

Waterfront Safety Standards

July 2004



LIFESAVING SOCIETY®

The Lifeguarding Experts

Other Safety Standard Publications available from the Lifesaving Society include:

Public Aquatic Facility Safety Standards: designed to assist public aquatic facility owners and operators in providing a safe aquatic environment. It recommends minimum safety standards for public aquatic facility operation.

Private Pool Safety Standards: designed to assist private pool owners and operators in providing a safe aquatic environment. It recommends minimum safety standards for private pool operation.

Semipublic Swimming Pool Safety Standards: designed to assist semipublic swimming pool owners and operators in providing a safe aquatic environment. It recommends minimum safety standards for semipublic swimming pool operation.

Public Wading Pool Safety Standards: designed to assist public wading pool owners and operators in providing a safe aquatic environment. It recommends a minimum safety standards for public wading pool operation.

Waterfront Safety Standards

July 2004



LIFESAVING SOCIETY®

The Lifeguarding Experts

WATERFRONT SAFETY STANDARDS

Published by the Lifesaving Society

13123 - 156 Street

Edmonton, Alberta, Canada T5V 1V2

Phone: (780) 415-1755; Fax: (780) 427-9334

Email: experts@lifesaving.org; Website: www.lifesaving.org

First Printing November 1999. Second Printing, Revised July 2004.

Copyright 2004 by the Royal Life Saving Society Canada. Reproduction by any means of materials contained in this book is prohibited unless authorized by the publisher. Direct inquiries can be made to the Lifesaving Society office.

The Lifesaving Society is Canada's lifeguarding experts. The Society is a national charitable organization working to prevent drowning and water-related injuries through lifeguard, lifesaving, and swimming training, competitive lifesaving, safety management standards and services, and Water Smart® public education.

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

National Library of Canada Cataloguing in Publication

Waterfront Safety Standards

ISBN 0-9733805-9-4

Lifesaving Society®, Swim for Life™, Swim to Survive™, and Water Smart® is a registered trademark of the Royal Life Saving Society Canada. Trademarks other than those owned by the Lifesaving Society used in this document belong to their registered owners.

CONTENTS

Executive Summary	1
Foreword	3
The Drowning Problem	5
Children & Aquatics	6
Adults at Risk	6
Diving & Shallow Water	6
Alcohol	7
Waterfront Risks	7
Groups	8
Definitions	9
Risk Management	11
Who is Responsible?	11
Risk Management Process	11
Preventing Incidents	11
Insurance	12
Personnel and Supervision	13
Waterfront Categories	13
Supervision	13
Lifeguard Supervision	13
Lifeguard Qualifications	14
Aquatic Instructor Qualifications	14
Orientation Training	14
Inservice Training	14
Aquatic Facility Supervision Standard	15
Staff Manual	15
Staff Communication	16
Health and Safety	16
Barrier Devices	16
Sun Protection	16
Emergency Procedures	17
Lifeguard Present	17
General Procedures	17
Specialized Procedures	17
Unsupervised Waterfront	18
Required Emergency Equipment	18
Supervised Waterfont	18
Unsupervised Waterfont	19
Contacting Emergency Services	19
Critical Incident Stress	19

Safety Systems	20
Facility Operating Manual	20
Waterfront Safety Rules	20
Safe Diving Rules	20
Recreational Equipment Rules	20
Signage	21
Standards for Signage	21
Facility Safety Rules Signs	21
Recreational Equipment Signs	21
Diving Signs	22
Other Signs	22
Admission Policies	22
Group Admissions	22
Supervision Systems for Supervised Waterfronts	23
Minimize Distractions	23
Lifeguard Positioning	23
Vigilance	23
Scanning	23
Lifeguard Identification	23
Number of Lifeguards	24
Instructional Programs Supervision	25
Aquatic Instructor to Student Ratios	25
Incident Tracking and Analysis	25
Waterfront Operation	26
Water Quality	26
Water Testing	26
Waterfront Fouling	26
Inspections and Testing	26
Recreational Equipment	27
Emergency Equipment	27
GFI - Ground Fault Interrupters	27
Safe Environment	28
Designating the Waterfront	28
Recreational Equipment Safety Standards	29
Waterslides	29
Swimming Rafts	29
Diving Boards or Platforms	29
Other Recreational Equipment	29
Recreational Equipment Installation	30
Resources	31
Lifesaving Society Resources	31
Government Resources	32
Other Relevant Resources	32
References	33

EXECUTIVE SUMMARY

Every owner of a waterfront facility has an obligation to provide a safe environment for every user of the waterfront. This obligation has been very clearly identified and affirmed by court decisions across Canada. In order to meet this obligation, you need the assistance of the experts – the Lifesaving Society. The Lifesaving Society is the authority in aquatic standards and safety. Our standards and expertise are based on extensive research and over 100 years of public safety education and service. We are leaders in research and prevention of injury and drowning.

The Lifesaving Society has a mandate for public safety. The Lifesaving Society *Waterfront Safety Standards* are your source of information about how to provide a safe environment and understand the regulations and standards that you must follow to achieve this goal. The Society developed and published these standards to educate waterfront owners about what they can do to safely operate their waterfront. Applying these standards to your waterfront will help you protect your customers – the public. It will also help you reduce the risk of injury or legal actions resulting from injuries.

The information in the Lifesaving Society *Waterfront Safety Standards* is organized in a logical order to help you understand the material and take the necessary actions to create and maintain a safe environment for your waterfront users. The following sections of the Standards address information for specific needs:

- **The Drowning Problem** – Provides you with information from the Lifesaving Society Drowning Research about who is at risk of drowning or being injured at your waterfront and the behaviors that may result in injuries.
- **Definitions** – Definitions of terms used in the standards.
- **Risk Management** – Provides you with information about your responsibility as the waterfront owner for the safe operation of your waterfront. Explains the risk management process that you can use to analyze and understand the risks associated with your waterfront and take steps to eliminate or reduce these risks.
- **Personnel and Supervision** – Explains the requirements for staff to operate and supervise a waterfront. It also includes recommendations for staff training and safety.
- **Emergency Procedures** – Emergency procedures are the steps waterfront staff can take to respond to an incident or help an injured person. This section provides guidance to help you identify and plan for the procedures you will need for your waterfront and select the necessary emergency equipment.
- **Safety Systems** – Safety systems are the day to day actions and policies established to prevent incidents and injuries. They include

such things as waterfront rules and how they are to be implemented, procedures for controlling access to the waterfront, suggestions for signs to educate users about hazards and safe behaviors for using the waterfront, and systems for supervising patrons.

- **Waterfront Operation** – Presents recommendations for the procedures used to operate the waterfront and maintain a safe waterfront. This includes maintaining safe water quality, and inspecting and testing waterfront equipment.
- **Safe Environment** – This section provides you with direction about how to make the physical environment of the waterfront safe. This includes items such as buoylines, recreational equipment such as swimming rafts, safe water quality, waterfront and equipment maintenance and much more.
- **Resources** – This section includes information about additional support resources and information available from the Lifesaving Society. This includes Lifesaving Society links to Government resources and other organizations which can assist aquatic facility owners and operators to provide a safe environment. The *Safety Management* section of the Lifesaving Society website, www.lifesaving.org, is your key to the most complete and current resources from the Society. The website will also have information about emerging issues that may not have been included in this edition of the Lifesaving Society *Waterfront Safety Standards*.

