool are structured and where bathers are under the supervision or direction of a certified instructor or coach. These times may include, but are not limited to, events such as competitions and practices for aquatic sports, swimming lesson programs, aquatic leadership and aquatic fitness.

**Instructor:** A person holding a current swim instructor certificate (e.g. Lifesaving Instructor) appointed by the owner or owner's agent to instruct an aquatic program such as swimming lessons.

**Lifeguard:** A person with a current National Lifeguard certification appointed by the owner or owner's agent to maintain surveillance over bathers while they are on the deck or in the pool and to supervise bather safety.

**Non-Swimmer:** A person who can not swim 25 metres without stopping.

**Owner or Owner's Agent:** The person or corporation who is the owner or designated owner's agent of a public aquatic facility.

**Patron:** An individual who enters a public swimming pool premises and may use the swimming pool.

**Personnel Manual:** A written document including policies and procedures for facility personnel which may be a subset of the Safety and Supervision Plan.

**Pool Deck:** The surface area immediately surrounding a public pool.

**Pool Operator:** An individual who operates and maintains a pool on a day-to-day basis and meets the qualifications set out in the Alberta Health Pool Standards in order to do so.

**Pool Standards:** The Alberta Health Pool Standards outlines in more detail owners and owner's agents responsibilities for public swimming pools in relation to the Public Swimming Pool Regulation.

## Definitions Continued

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**Public Swimming Pool Regulation:** The Alberta Public Swimming Pool Regulation outlines legislated responsibilities for owners and owner's agents of public swimming pools.

**Recreational Swimming:** Includes all unstructured swimming, rentals, birthday parties, daycamps, recreational swimming and school programs.

**Recreational Swim:** Any period where bathers' activities are not restricted and where bathers are not under the supervision or direction of an instructor or lifeguard.

**Safety and Supervision Plan:** A written document including policies and procedures for operation and maintenance of the Public Aquatic Facility based on current best practices.

**Shallow Water Attendant:** A person who is not a certified Lifesaving Society National Lifeguard, but assists with the monitoring of water less than 1.2 metres deep within an aquatic facility and holds the Shallow Water Attendant certification.

**Spectator:** A person watching lessons, competitions, or an event.

**Suction Outlet:** A fitting including a cover or grate and sump, that generates suction (e.g. drain cover) certified to ANSI / APSP 16 - 2011.

**Swimmer:** A person who can swim 25 metres without stopping.

**Swimming Pool:** A structure that contains water that is deeper than 60cm at its deepest point.

**Vacuum Fitting:** An outlet in the pool designed to connect a swimming pool vacuuming system.

**Viewing Area:** An area that has a separate entrance from the pool and physically separates the space used by spectators and the pool deck.

**Water Quality Incident Response Plan:** A written document that outlines procedures to maintain water quality as per the Alberta Health Pool Standards.

**Wading Pool:** A structure containing water the depth of which is 60cm or less throughout the structure.

**Water Features:** A feature of a swimming pool which water is sprayed or released into the pool or on the pool deck.

**Wave Pool:** A swimming pool in which waves or surf are mechanically generated.

**Water Spray Park:** A structure on which water is sprayed or released but does not accumulate.

**Within Call:** Means the person is on-site and reachable by voice or by a prearranged system and can respond within one minute.

**Whirlpool:** A structure utilizing hydro-jet circulation or air induction bubbles, containing water at a temperature above 30°C that is not drained, cleaned and refilled before each use.

# Section 1: Facility Design

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The following outlines design standards to be considered in the development of new aquatic facilities and to be applied to existing aquatic facilities. Often when regulations or codes change facilities may be grandfathered but the Lifesaving Society looks at the evidence behind the changes and has noted that the majority of changes are a result of past learnings that improve patron and staff safety. As such the Society recommends that all existing aquatic facilities meet the current Alberta Building Code requirements.

## 1.1 Facility Access Control

Every public aquatic facility must implement a system to control access to the pool and the pool equipment. This includes providing effective locks, key control procedures and policies for access control. The pool area must be locked and not accessible to the public at all times when effective supervision is not available.

Hazardous areas such as mechanical rooms and chemical storage areas must be locked at all times that the facility is open or accessible to the public.

If the pool is an outdoor pool, it must be enclosed by a fence and gate system that complies with the Alberta Building Code requirements for a public swimming pool. In summary, the building code requires that the pool be enclosed by a barrier at least 2.0m in height that prevents unauthorized access to the pool. The pool gate must be at least 2.0m in height and equipped with a self closing, self latching, lockable mechanism that is located at least 1.5m above ground level. Consult the building code for the specific design requirements (Appendix B).

## 1.2 Lighting

Pool lighting shall be inspected daily and must be adequate to easily see bathers and hazards. Burned out bulbs shall be replaced. A minimum of 215lux at deck level in all areas of the facility (e.g. pool area, change rooms, any other area of the facility used by bathers) and at water level is required by Alberta Building Code throughout all periods of operation (Appendix B).

Where underwater lighting is provided, the total lamp lumen's shall not be less than 650 multiplied by the area in square metres of the water surface for an outdoor pool, or 1 100 multiplied by the area in square metres of the water surface for an indoor pool. Lights shall be located so that bulbs can be replaced even when the swimming pool is in full use (Alberta Building Code - Appendix B). Such underwater lights, in conjunction with overhead lighting, shall be strategically located to provide illumination so that all portions of the aquatic facility, including the bottom and drains, can be easily seen. Higher underwater light levels shall be considered for deeper water to achieve this outcome. For more information refer to the Model Aquatic Health Code (Appendix B).

## 1.3 Glare

Windows and any other features providing natural light into the Aquatic Facility and interior lighting shall be designed or arranged to inhibit or reduce glare on the water surface.

## 1.4 Pool Basin

The pool basin of a swimming pool should be maintained in good condition.

### 1.4.1 Basin Colour

The submerged surfaces of a public pool must be white in colour, except for markings for safety or competition purpose. Safety markings should adhere to the application Building Code requirements (Appendix B). Competition markings should adhere to the applicable sport requirements (e.g. FINA).

### 1.4.2 Depth Markings

Pool depth markings shall be in both metres and feet. Many bathers identify depth in regards to height. Using both meters and feet will help bathers understand how deep the water is.