The Lifesaving Society recommends that you read the Lifesaving Society *Waterfront Safety Standards* and use this document to evaluate your waterfront and determine what steps you can take to create a safe environment for your patrons. This information should be shared with facility staff such as lifeguards as well as management who have a safety management role such as a parks director and your organizational risk manager. At least one copy of the Lifesaving Society *Waterfront Safety Standards* should be kept in the waterfront office for easy reference by facility staff. Additional copies are recommended for the other safety managers who should be aware of these standards.

Contact the Lifesaving Society for assistance to understand, interpret and implement the recommendations in the Standards. The Society contact information is located on the inside back cover.

FOREWORD

Faced with the potential for multi-million dollar lawsuits, waterfront owners are becoming more proactive in assessing and managing risk in their aquatic environment. The Lifesaving Society believes that many incidents are foreseeable and therefore preventable.

As the lifeguarding experts, the Lifesaving Society is the authority in aquatic standards and safety. The Society establishes standards for public safety and consults on aquatic safety issues. The Society sets public safety standards for the aquatic industry such as the owners and operators of waterfronts, interprets safety standards for aquatic facility owners, advises government and serves as an expert witness in legal cases involving aquatic safety issues. The Lifesaving Society *Waterfront Safety Standards* present the Lifesaving Society standards and recommendations for the safe operation of waterfront facilities.

The Lifesaving Society has developed and published public safety standards for aquatic activities and facilities throughout our history. The Lifesaving Society 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. 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.

The Lifesaving Society *Waterfront Safety Standards* assembles the standards published in these many different sources into a single document to make this information available and readily accessible to the waterfront owner. This document provides owners of waterfront facilities a set of clear recommendations from the Lifesaving Society for the safe operation of their waterfront. In addition to the Society's recommendations, this document also refers waterfront owners to other codes, regulations, statutes or standards that should be considered when developing safe operating practices for their waterfront. This document does not in any way replace or supersede current legislation. Owners and users must obey all provincial and municipal legislation, regulations and by-laws specific to their waterfront and community.

The Lifesaving Society recognizes that the recommendations provided in the Lifesaving Society *Waterfront Safety Standards* are not the only solutions that waterfront owners can use to provide a safe environment for their customers. The Lifesaving Society also recognizes that each waterfront has unique features. No single document can address every situation and need. In

situations where owners implement alternative safety measures, the Society recommends that they thoroughly evaluate and document these measures. Contact the Lifesaving Society for assistance to understand, interpret and implement the recommendations in the Standards.

THE DROWNING PROBLEM

Drowning is the second leading cause of unintentional death in Canada. The great tragedy is that the vast majority of these deaths are preventable. More than 99% of these fatalities occur in aquatic environments without lifeguard supervision. Aquatic facilities that are supervised by trained lifeguards are the safest locations for Canadians to go to enjoy aquatic activities. These supervised facilities include supervised waterfronts as well as public swimming pools and waterparks.

Over a 10 year period from 1991 to 2000, 2,224 people drowned in natural lakes and ponds, and artificial waterbodies such as reservoirs, retention ponds and artificial lakes. Recreational swimming in these waterbodies claimed the lives of over 300 Canadians and many more people were injured and needed medical attention. Some of these deaths and injuries occurred at waterfront facilities.

Waterfront facilities have a drowning prevention role both within the waterfront as well as within the larger community. Within the facility, they must make every effort to identify potential hazards and take effective steps to protect bathers from injury.

Within the larger community, the staff of a supervised waterfront can provide training in swimming and lifesaving skills as well as Water Smart® education to teach the public to protect themselves around aquatic settings or during aquatic activities. Information about Lifesaving Society training programs and Water Smart® education can be accessed through the Society website, www.lifesaving.org, or by directly contacting the Lifesaving Society. Water Smart® education materials available from the Lifesaving Society includes posters such as the “Within Arm’s Reach” poster and brochure, safety messages for signs and brochures, videos and activities that can be used to educate the public.

At unsupervised waterfronts, safety signs and posters can be used to educate patrons about the risks of aquatic activities and how to make Water Smart® choices to minimize these risks. Providing information about how to contact sources of Water Smart® education such as the Lifesaving Society is another strategy for protecting patrons.

The following Water Smart® information can be used to help develop safety rules for your facility and educate your patrons.

Children & Aquatics

While all age groups are at risk around water, deaths involving children are of particular concern. Drowning fatalities in children under the age of 5 are more than double that of any other age group. A major contributing factor in the deaths of children is the lack of adult supervision. For children under 5 years old, 85% were unsupervised when they drowned. For children age 5-12, 61% were unsupervised and in the age group from 13-15, 34% were unsupervised. These are alarming statistics, and speak volumes to the need for supervision of bathers at your waterfront.

Children are naturally curious about water. They are persistent and ingenious in finding a way to it. Tragedy can strike quickly. Ten seconds of unsupervised play or exploration can result in a drowning. That's all the time it takes! It also only takes a few inches of water for a drowning to occur. To prevent such tragedies, children must be supervised any time they have access to the waterfront. The best protection is to insist that all young children at the waterfront be directly supervised "Within Arm's Reach" distance by a caregiver. The message to your patrons should be: "If you are not within arm's reach, you have gone too far". At a Supervised Waterfront, the role of the lifeguard should be to provide an additional level of supervision and educate caregivers about their supervision and drowning prevention roles. School age children also need Water Smart® education about safe ways to enjoy the waterfront. Requiring a buddy system for these children is a good way to provide another layer of supervision.

The key to protecting children at a waterfront is always insisting that they be closely supervised when in the waterfront area.

Adults at Risk

Children aren't the only ones at risk of drowning in the waterfront. Adults are the second largest group at risk after young children under the age of 5. Drowning usually occurs when the adult goes for a dip alone. This may include swimming for fitness or just cooling off on a hot day. Nobody is around to notice, give assistance or get help if the adult gets into difficulty in the water.

The adult at risk of drowning, like the young child, swims unsupervised. And that's where the greatest danger lies! Everyone should swim with a buddy – adults too.

Diving & Shallow Water

Lifesaving Society Drowning Research has found that shallow water presents risks that the waterfront owner should consider. Any structure that patrons can walk on such as a dock or climb onto may be used for diving and possibly result in a diving injury. For shallow water (less than 2.5m deep), the only safe entry method is feet first. Patrons who dive into shallow water are at great risk. They risk hitting the bottom head-first and injuring their spine from the impact. Many of these victims are young men. The consequences are tragic. Death sometimes occurs, but most times, the person is paralyzed.

One dive into the waterfront can change their quality of life forever.