### 1.4.3 Deck Clearance

The deck perimeter shall have a minimum of 1.8 metres (approx. 6 feet) of clearance from the edge of the Aquatic Facility to fencing or another obstruction to allow for the aquatic personnel to roam and maximize bather surveillance in the Lifeguard's supervision zone. For passage behind a diving board, support column, slide or other recreational equipment a minimum of 0.9 metres of unobstructed deck space (approx. 3 feet) is required (Alberta Building Code - Appendix B).

# Section 2: Personnel

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The following outlines the minimum requirements for qualifications of personnel, staff training, staff communication and health and safety for Public Pools.

## 2.1 Qualifications

The following outlines the minimum qualification requirements by position. A public pool owner or owner's agent is responsible for monitoring, and tracking staff certification's. All staff certifications should be stored securely.

### 2.1.1 Lifeguard Qualifications

Lifeguard - Required minimum qualifications:

- Minimum age 16;
- Hold a current National Lifeguard Award; and
- Hold a current Alberta Workplace Approved Standard First Aid certification (Aquatic Emergency Care Award or Standard First Aid).

### 2.1.2 Assistant Lifeguard

Assistant Lifeguard - Required minimum qualifications:

- Minimum age 15;
- Hold a current Bronze Cross Award; and
- Hold a current Alberta Workplace Approved Standard First Aid certification (Aquatic Emergency Care Award or Standard First Aid).

### 2.1.3 Instructor Qualifications

Aquatic Instructor - Required minimum qualifications

- Minimum age 15;
- Hold a current Instructor award such as Swim Instructor or Lifesaving Instructor; and
- Hold a current lifesaving or lifeguarding award - minimum Bronze Cross (Distinction and National Lifeguard exceed the Bronze Cross minimum).

Note: If the instructor is also required to function as a lifeguard, they must meet the required minimum qualifications for a lifeguard.

### 2.1.4 Amenity Attendant

Amenity Attendant - Required minimum qualifications:

- Minimum age 14;
- Hold a current Amenity Attendant Certification Award; and
- Hold a current Alberta Workplace Approved Emergency First Aid.

### 2.1.5 Shallow Water Attendant

Shallow Water Attendant - Required minimum qualifications:

- Minimum age 14;
- Hold a current Shallow Water Attendant Certification Award; and
- Hold a current Aquatic Emergency Care Award or a current Bronze Cross and current Alberta Workplace Approved Emergency First Aid award.

### 2.1.6 Pool Operator

At least one staff member must be a certified pool operator. The pool operator must hold a certificate confirming that individual's successful completion of an approved swimming pool operator's training program that is recognized under the Swimming Pool Regulation (Appendix B).

### 2.1.7 Facility Manager

Must be familiar with all legislations, standards, regulations and codes that apply to the operation of a public aquatic facility in their community. The Lifesaving Society Aquatic Management Training course provides aquatic personnel with this information (Appendix A).

## 2.2 Training

The following outlines the minimum training requirements for aquatic personnel.



### 2.2.1 Orientation Training

All new or returning aquatic personnel must receive orientation training before assuming their duties. This training should include:

- Introduction to fellow staff members;
- Exploration of job description and responsibilities;
- Introduction to and evaluation of hazards and risks in the facility, and a review of facility rules and policies concerning them;
- Specific training in the facility's safety systems and emergency procedures;
- Review of personnel policies and procedures;
- Specific job-related training required to familiarize staff with the facility's programs, activities, operation and maintenance, and policies and procedures concerning supplies and equipment; and
- Specific training in public relations and effectively dealing with patrons.

### 2.2.2 Inservice Training

Every owner/owner's agent should plan, document and conduct regular and ongoing in-service training. Ongoing in-service training improves proficiency and helps to ensure that aquatic personnel maintain judgment, knowledge, skills and physical capability required to perform their duties. In addition, it reinforces the risks associated with the facility, allows personnel to become familiar with emergency procedures, and provides practical experience to work as a team.

In-service training should include:

- Evaluation and practice of emergency procedures designed specifically for the public aquatic facility;
- Review and practice of scanning, recognition, intervention, communication, rescue and physical fitness through drills and scenarios;
- Review of the Safety and Supervision Plan, and facility specific policies and procedures;
- Review and practice of first aid skills including, CPR, use of first aid equipment and supplies;
- Practice of public relations and effectively dealing with the patrons; and
- WHMIS training appropriate to the materials and equipment expected to be used for their role.

### 2.2.3 Training Documentation

Pool owner or owner's agent must keep records of orientation training and ongoing in-service training for at least seven years, to include:

- Content of training;
- Date and duration of training; and
- Attendance (including those who facilitated the training session).

### 2.3 Staff Communication

A system must be implemented which provides for regular communication and updates for facility personnel. The primary purpose is to communicate information that is useful in maintaining the safety of patrons and personnel. Examples of this information includes:

- Notice of large groups scheduled to attend the facility;
- Reporting of equipment in need of repair and steps taken to protect users;
- Notice of equipment closure or repair; and
- Notice of hazards or deficiencies.

### 2.3.1 Staff Manual

Every public aquatic facility shall develop a staff manual. The Lifesaving Society recommends that all personnel be provided with a personal copy of the manual. The intent of this manual is to function as a training and reference resource for the aquatic personnel and management. The staff manual may include a number of modules and at a minimum it should include:

- Mission, vision and employer policies/procedures (reporting to work, use of computers/cell phones, facility usage etc.)
- Information about the position (job description, expectations, role, schedule, pay etc.)
- Required training (Health & Safety, WHMIS etc.)
- Fit for work policy (alcohol, drugs)
- Pool Safety and Supervision Plan
- Water Quality Incident Response Plan
- General Sanitation Plan
- Safe work practices
- Emergency Procedures

## 2.4 Health and Safety

The following outlines the minimum Health and Safety requirements for aquatic personnel.

### 2.4.1 PPE

Owner's/owner's agents must provide aquatic personnel with personal protective equipment and training that is correct for the applicable hazards as per the Occupational Health and Safety Code, Part 18 (Appendix B). This may include: eye, ear and foot protection, gloves, protective apron, and face masks.

### 2.4.2 Footwear

Aquatic personnel must wear footwear that is appropriate for their role. If they are required to move large, heavy items, steel-toed shoes/boots must be used.

### 2.4.3 Barrier Devices

All aquatic personnel must have access to barrier devices to prevent cross contamination in a first aid situation. At minimum this must include a rescue breathing barrier device with a one-way valve and disposable non-latex gloves. Personnel may be required to initiate first aid before the facility first aid kit arrives, therefore the Lifesaving Society recommends that all personnel in a surveillance role have barrier devices on their person while on duty.

### 2.4.4 Sun Protection

All aquatic personnel working at outdoor facilities must have effective protection from sun and weather. Protection from the sun may include protective clothing, SPF 30 sunscreen and/or shade structures at the lifeguard stations. For more information, reference the Lifesaving Society position statement – Sun Protection in the Aquatic Environment (Appendix A).

### 2.4.5 Critical Incident Stress

In the event of a serious injury incident, all persons involved in the incident such as rescuers or bystanders shall be provided access to Critical Incident Stress Management (CISM) education and support. The Lifesaving Society can provide contacts for CISM support (Appendix A). Local EMS and victim services organizations can also provide local contact information for Critical Incident Stress Management services in your community.

## 2.5 Staff Identification

It is important that facility staff be identifiable to patrons and emergency personnel.

### 2.5.1 Lifeguard Uniforms

All lifeguards must wear a uniform which permits them to be easily and quickly identified. The purposes of the uniform is to make the lifeguards stand out so that they are readily distinguished from bathers and other facility personnel, and can be quickly contacted in case of an emergency or when assistance is required.

### 2.5.2 Instructor Uniforms

It is recommended that other facility personnel (assistant lifeguards, amenity attendants, instructors etc.) wear a uniform that also permits them to be recognized as facility staff and distinguishes them from other bathers and lifeguards.

# Section 3: Supervision Systems

The following outlines the minimum requirements for supervision, lifeguard-to-bather ratios, and instructional supervision. Every public Aquatic Facility must establish systems to provide effective supervision of all patrons and activities within the aquatic facility.

## 3.1 Supervision Standard

The following outlines the minimum Supervision requirements that every owner or owner's agent of a aquatic facility must establish. This defines the minimum requirements for aquatic staff who are responsible for the supervision of bathers.

The owner or owner's agent must take reasonable steps to ensure that personnel responsible for the supervision of patrons are able to perform to the facility expectations when employed. Facility's should set expectations and include evaluation of the following:

- Minimum vision requirements;
- Minimum fitness requirements;
- Vigilance expectations to monitor a staff members ability to perform their duties;
- Practices to evaluate if staff are fit for duty; and
- A process to identify and replace any personnel who is not able to meet the minimum requirements or the National Lifeguard standard at any time they are scheduled to work in a supervision role.

### 3.1.1 Safety & Supervision Plan

Every public aquatic facility must have a Pool Safety and Supervision Plan. The purpose of the plan is to define facility specific safety and supervision protocols. The document will serve as a reference and training resource for staff. The required content is outlined in Part 4, 10.0 of the Alberta Health Pool Standards (Appendix B). The Lifesaving Society has a template for this document available (Appendix A).

### 3.1.2 Lifeguard Positioning

Facility management must analyze the aquatic facility and determine and implement a Lifeguard positioning system designed to eliminate blind spots and allow the lifeguard team to observe all bathers in the pool area from their pathways.

Lifeguard positions, pathways, zones and rotations must be clearly outlined for Lifeguards on a facility map and available for reference.

A system must be implemented to provide regular monitoring of off-deck areas such as change rooms, saunas and steam rooms, exercise facilities, etc.

### 3.1.3 Distractions

Duties such as pool maintenance, set-up, and/or cleaning which may distract the lifeguard must not be assigned while they are on duty. The primary duty of lifeguards is surveillance and incident prevention. All efforts must be made to minimize distractions which may interfere with this duty.

Short conversations between lifeguards and bathers are necessary for public education about safe use of the facility and are key injury prevention practices. Longer conversations interfere with effective surveillance. Owners/owner's agents should establish a policy regarding the use of electronic devices by lifeguards.

### 3.1.4 Vigilance

Regular rotation between stations and regular breaks for lifeguards from surveillance are required. If two (2) or more lifeguards are on duty on deck, they should rotate lifeguard stations every 15 - 30 minutes. Every effort should be made to keep the lifeguard alert and focused on surveillance.

Lifeguards must be provided with a minimum 15 minute break from surveillance every two (2) hours. During this break lifeguards may be required to perform other non-surveillance related duties as required.

### 3.1.5 Scanning

All lifeguards must be able to continuously and systematically scan their area of responsibility within 10-30 seconds. Short interruptions which are designed to prevent injury (e.g. safety education) are acceptable.

### 3.1.6 Single Lifeguard

At least one lifeguard must be on duty in order to open the aquatic facility. One additional staff must be within call. This additional person must be trained in the emergency procedures for the facility. This person does not have to be a lifeguard and may be another facility personnel such as a cashier, janitor or manager. This recommendation for an additional person also applies during periods when the pool is being used for instruction under the direct supervision of an aquatic instructor.

### 3.1.7 Assistant Lifeguards

Assistant Lifeguards supplement but do not replace the need for certified Lifeguards. The number of assistant lifeguards that are utilized should never exceed the number of Lifeguards on the pool deck. Should an emergency present itself a lifeguard should be within call to respond and support the assistant lifeguard.

## 3.2 Lifeguard to Bather Ratios

A bather would be included in the head count if they are in the water or immediately intending on entering the water. Spectators are not included in the bather count.

### 3.2.1 Recreational Swim Times

The following table outlines the minimum number of lifeguards required for a given bather load for facilities with a water surface area of 400m<sup>2</sup> or less during recreational swim times.

| Numbers of Lifeguards  | Number of Bathers |
|--|-------------------|
| 1  | 1 - 40            |
| 2  | 41 - 80           |
| 3  | 81 - 140          |
| 4  | 141 - 200         |
| One additional lifeguard for each additional 100 bathers or fraction thereof | 201 and beyond    |

### 3.2.2 Instructional Swim Times

The following table outlines the minimum number of lifeguards required for a given bather load for facilities with a water surface area of 400m<sup>2</sup> or less during swimming lessons that are being provided by a certified Swim Instructor, for competitive swim practice, or swimming competition where the activity is the only thing taking place in the pool basin.

| Numbers of Lifeguards  | Number of Bathers |
|--|-------------------|
| 1  | 1 - 75            |
| 2  | 76 - 150          |
| 3  | 150 - 200         |
| One additional lifeguard for each additional 100 bathers or fraction thereof | 201 and beyond    |

A Owner or Owner's agent may choose to not provide lifeguards during swim lessons when the instructor is a certified lifeguard and the participants don't exceed the requirements of section 3.3.1.