Approximately 34 Canadians become partially or completely paralyzed each year as a result of breaking their necks in water-related incidents. Most of these injuries occur while diving into shallow water. They also occur as a result of roughness or “horseplay” around the waterfront – throwing or pushing a person into the water, diving from high heights, diving off shoulders, or being “boosted” into the air by another swimmer. Dangerous play can result in a range of injuries which include possible spinal injuries, injuries resulting from collisions with the waterfront bottom as well as injuries resulting from collisions between bathers. Patrons need Water Smart® education and rules about safe ways to enter, play and enjoy the waterfront. Steps should be taken to minimize the risk that they will use waterfront structures to dive into shallow water.

Alcohol

Alcoholic beverages are involved in approximately one-third (36%) of all Canadian preventable water-related deaths, and half (48%) of fatalities where the victim was 18 to 34 years of age.

The high incidence of drowning and alcohol is an important factor for the waterfront owner to keep in mind. Many Canadian adults do not understand the increased risk from mixing aquatic activities and alcohol consumption. The effects of alcohol can include impaired judgement and physical coordination. Impaired patrons may not recognize hazards and may engage in dangerous behavior. In addition they are at increased risk of injury as a result of their physical impairment. Consumption of alcohol at the waterfront or using the swimming area while under the influence should be prohibited.

Waterfront Risks

The nature of a waterfront poses risks that are not present in swimming pools. The following Water Smart® messages will help protect your patrons:

- **Always swim with a buddy and be each other’s lifeguard.**
Friends can challenge poor risk choices or help rescue each other. 40% of drowning victims were alone.
- **Swim at a marked swimming beach.** Go to a marked swimming area and keep within the boundaries. Nonswimmers should wear a lifejacket or PFD in the water. Floating toys require close supervision. Also beware of special hazards such as currents and offshore winds.
- **Check the weather and avoid storm conditions.** Get off the water if you spot a storm coming.
- **Choose It. Use It. Wear your PFD and insist that everyone in your boat use it.** Wearing a PFD while boating is a Water Smart® choice that can help protect against hypothermia and help the boater rescue himself during an incident. Lifesaving Society’s drowning statistics show that only one in ten boaters were wearing a PFD and half did not have one in the boat.

- **Get trained.** Learn to swim and learn lifesaving skills. The Lifesaving Society Swim for Life program teaches critical self rescue and swimming skills, and the Canadian Lifesaving Program teaches lifesaving skills to rescue others. Most drowning victims (67%) were less than 15 metres from a point of safety. Many were closer at only 2 - 3 metres. Simple reaching and throwing assists can make all the difference in these circumstances.

Groups

Waterfronts may be used by a variety of groups within the community. At a Supervised Waterfront, lifeguards will be present to educate the group members about how to enjoy the waterfront safely and be part of the safety supervision of the group. At unsupervised waterfronts, the group is responsible for providing for the safety of its members while using the waterfront. Owners of unsupervised waterfronts can assist groups to plan for their safety through a variety of mechanisms which may include:

- Safety signs that provide recommendations for groups including safety rules and safety systems with recommendations for the group to provide lifeguard supervision;
- Contacting local groups that may be known to use the waterfront and providing safety recommendations;
- Safety planning recommendations on a website associated with the waterfront;
- Recommending that they contact the Lifesaving Society at the Society website: www.lifesaving.org.

Recommendations for Water Smart® safety rules and safety systems for groups are available on the Lifesaving Society website.

DEFINITIONS

- q **Waterfront** means an aquatic facility composed of a water area designated for swimming, the associated beach area of the shoreline and any associated structures such as washrooms and changerooms. The facility may be located on a natural water body such as a lake or a similar artificial water body such as a man-made lake. The waterfront may be a public facility open to the general public or a private facility whose use is restricted to registered guests, customers, owners, tenants and their guests.
- q **Facility Manager or Operator** means a person designated by the waterfront owner as being responsible for the management and operation of the waterfront facility.
- q **Owner** means the person or corporation who is the owner of a waterfront.
- q **Swimmer or Bather** means a person participating in any recreational activity in or on the water.
- q **Patron** means any person using the aquatic facility. This includes swimmers or bathers plus any spectators or other persons on the beach or in other associated areas such as changerooms.
- q **Lifeguard** means a person holding a current National Lifeguard (NLS) certification appointed by the owner or operator to maintain supervision over the swimmers while they are on the beach or in the swimming area.
- q **Swimming Area** means the water area designated and marked for swimming.
- q **Beach** means the shore area immediately surrounding the waterfront and designated as part of the waterfront facility.
- q **Diving Board** means a flexible board intended for use by divers.
- q **Diving Platform** means a rigid board or platform intended for use by divers.
- q **Current Award** means a training certification which is valid for a specified period from the date of certification or examination. The length of time that a certificate is current may be set by the certifying body and/or government regulation. For example, Lifesaving Society National Lifeguard Award is current for 2 years from the date of certification and Lifesaving Standard First Aid certification is current for 3 years from the date of certification.

- q *Lifeguard Supervision* is the deliberate and conscious act of observing facility users to ensure the lifeguard is immediately aware of any incident or behavior which may prove life-threatening or injurious.

RISK MANAGEMENT

Who is Responsible?

Ultimately the owner of a waterfront is responsible for the safe operation of the facility. The responsibility for the operation of the facility may be delegated to a Facility Manager or Operator. This responsibility may be further delegated to individuals such as Supervisors or Lifeguards who may be left in charge of the facility if it is a supervised waterfront. When the owner or manager is not present, the “in-charge” person, regardless of title, assumes full responsibility for the safe operation of the facility.

The Lifesaving Society *Waterfront Safety Standards* outlines the Lifesaving Society’s recommendations for minimum safety requirements for waterfronts. Safety shall be the primary concern of waterfront owners and managers. All facility staff are encouraged to go beyond the minimum requirements in their mandate to provide a safe environment. This means practising risk management: working diligently to prevent emergencies, but also responding to them quickly and efficiently if they do happen.

Risk Management Process

Risk Management is an ongoing process that is used to identify risks associated with your waterfront and activities at the waterfront, and take measures to reduce risk and prevent incidents and injuries. The process includes the following steps:

1. Identify risks
2. Evaluate: Why are they happening? What is the source?
3. Develop controls and strategies to minimize or eliminate risks including education of facility users regarding safe behaviors
4. Implement
5. Monitor efforts and evaluate results

Preventing Incidents

All waterfront personnel and owners/operators shall view incident prevention as an integral part of their jobs. An attitude should be fostered and encouraged among staff that they are hired to anticipate incidents and take steps to prevent them, as well as respond to emergencies.

Establishing safety systems are important steps in prevention. One way of doing this is to keep accurate incident records. Tracking incidents and analysing these records to develop strategies to reduce risk is critical to risk management.

Facility analysis is an important means to reduce risk. Is equipment in good working order? Are there danger zones where incidents tend to occur or may occur? Are there problems created by structures or design? How secure is the area? Are the marking systems for the swimming area adequate? Can these be changed or the potential risk be reduced?

Insurance The owner of a waterfront facility shall make certain that an insurance policy and liability coverage are in place to cover the facility, staff, 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.

PERSONNEL AND SUPERVISION

Waterfront Categories

For the purposes of these standards, waterfronts are divided into two categories:

- **Unsupervised Waterfront** – public or private waterfront which is not supervised by lifeguards.
- **Supervised Waterfront** - public or private waterfront which is supervised by lifeguards.