### 3.2.3 Assistant Lifeguard Ratios

The following table outlines the minimum number of lifeguards and assistant lifeguards required for a given bather load for facilities that utilize assistant lifeguards with a water surface area of 400m<sup>2</sup> or less during recreational swim times.

| Numbers of Lifeguards  | Number of Assistant Lifeguards   | Number of Bathers |
|--|--|-------------------|
| 1  | 0  | 1 - 40            |
| 1  | 1  | 41 - 75           |
| 2  | 1  | 76 - 125          |
| 2  | 2  | 126 - 175         |
| 3  | 2  | 176 - 225         |
| 3  | 3  | 226 - 300         |
| One additional lifeguard for each additional 100 bathers or fraction thereof | One additional assistant lifeguard for each additional 100 bathers or fraction thereof | 301 and beyond    |

### 3.2.4 Square Footage

Owner's/owner's agents must establish a lifeguard-to-bather ratio that ensures that lifeguard(s) will be able to see all areas of the pool that are accessible to bathers (including but not limited to the bottom of the pool). In an aquatic facility with a water surface area greater than 400m<sup>2</sup>, more than one (1) lifeguard may be required to be on duty to maintain a safe level of supervision. In swimming pools where bathers can disperse over large areas, additional supervision should be provided.

### 3.2.5 Facility Specific Factors

Facility managers must analyze their specific facility, equipment and bather behaviours to determine appropriate lifeguard-to-bather ratios for their facility. Some of the factors to consider include:

- Size and configuration of the facility;
- Number of pools;
- Types of pools;
- Blind spots or glare.
- Danger areas;
- Number of bathers;
- Type of bather activity, age or ability/disability of patrons;
- Level of adult supervision such as parents or teachers;
- Equipment in use (e.g. toys, slides); and
- Public education and relations requirements.

### 3.2.6 Bather Counts

Lifeguards should count and record the number of bathers in the pool in 30 minute increments. This count can be used to determine the number of lifeguards required for that bather load. Lifeguards should also perform a head count any time they feel the number of bathers has changed which may require them to add or reduce the number of lifeguards.

### 3.2.7 Facility Capacity

The total number of bathers must not exceed the maximum bather load for the pool as defined in the Swimming Pool Regulation (Appendix B). Bather counts should be added up throughout the day for each basin to ensure the maximum is not exceeded and to assist the pool operator with water quality management.

### 3.3 Instructional Program Supervision

The following outlines the minimum requirements for Instructional Program Supervision. Every Public Aquatic Facility must establish systems to provide effective supervision during instructional programs. These systems should include:

- Defined meeting locations where students meet their instructor;

- Procedures to safely guide students out of the pool area after completion of the program and in the case of an emergency;
- Supervision practices for instructors designed to provide continuous observation of all students.

### 3.3.1 Instructional Setting

In the event that a pool is being used solely for aquatic instruction, a certified aquatic instructor may be substituted for a lifeguard only if each instructor is also a certified lifeguard. Each instructor can only supervise one class or group, not exceeding 25 participants or the program recommended ratio, whichever is lower. Direct supervision means direct and uninterrupted control of the bathers by the aquatic instructor who is charged with their care. If even one instructor is not a lifeguard, a lifeguard must supervise the pool area. When there are 40 or more people in the pool and deck area during an instructional period, there shall be a lifeguard on deck to provide supervision.

### 3.3.2 Instructor to Student Ratios

Facilities should follow the program ratios set out by the program provider.

### 3.4 Group Admission

For public groups, (schools, daycares, camps etc.) the following outlines the minimum required ratios for caregivers to children under the age of 8 years:

- One caregiver for every 4 children
- One caregiver for every 8 children if lifejackets are worn by all children

Refer to the Lifesaving Society's Within Arm's Reach and Active Supervision Booklet and Caregiver Supervision Module for more information (Appendix A).

# Section 4: Safety Systems

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All public aquatic facilities must develop and document a set of safety systems appropriate to the needs of the facility. The following outlines the minimum requirements for the public education plan, signage and emergency equipment. Safety systems are an important part of minimizing risk and preventing injury

## 4.1 Public Education Plan

Every public aquatic facility must develop a Public Education Plan to educate and inform patrons about the safe use of the aquatic facility according to Part 11 of the Alberta Health Pool Standards (Appendix B). A Public Education Plan must include: facility rules, safety rules, signage and a plan for how to communicate this to the public.

### 4.1.1 Admission Policies

Admission policies must be established as part of the facility rules and communicated to the public through signs and public education. Minimum requirements for admission policies include:

- Minimum age and requirements for supervision of children;
- The requirement to actively supervise young children and non-swimmers “Within Arm’s Reach” by a caregiver;
- Notification of medical conditions that may affect bather safety (e.g. seizure disorder);
- Requirements for group admissions such as orientation to the facility and its rules;
- Additional supervision requirements.

### 4.1.2 Pool Safety Rules

Every public aquatic facility must develop and enforce a set of rules to guide safe use of the aquatic facility and its equipment. These rules are intended to reasonably control the risks associated with the use of an aquatic facility while also facilitating the enjoyment of the aquatic recreation experience. The rules must be documented in the Aquatic Safety and Supervision Plan and communicated to patrons through the use of signs, announcements and other forms of public education.

### 4.1.3 Safe Diving Rules

The Lifesaving Society’s Standard for a minimum safe water depth for head-first entries off the side of a pool or dock is 2.5 metres for a distance of at least 8m from the starting point. Entries into water less than 2.5m deep should be feet first. Diving injuries are a leading cause of spinal injuries. Over 90% of spinal injuries occur in water less than 1.8 metres (6 feet) deep. Signs must be provided with clear direction about where diving is permitted or restricted in locations readily visible to bathers.

### 4.1.4 Breath Holding

Every public aquatic facility must develop a policy to restrict the practice of hyperventilating and repetitive breath-holding activities. The practice shall be permitted only under the direct supervision of a qualified instructor or coach and following a recognized safety protocol for aquatic sports such as underwater hockey, synchronized swimming, Lifesaving Sport etc.