Note: Waterfronts for use at camps for children are categorized as Supervised Waterfronts and shall provide lifeguard supervision.

Supervision

Lifesaving Society drowning research statistics show that most drownings occur in aquatic settings without lifeguard supervision. Almost half of the victims were alone at the time of their death. These are alarming numbers, and this is why the Lifesaving Society encourages all owners of waterfront facilities to consider the need and options to supervise the waterfront when it is used by patrons.

Supervision options include:

1. A lifeguard who is responsible for continuous surveillance of bathers in the swimming area. ***The lifeguard system is the approach recommended by the Lifesaving Society.*** Lifeguarded facilities provide the highest level of public safety for facility users and owners.
2. A buddy system where waterfront patrons should be accompanied by another person with the clear expectation that they are responsible for supervising each other. Swimming alone should not be an acceptable practice.

If the waterfront is not supervised by a lifeguard; the owner of a waterfront shall post signs in visibly conspicuous locations on the beach and at all access points stating the following or something similar:

Warning: No Lifeguard on Duty. Children must be supervised by an adult.

Lifeguard Supervision

At Supervised Waterfronts, lifeguards shall be on duty and in position at all times during the hours of supervision. Signs shall be posted and clearly visible to patrons indicating the hours of supervision. In the event that the waterfront is being used solely for aquatic instruction, a qualified aquatic instructor may be substituted for a lifeguard only if each instructor is also a qualified lifeguard. Each instructor can only supervise one class or group. 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 qualified lifeguard shall supervise the waterfront area.

Lifeguard Qualifications

Lifeguard - Required minimum qualifications

- Minimum age 16;
- Hold a current National Lifeguard (NLS) Award (NLS Waterfront option is recommended, any other NLS Award is acceptable);
- Hold a current Standard First Aid (Aquatic Emergency Care Award or Lifesaving Standard First Aid recommended);
- Be trained in the waterfront safety systems and emergency procedures.

Aquatic Instructor Qualifications

Aquatic Instructor - Required minimum qualifications

- Minimum age 15;
- Hold a current Instructor award such as Swim for Life Instructor or Lifesaving Instructor;
- Hold a current lifesaving or lifeguarding award - minimum Bronze Cross (Distinction and National Lifeguard exceed the Bronze Cross minimum);
- Be trained in the waterfront safety systems and emergency procedures.

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

Orientation Training

All new or returning supervision staff shall receive orientation training before assuming their supervision 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;
- 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;
- Specific training in the waterfront safety systems and emergency procedures;
- Specific training in public relations and effectively dealing with the patrons.

Inservice Training

Waterfront staff and employers shall recognize the need for regular review of procedures and skills assessment. Inservice training should include:

- Evaluation and practice of emergency procedures designed specifically for the waterfront;
- Review and practice of supervision, recognition and rescue skills;
- Practice use of safety equipment;
- Review of supervision policies and procedures including number of staff per patron and guidelines for patron and staff conduct;
- Review and practice of first aid skills including use of first aid

equipment and supplies;

- Practice of public relations and effectively dealing with the patrons;
- WHMIS training appropriate to the materials and equipment they may be expected to use.

Aquatic Facility Supervision Standard

Every owner/operator of a supervised waterfront shall establish an Aquatic Facility Supervision Standard. This standard shall define the minimum requirements for lifeguards and instructors who are responsible for the supervision of bathers. The standard should include:

- Fitness and skill standards appropriate for the waterfront;
- Minimum vision and hearing standards;
- Practices to evaluate if conditions such as injuries, illness and pregnancy prevent the staff person from meeting the standard;
- Minimum training to effectively perform all required supervision duties;
- A process to identify and replace on duty any staff member who is not able to meet the standard at any time she is scheduled to work in a supervision role.

Two parties have a responsibility to ensure that staff are able meet their obligations - the employer and the lifeguard/instructor. The employer is required to take reasonable steps to ensure that supervision staff are able to perform to the Aquatic Facility Supervision Standard when employed in a supervision role. The lifeguard/instructor also has a personal responsibility to be able to meet the required Aquatic Facility Supervision Standard at anytime that she is lifeguarding or instructing. It also requires that anytime she is not able to meet the standard (eg. due to illness or injury) she shall inform her employer. A lifeguard/instructor who is unable to meet the minimum standard to lifeguard or instruct at her facility should not work in a supervision role until she is able meet the standard.

Staff Manual

Every waterfront should develop a Staff Manual. This manual should be readily available to the waterfront staff. The Lifesaving Society recommends that all staff be provided with a personal copy of the Staff Manual. The intent of this manual is to function as a training and reference resource for the waterfront staff and management. The suggested content should include:

- All facility supervision procedures and requirements;
- All specific safety systems and emergency procedures that the staff member is required to know and be able to do;
- Relevant employment policies and procedures as well as any specific employment standards such as the Aquatic Facility Supervision Standard.

The Staff Manual may be a subset of the more comprehensive Facility Operating Manual.

Staff Communication

A system shall be implemented which provides for regular communication and updates for facility staff. The primary purpose is to communicate information that is useful in maintaining the safety of patrons and staff.

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.

Health and Safety *Barrier Devices*

All waterfront staff shall have access to barrier devices to prevent cross contamination in a first aid situation. At minimum this shall include a rescue breathing barrier device with a one-way valve and disposable surgical gloves. Because waterfront staff may be required to initiate first aid before the facility first aid kit arrives, the Lifesaving Society recommends that all staff have barrier devices that can be carried with them while on duty.

Sun Protection

All waterfront staff shall 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. The Lifesaving Society position statement – Sun Protection in the Aquatic Environment – is posted in the Safety Management section of the Society website at www.lifesaving.org.

EMERGENCY PROCEDURES

Lifeguard Present

All supervised waterfront facilities shall develop and document a set of emergency procedures appropriate to the needs of the facility. The emergency procedures may be a combination of general and specialized emergency procedures designed to address incidents or injuries that may be expected to occur at the specific waterfront. It may be necessary to have different versions to accommodate different staffing levels (eg. 1 lifeguard vs. 2 lifeguards on duty).

General Procedures

These are generalized procedures which can be adapted to a variety of incidents or injuries.

- **Minor Emergencies** - adequate waterfront coverage can be maintained at all times by one or more lifeguards (eg. simple first aid, public relations)
- **Major Emergencies** - adequate waterfront coverage cannot be maintained and the swimming area must be cleared until lifeguard attention can be directed back to waterfront supervision (eg. multiple victims, serious first aid, pullout requiring resuscitation)

An excellent reference for developing emergency procedures for your waterfront is the Lifesaving Society lifeguarding manual – *Alert, lifeguarding in action*. This manual also provides excellent guidance for many of the safety practices that are required for a safe environment. Additional resources are available on the Lifesaving Society website at www.lifesaving.org.

Specialized Procedures

Specialized procedures are designed to address very specific situations that may require very clear, detailed procedures. These situations may include events which threaten multiple individuals such as a fire or lightning. Other situations such as the treatment of possible spinal injuries benefit from developing very clear and detailed procedures which can be practised and developed to a competent and consistent level of skill. Facility management and staff should analyse the types of situations that would benefit from specialized procedures and develop the appropriate emergency procedures.

Examples of common specialized emergency procedures include:

- Evacuation procedures for fire or lightning;
- Missing person;
- Bomb threat;
- Scuba injury.

Emergency procedures should include and document at least these elements:

- Emergency signals;
- Procedures for clearing the swimming area;
- Roles of all responding staff;
- Roles of bystanders;
- Procedures for contacting emergency services;
- Defined focal points for removing a victim from the water and providing treatment;
- Emergency equipment required;
- Procedures for notifying any other persons (eg. management, a victim's family members, other persons that might be affected by the incident);
- Practices for dealing with media inquiries.

Unsupervised Waterfront

Basic emergency procedures should be addressed and may be as simple as posting a sign with instructions about what to do in the event of an emergency (eg. location of emergency phone, call 911, cover with a blanket, etc.).

Required Emergency Equipment

Supervised Waterfront

Every supervised waterfront shall have the following emergency equipment available and appropriately located for use in an emergency:

- A dedicated emergency telephone with posted emergency numbers;
- A rescue aid such as a rescue can or tube for each lifeguard;
- At least 2 buoyant throwing assists with a 15 metre buoyant line attached;
- At least 2 reaching poles at least 3 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 injury victim;
- At least one Number 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;
- A designated first aid area;
- Rescue craft such as a paddleboard or boat when any part of the swimming area extends more than 50 metres from shore. A paddleboard is recommended if the distance is greater than 25 metres.

The following equipment may also be appropriate for lifeguard use:

- Skindiving equipment including mask, fins and snorkel for water searches;
- Binoculars;

- Oxygen inhalator capable of a flow rate of 10 - 15 litres/minute. Inclusion of a pocket mask with oxygen fitting can permit oxygen resuscitation of a nonbreathing victim;
- One or more extra spineboards with head immobilizers for training purposes;
- An Automated External Defibrillator (AED).

Unsupervised Waterfont

Every unsupervised waterfront shall have the following emergency equipment available and appropriately located for use in an emergency:

- A dedicated emergency telephone with posted emergency numbers;
- At least 1 buoyant throwing assist with a 15 metre buoyant line attached;
- At least 1 reaching pole at least 3 metres in length.

Note: Emergency equipment can be purchased from the Lifesaving Society and various safety equipment suppliers. Instructions for building throwing assists and reaching poles are available on the Lifesaving Society website www.lifesaving.org.

Contacting Emergency Services

Every waterfront shall have an emergency telephone which is easily accessible and has a dedicated line to EMS. The telephone shall be able to work in the event of a power failure. At an unsupervised waterfront, a payphone is acceptable if it provides direct EMS access without requiring any payment. If the emergency phone is not easily accessible, directions to the nearest phone shall be posted at the beach.

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

It is recommended that a script for the emergency call 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 may include information such as: facility address, phone number, a prompt to describe the nature of the emergency, the location for emergency access, etc.

Critical Incident Stress

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

SAFETY SYSTEMS

All waterfronts shall develop and document a set of safety systems appropriate to the needs of the facility. Safety systems are the day to day actions and policies established to prevent incidents and injuries. They include such things as waterfront rules and how they are to be implemented, and procedures for preparing the waterfront area for bathers. Safety systems are an important part of minimizing risk and preventing injury.

Facility Operating Manual

Every Waterfront shall develop and maintain a comprehensive Facility Operating Manual. This manual should document all facility operating standards, expectations, policies and procedures required for the safe operation of the facility. The purpose of the manual is to serve as a training and reference resource. It should be stored in an easily accessible location.

Waterfront Safety Rules

Every waterfront owner/operator shall develop and apply a set of rules to guide safe use of the waterfront and its equipment. These rules are intended to reasonably control the risks associated with the use of a waterfront while also facilitating the enjoyment of the aquatic recreation experience. The rules shall be documented in the Facility Operating Manual. Staff should carefully analyse the facility and equipment to identify risks which may be inherent in their design and construction. Patterns of patron use will also provide useful data. The results of this analysis should be used to develop the safety rules. These rules should be communicated to patrons through the use of signs, announcements and other forms of public education.

Safe Diving Rules

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. Based on this research, the Lifesaving Society's Standard for a minimum safe water depth for diving entries off a dock or swimming raft is 2.5 metres. Entries into water less than 2.5m deep should be feet first. Structures that could be used for diving such as docks or swimming rafts should be evaluated for diving hazards and appropriate safety rules developed.

Recreational Equipment Rules

Rules for the safe use of recreational equipment such as diving boards and platforms, slides, inflatables, etc. shall be developed. These rules should include directions for safe use as well as any necessary restrictions such as age or height restrictions.

Signage

Signs serve three functions in a waterfront:

- Inform users about supervision requirements;
- Inform users about the suggested rules for safe use of the facility;
- Warn users of hazards and ways to avoid these hazards.

Signs with general safety rules shall be posted in a conspicuous location in the waterfront area. Where possible, utilize signs which use pictures to convey the message. Use of universal symbols provides instant recognition and avoids confusion if readers cannot read or do not read English.

Standards for Signage

Color:

- Red slash - the activity is prohibited.
- Yellow background - warning or caution
- Green Border - activity is permitted

Rules: clearly indicate which activities are prohibited or permitted. Including the reason for the rule increases compliance.

Duty to Warn: identify hazards, the risk or consequence of the hazard and how to avoid it.

Location: should be posted at the hazard and where possible, at the access points or routes.

Facility Safety Rules Signs

The facility safety rules signs should list general rules to guide the safe use of the waterfront. Some sample rules which should be posted are:

- Suggested minimum age and requirements for supervision of children (eg. all children under the age of 7 should be accompanied “Within Arms Reach” by a responsible person 16 years of age or older);
- Request for lifeguard notification of medical conditions that may affect bather safety; eg. seizure disorder (eg. please alert the attendant of any medical conditions you may have);
- Anyone not toilet trained must wear protective water resistant swimwear to prevent fouling and contamination of the water;
- Play safe;
- No glass containers are allowed in the swimming area or on the beach.

Recreational Equipment Signs

Recreational equipment such as swimming rafts, waterslides, diving boards or rope swings require specific rules and restrictions for safe use of each item. These rules shall be posted in a readily visible location near each piece of equipment.

Diving Signs

Signs providing clear direction about where diving is permitted or restricted shall be posted in locations readily visible to the diver.

Other Signs

Signage should be considered in appropriate locations that informs customers about emergency signals and the facility admission policy. Waterfront owners and staff should regularly evaluate if the existing signs are effective or whether other signage is required and take appropriate follow-up measures.

Note: The Lifesaving Society can provide assistance to locate suppliers of waterfront safety signs.

Admission Policies

Admission policies shall be established as part of the facility rules and communicated to the public through signs and public education. Suggested topics for admission policies include:

- Minimum age and requirements for supervision of children;
- Notification of medical conditions that may affect bather safety; eg. seizure disorder;
- Requirements for group admissions such as orientation to the facility and its rules;
- Additional supervision requirements.