### 4.1.5 Recreational Equipment Rules

Rules for the safe use of recreational equipment such as diving boards and platforms, slides, rope swings, inflatables, etc. must be developed and posted in a readily visible location near each piece of equipment. These rules must include specific directions for safe use as well as any necessary restrictions such as age or height restrictions, bather entry/use restrictions, and manufacturer restrictions.

## 4.2 Anti-Entrapment Plan

Every public aquatic facility must develop an Anti-Entrapment Plan which includes certificates for each anti-entrapment cover and is compliant with the Public Pool Regulations and Alberta Health Pool Standards. The required content is outlined in Part 3, 9.0-9.6.4 of the Alberta Health Pool Standards and a fillable template can be found through Alberta Health Services (Appendix B). The Lifesaving Society also has a fillable template (Appendix A).

## 4.3 Incident Tracking and Analysis

Every public aquatic facility must institute a system to document and analyze all injuries, rescues and other incidents that occur at the aquatic facility. This data must be used to evaluate and where appropriate modify emergency procedures, safety

systems, staff training or any other practices that might benefit from this analysis. Effective injury prevention requires an understanding of what types of injuries may occur and the circumstances under which the injuries may result.

#### 4.4 Required Emergency Equipment

Every public aquatic facility must have the following emergency equipment available and appropriately located for use in an emergency:

- At least two (2) buoyant throwing assists with a buoyant line attached. The length of the line should be at least the width of the pool;
- At least two (2) electrically insulated or non-conduction reaching poles at least 3.65 metres in length. Ideally the pole should have a large hook that can be used to pull a person to safety;
- At least one spineboard with an effective immobilization system. At least one extra spineboard with head immobilizer is recommended for backup when a spineboard is removed from the facility to transport a spinal injured victim;
- At least one Number two (2) first aid kit with a rescue breathing barrier device with a one-way valve and disposable surgical gloves. Extra supplies for high use items such as bandages should be available;
- An Automated External Defibrillator (AED); and
- A designated first aid area.

The following equipment should also be considered for lifeguard use:

- A rescue aid such as a rescue can or tube;
- Oxygen inhalator capable of a flow rate of 10 - 15 litres/minute with pulse oximeter. Inclusion of a pocket mask with oxygen fitting can permit oxygen resuscitation of a non-breathing victim; and
- An elevated lifeguard platform or chair, not less than 1.8 metres above the water surface.

#### 4.5 Signage

Signs serve two functions in a public aquatic facility:

- To inform users about the suggested rules for safe use of the facility; and
- To warn users of hazards and ways to avoid these hazards.

Signs with general safety rules must be posted in a conspicuous location in the aquatic facility. Where possible, signs with pictures and symbols to convey the message should be used. Use of universal symbols provides instant recognition and avoids confusion if readers cannot read or do not read English. The Alberta Health Pool Standards lists requirements for Patron Education and Notification in Part 4, Section 11.0 (Appendix B).



# Section 5: Emergency Procedures

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All aquatic facilities must develop and document a set of emergency procedures appropriate to the needs of the facility. The emergency procedures shall be a combination of general and specialized emergency procedures designed to address incidents or injuries that occur at the facility.

## 5.1 Procedure Development

Emergency procedures shall include at minimum these elements:

- Roles of all responding staff;
- Roles of bystanders;
- Emergency signals;
- Procedures for clearing the pool;
- Procedures for contacting emergency services;
- Defined focal points for removing a casualty from the water and providing treatment;
- Emergency equipment required;
- Incident reporting process;
- Procedures for notifying any other persons (e.g. management, a victim's family members, other persons that might be affected by the incident);
- Practices for dealing with media inquiries; and
- How the procedure would be modified for various staffing levels that may occur at the facility.

Emergency procedures may need for be adapted to respond to a variety of incidents or injuries and should include both Minor and Major emergencies.

- Minor Emergencies - adequate pool coverage can be maintained at all times by one or more lifeguards
- Major Emergencies - adequate pool coverage cannot be maintained and pool must be cleared until lifeguard attention can be directed back to pool supervision

More information can be found in the Alert Manual: Lifeguarding in Action (Appendix A).

## 5.2 Specialized Procedures

Specialized procedures are designed to address specific situations that may require a modified or adapted emergency response. These situations may include response to specialized areas such as diving tanks, waterslides or wave pools. Facility management and personnel should analyze the types of situations that would benefit from specialized procedures and establish appropriate emergency procedures for response.

### 5.2.1 Naloxone Training

National Lifeguards are trained to perform primary care interventions such as CPR and the use of an AED, however, they are not trained in the use of Naloxone. If an employer determines that lifeguards need to be able to respond to drug overdoses, the employer will need to provide the lifeguards with specialized training to both recognize and respond in an emergency as approved by the regional health authority and/or the provincial Occupational Health and Safety division.

### 5.2.2 DNR Order

Aquatic personnel shall continue with resuscitation efforts including Cardiopulmonary Resuscitation (CPR) even when presented with a Do Not Resuscitate (DNR) order. Only when directed by EMS or other authorized medical personnel, shall resuscitation efforts including CPR cease.

## 5.3 Contacting Emergency Services

Every owner/owner's agent of a public aquatic facility must have a procedure for contacting emergency services and a designated emergency telephone which is easily accessible from the deck. The telephone must be able to work in the event of a power failure and allow for direct connection with an emergency service or the local telephone utility.

### 5.3.1 Contact Numbers

Emergency contact telephone numbers must be posted by the emergency telephone.

### 5.3.2 Script

A script for emergency calls must be posted beside the emergency phone. This is particularly important if the emergency procedures include the use of bystanders to contact emergency services. The script should be designed to provide the information required to direct the request for emergency assistance.

This should include at minimum:

- The facility address;
- Phone number;
- A prompt to describe the nature of the emergency; and
- The location for emergency access.

A sample script is available on the Lifesaving Society website (Appendix A).

# Section 6: Pool Operation

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Pool Operators are responsible for the safe operation of the swimming pool including maintaining safe water quality as per the Public Pool Regulations and Alberta Health Pool Standards (Appendix B). Maintaining excellent water quality is a critical component of operating a safe environment. The water quality must protect the health and safety of the users by protecting them from disease transmission and maintaining balanced water to prevent injury from chemicals in the water. Good water quality also contributes to protecting the pool, aquatic equipment, and the swimmer's enjoyment of the pool.