Group Admissions

As part of the admission policies, groups should be required to notify the waterfront owner/operator in advance of the group's planned attendance at the facility. This information should be used to prepare waterfront staff and/or the group to use the waterfront safely.

Supervised Waterfront – ensure that enough lifeguards will be present for the size and type of participants in the group, orient the group to the safety rules and address any specific safety needs of the group.

Unsupervised Waterfront – recommend that group provide a qualified lifeguard to supervise the group at the waterfront. The lifeguard should be one element of a safety plan that includes safety rules, planned emergency procedures, an emergency communication system, rescue and first aid equipment and defined supervision roles of other supervisors such as teachers, group leaders, and parents. Information about these safety plans can be found in the *Safety Management* Section of the Lifesaving Society website.

Supervision Systems for Supervised Waterfronts

Every Supervised Waterfront shall establish systems to provide effective supervision of all persons and activities within the waterfront area.

Minimize Distractions

The primary duty of lifeguards is supervision. All efforts shall 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 are not recommended because they interfere with effective supervision. Assigning duties such as equipment maintenance which may distract the lifeguard is not recommended.

Lifeguard Positioning

The supervision position(s) of lifeguards shall be designed to eliminate blind spots in the waterfront area. It shall be possible for the lifeguard team to observe all bathers in the waterfront area. Waterfront owners and staff shall analyse the waterfront area and implement systems that provide coverage of blind spots. These systems might include the use of elevated lifeguard stations, patrols based on a rescue craft and walking lifeguard patrols.

Vigilance

Lifeguarding is a vigilance task. Every effort shall be made to keep the lifeguard alert and focused on supervision. Regular rotation between stations and regular breaks from the vigilance task are required. If two or more lifeguards are on duty, they should rotate lifeguard stations every 15 - 30 minutes.

The Lifesaving Society recommends that lifeguards should be provided with a minimum 15 minute break from the supervision task every 2 hours. During this break lifeguards may be required to perform other duties such as maintenance.

Scanning

All lifeguards shall be able to continuously scan their area of responsibility. Short interruptions which are designed to prevent injury (eg. safety education) are acceptable.

Lifeguard Identification

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

Number of Lifeguards

At least one lifeguard shall be on duty and in position in order to open the waterfront for supervised use. The Lifesaving Society recommends that at least one other trained responder be on duty, within call and on the premises. This additional person should be trained in the emergency procedures for the waterfront. While this person may be another staff person such as a cashier, janitor or manager, it is recommended that this person be a lifeguard. This recommendation for an additional person also applies during periods when the waterfront is being used for instruction or competition under the direct supervision of one aquatic instructor.

Note: “Within call” means the lifeguard on duty shall be able to call the additional person by voice or by a prearranged alarm system. The lifeguard shall not have to leave the lifeguard position or the victim to summon the assistance of the additional person. The additional person shall be on-site. Use of a pager or cell phone to call for assistance from an additional person who is off-site does not fit the meaning of “within call”.

An adequate number of lifeguards to safely supervise the swimming area shall be on duty during the scheduled hours of supervision. The number of lifeguards changes according to the needs and conditions of each waterfront. Waterfront owners and staff shall analyse their specific waterfront facility, equipment and bather behaviors to determine appropriate numbers of lifeguard for their waterfront. Some of the factors to consider include:

- Length of shoreline;
- Geographical features such as curves or bends in shoreline that may impact on lifeguard sightlines and rescuer response times;
- Distance from shore to outer edge of swimming area;
- Water and weather conditions;
- Experience and training of lifeguards;
- Number and concentration of bathers;
- Age or ability/disability of patrons;
- Level of adult supervision such as parents or teachers;
- Type of bather activity;
- Danger areas;
- Recreational equipment in use (eg. toys, inflatables, slides);
- Public education and relations requirements.

Lifeguards should regularly (eg. every 30 minutes) count the number of bathers in the waterfront. This count should be used to select the number of lifeguards required for that bather load. It is recommended that these counts be documented and used to regularly evaluate lifeguard requirements.

Instructional Programs Supervision

Every Waterfront shall establish systems to provide effective supervision during instructional programs. These systems may include:

- Defined meeting locations where students meet their instructor;
- Procedures to safely guide students out of the swimming area after completion of the program;
- Supervision practices for instructors designed to provide continuous observation of all students.

Aquatic Instructor to Student Ratios

Facility management shall consider patron safety foremost when setting instructor to student ratios. The instructor shall be able to effectively manage the number of students and prevent emergencies. Some factors to consider include the type of activity and the age and swimming ability of the students.

Incident Tracking and Analysis

Effective injury prevention requires an understanding of what types of injuries may occur and the circumstances under which the injuries may result. Every supervised waterfront shall institute a system to document and analyse all injuries and rescues that occur in the waterfront. This data shall be used to evaluate and where appropriate modify emergency procedures, safety systems, staff training or any other practices that might benefit from this analysis.

Unsupervised waterfronts should encourage patrons to report injuries or incidents to the waterfront owner/operator. These reports should be used to identify and correct any safety concerns.

WATERFRONT OPERATION

Water Quality

Maintaining excellent water quality is a critical component of operating a safe environment for your patrons. The water quality shall protect the health and safety of the users by protecting them from disease transmission. Good water quality also contributes to the swimmer's enjoyment of the waterfront.

Water Testing

At least one microbiological sample of water from the swimming area shall be taken at intervals of not more than 7 days and shall be submitted to the Provincial Laboratory of Health. If the water sample does not meet the minimum standard for bather safety, the swimming area shall be closed until subsequent testing confirms that the swimming area is safe for use. If the swimming area must be closed, signs shall be posted at the access points informing patrons of the closure and the risk to their health.

Note: Some waterfronts may be at risk of contamination from sources such as septic systems after a heavy rain storm. These facilities should also submit a water sample for testing after a storm which may result in contamination of the swimming area.

Waterfront Fouling

Every waterfront should take steps to minimize the risk of contamination of the swimming area with fecal material. These may include:

- Recommending that children who have not been toilet trained wear a cloth or pool diaper covered by an impermeable pant with closures that seal around the leg and waist openings;
- Ensuring that effluent from washrooms cannot enter the swimming area;
- Recommending that persons with diarrhea, or who have had diarrhea in the past 2 weeks stay out of the waterfront until they are well;
- Prohibiting dogs from using the swimming area or beach.

Waterfront fouling is a serious concern. Illness involving E Coli and cryptosporidium have been traced to exposure in waterfronts.

Inspections and Testing

All areas and equipment of the waterfront shall be thoroughly inspected at the beginning of the season. The inspection should identify any hazards that must be corrected or marked to protect the waterfront patrons. Examples include drop offs, debris in the swimming area and hidden underwater dangers.

A regular schedule of inspection and testing should be carried out. The schedule should be designed for the needs of the specific equipment or area of the waterfront including inspecting the beach looking for hazards that may be introduced by patrons at the waterfront such as broken glass, fire pits

and deep holes. The inspections may range from a simple visual inspection to a process to test the safe operation of the equipment. Tools such as checklists should be used to document the inspection results and insure that the inspection process is consistent and comprehensive. Any deficiencies identified shall be documented and recommendations for corrective measures identified.

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

Note: Because the waterfront may be affected by environmental conditions such as the weather and water currents which can introduce hazards, the inspection process should anticipate these potential changes. Example: after a storm, the swimming area should be inspected to identify hazards such as debris that may have been introduced into the swimming area or onto the beach.

Recreational Equipment

All recreational equipment (eg. swimming rafts, waterslides, diving boards) should be inspected regularly. If it is used heavily this may need to be daily. Equipment in unsafe condition shall be closed until repairs can be completed and evaluated.

Emergency Equipment

Waterfront emergency equipment shall be inspected daily. All equipment shall be maintained in a state of readiness. Any deficient equipment shall be repaired or replaced immediately.

GFI - Ground Fault Interrupters

Electrical circuits that wet patrons may contact such as in changerooms shall be protected by a GFI. All GFIs shall be tested at least monthly. Any GFI that fails the test shall be disabled and the circuit it controls removed from use until the GFI can be repaired or replaced.

SAFE ENVIRONMENT

The waterfront owner shall be familiar with all codes and regulations that apply to the operation of a waterfront. This includes the building code which sets minimum construction standards for a public waterfront. Where applicable, relevant information from these standards should be incorporated into the policies and procedures of the facility and documented in the Facility Operating Manual.

Note: The Lifesaving Society lifeguarding manual – *Alert, lifeguarding in action* provides excellent guidance for many of the safety practices that are required for a safe environment at a waterfront.

Designating the Waterfront

The swimming area and beach intended for use by patrons shall be clearly designated through signs, buoylines, buoy markers or a combination of these. The following design factors should be considered when designating the waterfront:

- If boating occurs as part of waterfront operations, boating and swimming areas shall be separated.
- Where possible, limit access to the waterfront to one point of entry and to pedestrian traffic only. If conflicting activities occur at the waterfront (eg. swimming and boating) separate points of entry to each area are recommended.
- Any permanent hazards (eg. non-movable rocks, sudden changes in water depth such as drop offs) must be clearly marked.
- If the size of the swimming area and water and weather conditions permit, the swimming area should be surrounded on all water sides with a continuous float line of rope and buoys. The boundaries of the swimming area should be visible from land and water by swimmers and boaters.
- Where swimming areas are located adjacent to motor boat traffic, a set of swimming buoys shall be placed at the outer perimeter of the swimming area to alert boaters to the swimming area. The buoys should be designed so that they can be easily seen by the boat operator. Information about swimming buoys can be found in the Lifesaving Society BOAT Study Guide or the Canadian Coast Guard Safe Boating Guide.
- When choosing the dimensions of a swimming area for a Supervised Waterfront, the operator should take lifeguarding requirements into consideration (eg. rescue response time, scanning the entire area, etc.).

Recreational Equipment Safety Standards

Waterslides

Waterslides shall 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 area at the bottom of the slide.

Swimming Rafts

Some waterfronts may choose to locate a swimming raft within the swimming area. Waterfront owners should recognize that placing this type of structure within the swimming area creates hazards that should be carefully considered before choosing to install a swimming raft.

- Distance from shore – many swimmers will be attracted to swim to the raft and may be tempted to swim beyond their ability. Minimizing the distance from shore can reduce this risk.
- Minimum water depth – the water depth under and around the swimming raft shall be a minimum of 2.5 metres deep. If the top of the platform is more than 20cm above the water level, the swimming platform should be considered a diving platform, and the minimum depth based on the FINA Standard.
- Anchoring – the anchoring system for the raft should be designed to minimize the risk of bather entrapment or possible collision by a diver.

Diving Boards or Platforms

Minimum standards for safe entries off a diving board or platform 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.

Diving boards and platforms should not be installed on floating platforms such as docks or swimming rafts. Movement by waves or persons on the platforms can change the depth under the diver and increase the risk of injury.

Note: *The Lifesaving Society recommends that all diving board installations comply with the FINA preferred standard. The Lifesaving Society recommends that diving boards and platforms which cannot meet the current FINA standard should be removed from use.*

Other Recreational Equipment

Other recreational equipment such as rope swings or large inflatable structures shall be installed and maintained in accordance with the manufacturer's instructions. These installations shall be analysed to identify

any hazards or risks and steps taken to control these risks. Where entry from a height is involved, the FINA Diving standard may be useful for evaluating safe depth requirements.

Recreational Equipment Installation

Installation of all recreational equipment shall be in compliance with the Alberta Building Code. 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/operator shall be aware of the specific regulations governing diving boards and water slide flumes.

Recreational equipment shall 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 shall 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 the waterfront staff and appropriate rules for use be determined and posted before being released for use.

RESOURCES

Lifesaving Society Resources

Many resources are available from the Lifesaving Society to assist waterfront facility owners and operators to evaluate the safety needs of their facility and to develop practices for the safe operation of the facility. These resources include information about safety standards, training programs, resource manuals, sample practices, forms and much more. Visit the *Safety Management* section of the Lifesaving Society website, www.lifesaving.org, 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, programs, products and services include:

- *Lifesaving Society Safety Standards*: designed to assist aquatic facility owners and operators in providing a safe aquatic environment. Includes standards for public facilities, semipublic pools, wading pools, beaches and private pools.
- *Lifesaving Society Reference Manuals*: examples include Canadian Lifesaving Manual (definitive lifesaving training reference) and Alert: lifeguarding in action (the lifeguard training reference).
- *Lifesaving Society Training Programs*: Swim for Life Learn to Swim Program - the national standard for swimming; Canadian Lifesaving Program - lifesaving training including the Bronze Cross award; National Lifeguard Program - training awards for lifeguards at pools, waterparks, waterfronts and surf beaches; Lifesaving First Aid - includes CPR, Lifesaving Emergency and Standard First Aid, Aquatic Emergency Care, Oxygen Administration; and more.
- *Lifesaving Society Position Statements*: formal Society Positions on a variety of topics such as use of defibrillators by lifeguards and sun protection in aquatic environments.
- *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. Sample topics include: pool color and design, inservice training, facility lighting, lifeguard positioning, suction hazards, and pool fouling.
- *Drowning Research*: Drowning Reports – analysis of the Society’s annual drowning research.
- *Public Education*: Water Smart® messages about choices to reduce risks in, on and around the water; Within Arm’s Reach video, brochure and posters; Sudden Impact video, and much more.
- 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.
- *Aquatic Safety Management Services*: Lifesaving Society services to help you operate a safe aquatic environment. Includes aquatic safety

audits, facility design and operation consulting, safety standards and expert witness services.

- *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.

Note: Visit the Lifesaving Society website to find new resources, products and services that are added and updated regularly on the website.

Government Resources

The Lifesaving Society *Waterfront Safety Standards* summarizes standards, guidelines and recommendations from the Lifesaving Society intended to provide guidance for the safe operation of waterfront facilities. This guidance is not intended to replace requirements that may be included in statutes, regulations or guidelines of the Government. Waterfront owners should also be aware of these government requirements. Information about these requirements and links to government websites are included in the *Safety Management* section of the Lifesaving Society website: www.lifesaving.org.