## 6.1 Disinfection and Water Balance

Effective pool disinfection and water balance must be maintained at all times that the public aquatic facility is open. The skimmer system shall be designed to allow continuous removal of water from the surface, maximizing the flow of water through the skimming devices, meeting the minimum water turn-over rate for that pool. These procedures must meet or exceed the minimum standards required in the Public Pool Regulations and Alberta Health Pool Standards (Appendix B).

### 6.1.1 Pool Water Clarity

Every owner/owner's agents of a public swimming pool shall ensure that pool water is of sufficient clarity to permit a black disc (150 millimetres in diameter on a white background) located on the bottom of the pool (in the area of its greatest depth) to be clearly visible from a point on the deck nine metres away from the disc. When the disc is not clearly visible the entire pool shall be closed until the problem is corrected. The pool water clarity or the visibility of the pool bottom must be evaluated regularly throughout each day that the facility is in operation. Good bottom visibility is imperative for public safety and cannot be compromised (Appendix B).

### 6.1.2 Water Testing

A trained individual should perform a manual water test for each pool basin to confirm the pool is safe for use and that the automated controller is in good working condition. At a minimum the following should be tested and recorded daily:

- Free Chlorine;
- Combined Chlorine;
- pH;
- Temperature;
- Alkalinity;
- Hardness;
- Total Dissolved Solids (TDS); and
- Cyanuric acid levels (for outdoor pools only).

Water test results should be within the range identified by Alberta Health Services. If they are outside the required range then immediate corrective action should be taken to correct it. This would include notifying the Pool Operator for further direction.

Any time bather safety may be at risk due to water test results the pool should be closed.

### 6.1.3 Chemical Additions

Any time chemicals are being added to the pool manually the pool basin should be closed to bathers.

When adding chemicals to the pool, personnel should review the Safety Data Sheet (SDS) and follow all manufacturer directions for use.

## 6.2 Pool Operating Documents

Every public aquatic facility must develop written procedures and a tracking method for the operation of the mechanical systems as per the Public Pool Regulations and Alberta Health Pool Standards (Appendix B). Documentation should be kept for 7 years. This includes but is not limited to: contamination response, backwash, adding water, and testing for water clarity, pH, chlorine and alkalinity.

### 6.2.1 Documentation

Every aquatic facility must have a Water Quality Incident Response Plan. This will outline the steps to be taken when the following are not meeting Alberta Health Pool Standards/Regulations:

- ORP;
- free chlorine;
- cyanuric acid (outdoor pools only);
- pH; and
- Water clarity.

In addition written procedures must be developed to deal with a pool fouling incident (e.g. blood, food, chemicals, fecal matter or vomit) (Appendix B). This procedure must identify how contaminating material should be removed and provide instructions for disinfection of the pool. The Lifesaving Society website has resources to help aquatic facilities develop strategies to manage pool fouling incidents (Appendix A).

### 6.3 Mechanical Systems

All facility mechanical systems and chemical handling must be maintained and operated in a manner which protects the facility users and personnel. The standards for these practices must be documented and followed by all facility personnel. Reference sources for these standards include:

- Manufacturer directions;
- Safety Data Sheets (SDS);
- WHMIS regulations and training;
- Pool operator manuals and training programs;
- Occupational Health and Safety regulations;
- Transportation of Dangerous Goods regulation; and
- Recommendations from past fatality inquiries.

### 6.4 Aquatic Facility Inspection

Every aquatic facility should be inspected on an annual basis by a certified Aquatic Safety Inspector. Aquatic Safety Inspectors follow a standardized checklist when performing the inspection and provide a copy of the inspection to facility management immediately following the inspection.

Facility staff should perform monthly inspections of the facility, amenities, and equipment. All inspections should be documented on a checklist or report. Any deficiencies that are identified should be documented along with any corrective measures taken.

Deficiencies which affect the safe operation of the pool or equipment shall be corrected immediately. If this is not possible, effective steps must be taken to protect patrons and personnel. In some cases it may be necessary to close the pool or equipment until it can be returned to a safe condition.

#### 6.4.1 Fire Extinguishers

Fire extinguishers must be inspected monthly by staff and annually by a certified fire extinguisher inspector as per the Fire Code (Appendix B). Inspections must be recorded.

#### 6.4.2 Emergency Lighting

Emergency lighting must be tested at least once every month and must be in place to illuminate the deck and pool bottom in the event of a power failure.

#### 6.4.3 Emergency Equipment

Emergency equipment must be inspected daily. All equipment must be maintained in a state of readiness. Any deficient equipment must be repaired or replaced immediately.

#### 6.4.4 GFCI Inspections

All Ground Fault Circuit Interrupter's (GFCI) should be tested monthly. Any GFCI that fails the test must be disabled, repaired or replaced.

### 6.5 Aquatic Facility Safety Audit

Every aquatic facility should be audited by a certified Aquatic Safety Auditor once every five years. Aquatic Safety Auditors look at all areas of the aquatic facility's operation including personnel, communications, lifeguard systems, emergency equipment, documentation, equipment, and the facility condition overall. Aquatic Safety Auditors provide a detailed report including findings and recommendations.

### 6.6 Pool Amenities and Equipment

All pool amenities that are available for public use should be inspected daily before public access is permitted. Amenities in an unsafe condition should be closed until repairs can be completed.

### 6.7 Air Quality

All equipment that is available for public use should be inspected according to a facility schedule that would be determined based off a risk assessment. Any equipment that is determined to be damaged or unsafe should be removed from service.

Heating, ventilation and air conditioning (HVAC) systems must be operated continuously while aquatic facilities are occupied by staff and the public to provide the minimum quality of outdoor air for ventilation, as required by the standards or building codes to which the building was designed. Owner's/owner's agents shall ensure that the HVAC systems are inspected by a qualified technician and that the filters are not dirty, damaged, dislodged or leaking around the edges. For more information refer to the Lifesaving Society 'Air Quality Position Statement (Appendix A). The noise generated by the HVAC system must not exceed 55dBA at any time while the aquatic facility is open for use. For more information refer to the Model Aquatic Health Code (Appendix B).

### 6.8 Anti-entrapment

All pool water outlet covers must be inspected visually daily. If any of the pool's water outlet covers are loose or missing the pool must be closed until the cover is repaired or replaced.

Monthly in-water physical inspection of these outlets is recommended. Facility personnel should not underestimate the power or danger of suction. Outlet cover inspections should be undertaken with extreme caution to ensure safety. The outlet inspection procedure may include:

- Shutting down the filter system and ensuring that:
  - There is no suction in the system;
  - The system is locked out or supervised to ensure that it is not turned on during the inspection;
- A diagram of the pool depicting the outlet covers will guide the inspection. Each outlet cover should be assigned a number to help the accurate recording of inspection results;
- A lifeguard must be present as an emergency back-up during the inspection;
- Record the inspection results and any remedial action required and completed.

#### 6.8.1 Single Drain

Any pool with only one drain must have at least two anti-entrapment devices installed and maintained. Suction from the main drain in pools with only one drain has resulted in drownings and serious injury. All swimming pools must comply with the Alberta Swimming Pool Regulation (Appendix B), ANSI approved anti-entrapment devices may provide additional layers of protection.

#### 6.8.2 Equalizer Lines

Some pool circulation systems include pool skimmers with equalizer fittings located in either the skimmer basket or the pool wall below water level. All equalizer fittings that are located in the pool basin should be permanently plugged and disabled.

### 6.9 General Sanitation Plan

Every public aquatic facility must develop a General Sanitation Plan. This plan must list the chemicals used for cleaning and disinfection and specify the cleaning routine. The required content is outlined in Part 4, 13.1 of the Alberta Health Pool Standards (Appendix B).

# Section 7: Specialized Equipment

The public aquatic facility owner/owner's agent must install, maintain, and operate specialized equipment as per the Building Code Requirements and manufacturer recommendations. Where applicable, relevant information should be included in the policies and procedures of the facility and documented in the Personnel Manual, Pool Operating Documents, and/or Aquatic Safety and Supervision Plan.

## 7.1 Starting Blocks

Starting blocks for swimming competition must be installed and maintained in accordance with the manufacturers' directions. Refer to the Swim Canada rule book for the standard for the use of starting blocks for swimming competition and practice (Appendix B).

If the starting blocks are available for use by the general public, the Lifesaving Society recommends that the water depth under and in front of the blocks is 2.5 metres for a distance of at least 8 metres from the starting point.

## 7.2 Diving Boards or Platforms

For recreational use of a 1 metre and 3 metre diving board or platform, pool operators shall ensure:

- That surfaces (steps, ladder, springboard and platform) are non-slip even in wet conditions.
- That the part of a springboard or diving platform which is not over water, and that is 1 meter from the surface or higher, must be equipped on both sides with guardrails which conform to building codes and standards.
- That access to a 3 meter or higher diving board or diving platform by a ladder is limited to individuals over 12 years of age, and measuring at least 1.35 metres in height.

Minimum standards for safe entries off a diving board or platform for competitive swimmers are provided in the FINA (Federation Internationale de Natation Amateur) preferred standard. The latest version of the standard is available through links at the Lifesaving Society website or in the Alberta Building Code.

The FINA standards were designed to protect skilled competitive divers who are trained and supervised by diving coaches. Untrained recreational divers may experience a greater level of injury risk than competitive divers.

Note: Many older pools have diving boards and/or platforms that were installed according to an early standard and may not be able to meet the current FINA standard. The Lifesaving Society recommends that all diving board installations comply with the Alberta Building Code and FINA standards. The Lifesaving Society recommends that diving boards and platforms which cannot meet the current standards be removed from use.

## 7.3 Waterslides

Waterslides must be maintained and inspected according to the instructions supplied by the manufacturer. Controls should be implemented which minimize the risk of collision or injury within the slide or the landing pool/flume at the bottom of the slide. Examples of controls would be:

- A slide attendant controlling the dispatch of sliders;
- Signage indicating that the next slider can't go until the slider ahead has reached the end of the slide; and/or
- A light which is controlled by a timer or a sensor which is automatically activated when it is safe for the next slider to go.

Operators should evaluate factors which affect the movement of bathers within the slide and establish appropriate safety standards.

## 7.4 Rope Swing

A professional structural engineer should be consulted prior to installing a rope swing. When installing a rope swing, every owner/owner's agent shall ensure that the rope swing be installed over a landing zone where the minimum depth of water is not less than:

- 2.5m where the bather starts from a launching point elevation that is not greater than 1 meter above the water surface with a foot first entry into the water.
- 3.2m where the bather starts from a launch point elevation that is not greater than 1 meter above the water surface where a head first entry into the water is permitted.
- 3.8m where the bather starts from a launching position elevation that is greater than 1 meter to a maximum 3 meters in height above the water surface where any type of entry is permitted.

### 7.5 Aquatic Amenities

Aquatic amenities such as climbing walls, artificial sheet waves or inflatable structures must be installed and maintained in accordance with the manufacturer's instructions. These installations should have a risk assessment conducted on them to identify hazards and identify controls that can be implemented to minimize and rescue risk to bathers.

### 7.6 Installing Recreational Equipment

Installation of all recreational equipment must be in compliance with the Alberta Building Code (Appendix B). This code covers all permanently installed play equipment. The hardware of this equipment should be corrosion resistant and the design and location approved. The owner/owner's agent must be aware of the specific regulations governing installation of operation of recreational equipment.

Recreational equipment must be installed, maintained and operated in accordance with the manufacturer's specifications unless it contravenes the Alberta Building Code. These specifications can be obtained from either the manufacturer or the distributor of the equipment.

Recreation equipment must not contain any protrusions, means of entanglement or other obstruction that might cause the entrapment of a bather. All new equipment should be tested by aquatic personnel and appropriate rules for use be determined and posted before being released for use.

# Appendix A

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## Lifesaving Society Resources

Resources are available from the Lifesaving Society to assist aquatic facility owners/owner's agents and operators to evaluate the safety needs of their facility and to develop safe operation practices. Visit the Lifesaving Society website, for the most complete and current list and links to resources from the Society. You can also contact the Lifesaving Society with questions or requests for assistance.