Relevant Government statutes, regulations or guidelines may include:

- Small Vessel Regulations
- Canadian Aids to Navigation System
- Alberta Building Code
- Fire Regulations
- WHMIS
- Employment Standards Regulation
- Occupational Health and Safety Code
- Occupiers Liability Act
- First Aid Regulation
- Working Alone Safely

Other Relevant Resources

Resources from other organizations such as the Centres for Disease Control (CDC) and FINA are valuable resources to assist aquatic facility owners to evaluate the safety needs of their facilities and to develop practices for the safe operation of their aquatic facilities. Information about these organizations and links to their websites are included in the *Safety Management* section of the Lifesaving Society website: www.lifesaving.org.

REFERENCES

- q ***Alert: lifeguarding in action.*** Royal Life Saving Society Canada, Ottawa, Ontario, Canada; 1993
- q ***National Lifeguard Standards.*** Marianne Paul; Royal Life Saving Society Canada, Ottawa, Ontario, Canada; 1989
- q ***Waterfront Safety Standards.*** Royal Life Saving Society Alberta and Northwest Territories, Edmonton, Alberta, Canada; 1999
- q ***Guide to Ontario Public Pool Regulations.*** Royal Life Saving Society Ontario, Toronto, Ontario, Canada; 1996
- q ***Standard of Practice for Swimming Pools.*** Government of Alberta, Edmonton, Alberta, Canada; 1985
- q ***AR 247/85 Public Health Act Swimming Pool Regulation.*** Government of Alberta, Edmonton, Alberta, Canada; 1985
- q ***AR 48/2000 First Aid Regulation.*** Government of Alberta, Edmonton, Alberta, Canada; 2000
- q ***Alberta Building Code 1997.*** National Research Council of Canada, Ottawa, Ontario, Canada; 1998.
- q ***FINA Dimensions for Diving Facilities.*** Federation Internationale de Natation Amateur (FINA), Lausanne, Switzerland; 1991
- q ***Safety in Swimming Waterfronts.*** Sports Council Publications, Wetherby, United Kingdom; 1988
- q ***Guidelines for Safe Waterfront Operation.*** Royal Life Saving Society Australia, North Sydney, New South Wales, Australia; 1996
- q ***WWA Considerations for Operating Safety.*** World Waterpark Association, Lenexa, Kansas, USA; 1989
- q ***Beach Lifeguarding.*** Royal Life Saving Society UK, Studley, Warwickshire, United Kingdom, 1994
- q ***The Encyclopedia of Aquatic Codes & Standards.*** National Recreation and Park Association, Ashburn, Virginia, USA; 1999

- Admission policies 22
- Adults 6
- Alcohol 7
- Aquatic Facility Supervision
 - Standard 15
- Aquatic Instructor 14
- barrier devices 16
- buoy markers 28
- buoylines 28
- Children 6
- communication 16
- Critical Incident Stress 19
- Diving 6, 20, 22, 29
- Drowning Problem 5
- emergency equipment 18, 27
- emergency procedures 17
- emergency telephone 19
- Facility analysis 11
- Facility Operating Manual 20
- GFI 27
- Groups 8
- Incident Tracking 25
- Inservice training 14
- Inspections and Testing 26
- Instructional Programs Supervision
 - 25
- Insurance 12
- Lifeguard 13, 14
- Lifeguard Identification 23
- Lifeguard Positioning 23
- Number of Lifeguards 24
- orientation training 14
- prevention 11
- Recreational Equipment 20, 21, 27, 29
- Risk Management 11
- Risks 7
- Safety Rules 20, 21
- safety systems 20
- Scanning 23
- Signage 21
- Staff Manual 15
- Sun Protection 16
- Supervised Waterfront 13
- Supervision 13, 23
- swimming area 26, 28
- swimming raft 29
- Unsupervised Waterfront 13
- Vigilance 23
- water quality 26
- Water Testing 26
- Waterfront Fouling 26

HOW TO REACH US

For more information about Lifesaving Society programs and services, contact the branch in your area.

Alberta & Northwest Territories Branch

13123 - 156 Street
Edmonton, Alberta T5V 1V2
Telephone: (780) 415-1755
Fax: (780) 427-9334
E-mail: experts@lifesaving.org
Web site: www.lifesaving.org

British Columbia & Yukon Branch

112 - 3989 Henning Drive
Burnaby, British Columbia V5C 6N5
Telephone: (604) 299-5450
Fax: (604) 299-5795
E-mail: info@lifesaving.bc.ca
Web site: www.lifesaving.bc.ca

Manitoba Branch

504 - 138 Portage Avenue East
Winnipeg, Manitoba R3C 0A1
Telephone: (204) 956-2124
Fax: (204) 944-8546
E-mail: aquatics@lifesaving.mb.ca
Web site: www.lifesaving.mb.ca

National Office

287 McArthur Avenue
Ottawa, Ontario K1L 6P3
Telephone: (613) 746-5694
Fax: (613) 746-9929
E-mail: experts@lifesaving.ca
Web site: www.lifesaving.ca

New Brunswick Branch

440 Wilsey Road, Suite 105
Fredericton, New Brunswick E3B 7G5
Telephone: (506) 455-LSNB (5762)
Fax: (506) 450-SWIM (7946)
E-mail: lifesave@nb.aibn.com
Web site: www.lifesavingnb.ca

Newfoundland & Labrador Branch

P.O. Box 8065, Station "A"
St. John's, Newfoundland A1B 3M9
Telephone: (709) 576-1953
Fax: (709) 738-1475
E-mail: lifeguard@nl.rogers.com
Web site: www.lifesavingnl.ca

Nova Scotia Branch

5516 Spring Garden Road
Box 3010 South
Halifax, Nova Scotia B3J 3G6
Telephone: (902) 425-5450
Fax: (902) 425-5606
E-mail: experts@lifesavingsociety.ns.ca
Web site: www.lifesavingsociety.ns.ca

Ontario Branch

400 Consumers Road
Toronto, Ontario M2J 1P8
Telephone: (416) 490-8844
Fax: (416) 490-8766
E-mail: experts@lifeguarding.com
Web site: www.lifesavingsociety.com

Prince Edward Island Branch

P.O.Box 2411
Charlottetown, Prince Edward Island C1A 4A0
Telephone: (902) 368-7757
Fax: (902) 368-7757
E-mail: pei.lifesaving@islandtelecom.com

Quebec Branch

4545 Pierre de Coubertin Avenue
P.O. Box 1000, Station "M"
Montreal, Quebec H1V 3R2
Telephone: (514) 252-3100 or 1-800-265-3093
Fax: (514) 254-6232
E-mail: alerte@sauvetage.qc.ca
Web site: www.sauvetage.qc.ca

Saskatchewan Branch

2224 Smith Street
Regina, Saskatchewan S4P 2P4
Telephone: (306) 780-9255
Fax: (306) 780-9498
E-mail: lifesaving@sasktel.net
Web site: www.lifesavingsociety.sk.ca



LIFESAVING SOCIETY®

The Lifeguarding Experts