Lifesaving Society standards, services, resources, programs, and products include:

### Standards and Research:

- Lifesaving Society Safety Standards: designed to assist aquatic facility owners/owner's agents and operators in providing a safe aquatic environment. Includes standards for public facilities, semipublic pools, wading pools, beaches and private pools.
- Standards Journal: a combination of aquatic safety related legal reports and recommendations, and Lifesaving Society Positions on safety issues.
- Lifesaving Society Position Statements: formal Society Positions on a variety of topics.
- Drowning Research: Drowning Reports – analysis of the Society's annual drowning research.
- Risk Management Articles: used to educate facility owners about public safety issues and the measures they can take to create safe environments and enhance public safety.

### Aquatic Safety Management Services:

- Comprehensive and Topical Aquatic Safety Audits
- Lifeguard Positioning Analysis
- Facility Design and Signage Consultations
- Safety and Supervision Plan Review and Incident Analysis

### Safety Management Resources:

- Aquatic Safety and Supervision Template
- Anti-entrapment Template
- Sample forms and tools for developing risk management practices for your facility. Examples include first aid forms, major incident documentation, EMS telephone scripts, Critical Incident Stress Management, suggested contents for Aquatic Staff Manual.

### Public Education Resources:

- Water Smart® messages about choices to reduce risks in, on and around the water. Includes Within Arm's Reach video, brochure and posters.



### Programs:

- Training Programs: Swim for Life Learn to Swim Program, Canadian Swim Patrol, Bronze Medals, National Lifeguard, Lifesaving First Aid and much more.
- Safety Management Training Programs: Aquatic Safety Inspector, Aquatic Safety Auditor, SEE Auditor, Aquatic Supervisor Training, and Aquatic Management Training..
- Lifesaving Society Reference Manuals: Canadian Lifesaving Manual, Alert: Lifeguarding in Action, the Canadian Competition Manual, and the Alberta and Northwest Territories Competition Manual.

### Safety Equipment and Training Products:

- Includes spineboards and head immobilizers, barrier devices such as pocket masks, whistles, rescue tubes, lifeguard clothing, Actar CPR training manikins and much more.
- Contact the Lifesaving Society to inquire about becoming an affiliate delivery partner.

# Appendix B

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## Government Resources

Public aquatic facility owners/owner's agents must be aware of government legislations, standards, regulations, and codes for their community. Information about these requirements and links to government websites are included in the Safety Management section of the Lifesaving Society website, [www.lifesaving.org](http://www.lifesaving.org).

Relevant Provincial Government legislations and regulations may include:

- Alberta Building Code
- Alberta Health Pool Standards
- Alberta Swimming Pool Regulation
- Employment Standards Regulation
- Fire Regulations
- First Aid Regulation
- Occupational Health and Safety Code
- Occupiers Liability Act
- WHMIS
- Working Alone Safely

## Other Relevant Resources

Resources from the Lifesaving Society Canada International Lifesaving Federation (ILS) and FINA are valuable to assist aquatic facility owners/owner's agents. Information about these organizations and links to their websites are included in the Safety Management section of the Lifesaving Society website.

# Appendix C

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## Signage Standard

|                     |  |
|---------------------|--|
| <b>Color</b>        | Red Slash and Border - activity is prohibited.<br>Green Border - activity is permitted<br>Yellow Background - warning or caution   |
| <b>Rules</b>        | Rules shall clearly indicate which activities are prohibited or permitted. Including the reason for the rule increases compliance.   |
| <b>Duty to Warn</b> | The facility owner/owner's agent shall identify hazards, the risk or consequence of the hazard and how to avoid it.  |
| <b>Location</b>     | Signs shall be posted at the hazard and where possible, at the access points or routes. Signage should be considered for appropriate locations that informs customers about emergency signals and the facility admission policy. Facility management and staff should regularly evaluate if the existing signs are effective or whether other signage is required and take appropriate follow-up measures. |

# References

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- **Alberta Health Pool Standards, July 2014 (Amended January 2018).** Public Health and Compliance; 2018
- **Alberta Pool Standards, July 2014 (Amended January 2018).** Government of Alberta, Edmonton, Alberta, Canada; 2018
- **Alberta Regulation 87/2009 Occupational Health and Safety Code.** Government of Alberta, Edmonton, Alberta, Canada; 2020
- **Alberta Regulation 204/2014 Public Health Act Public Swimming Pool Regulation.** Government of Alberta, Edmonton, Alberta, Canada; 2019
- **Alert: lifeguarding in action.** Royal Life Saving Society Canada, Ottawa, Ontario, Canada; 2016
- **Beach Lifeguarding.** Royal Life Saving Society UK, Studley, Warwickshire, United Kingdom, 1994
- **The Encyclopedia of Aquatic Codes & Standards.** National Recreation and Park Association, Ashburn, Virginia, USA; 1999
- **FINA Facility Rules 2017-2021.** Federation Internationale de Natation Amateur (FINA), Lausanne, Switzerland; 2017
- **Guide to Ontario Public Pool Regulations.** Royal Life Saving Society Ontario, Toronto, Ontario, Canada; 2018
- **Guidelines for Safe Pool Operation.** Royal Life Saving Society Australia, North Sydney, New South Wales, Australia; 1996
- **Model Aquatic Health Code.** <https://www.cdc.gov/mahc/pdf/2018-MAHC-Code-Clean-508.pdf>; 2018
- **National Building Code - 2019 Alberta Edition, Volume 1.** National Research Council of Canada, Ottawa, Ontario, Canada; 2019
- **National Lifeguard Standards.** Marianne Paul; Royal Life Saving Society Canada, Ottawa, Ontario, Canada; 1989
- **Lifesaving Society Canada General Standards.** Royal Life Saving Society Canada, Ottawa, Ontario, Canada
- **Lifesaving Society Canada Swimming Pool Standards.** Royal Life Saving Society Canada, Ottawa, Ontario, Canada
- **Standard of Practice for Swimming Pools.** Government of Alberta, Edmonton, Alberta, Canada; 1985
- **Safety in Swimming Pools.** Sports Council Publications, Wetherby, United Kingdom; 1988
- **Waterfront Safety Standards.** Royal Life Saving Society Alberta and Northwest Territories, Edmonton, Alberta, Canada; 1999

- **WWA Considerations for Operating Safety.** World Waterpark Association, Lenexa, Kansas, USA; 1989

**Publications of the Lifesaving Society are available from any Branch office. Inquiries from outside Canada should be directed to the National Office.**

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