

Aquatic Safety Audit Report

Station Beach Kincardine

January 25, 2016



LIFESAVING SOCIETY

The Lifeguarding Experts

Aquatic Safety Audit

On September 4, 2015, The Corporation of the Municipality of Kincardine retained the Lifesaving Society to undertake a safety audit of Station Beach and the two adjacent piers.

An initial meeting was held with Ms. Karen Kieffer, Director of Parks & Recreation, Municipality of Kincardine and Mr. Michael Shane, Safety Management Director of the Lifesaving Society.

It was agreed that the purpose of the aquatic safety audit was to maximize the safety of participants at Station Beach, Kincardine. The safety audit would identify what steps might be taken to minimize the risk of drowning or serious water-related injuries.

It was agreed that the scope of the safety audit would include discussions with management in addition to an evaluation of the aquatic facility's operation. This evaluation would report only on those items that require attention. It would not address aspects that were satisfactory or exceptional.

Aquatic Safety Audit Process

Personnel

The Lifesaving Society appointed Mr. Michael Shane as the Aquatic Safety Management Services Chief Auditor. He has extensive experience in facility evaluation and waterfront operations.

The Lifesaving Society appointed auditors Mr. Scott Ruddle, Ms. Conny Smith, Mr. Roy Warren, and Ms. Shanna Reid. All auditors have extensive experience in aquatics, facility evaluation and waterfront operations.

The Municipality of Kincardine appointed Ms. Karen Kieffer as the primary contact for the safety audit team.

Audit Components

The audit team followed a process that included:

- On-site waterfront tour of Station Beach and the two adjacent piers was conducted on October 8, 2015 and November 24, 2015.
- Interviews with management staff at various levels within the Parks & Recreation Department.
- A review of all relevant literature.
- Draft report submitted and reviewed by the Municipality.
- Completion of a final report.

Site Tour

The safety audit team completed its tour of Station Beach and the two adjacent piers on October 8, 2015. During their inspection the auditors examined the facility applying criteria developed by the Lifesaving Society from sources that include:

- Lifesaving Society standards concerning the operation of public waterfront swimming areas.
- Government of Ontario statutes governing public swimming pools and waterfront operations.
- Recommendations from coroners' inquests.

Photographs were also taken of the sites.

Staff interviews

Ms. Karen Kieffer, Director of Parks & Recreation, Municipality of Kincardine attended the site tours to provide feed back as required. Following the site tours, the safety audit team interviewed with Ms. Karen Kieffer, Mr. Chris Hartwick – Parks Supervisor, and Mr. Barrett Lafortune – Aquatics Supervisor. The members of the audit team asked questions of the interviewees, after which they were invited to share additional thoughts with assurances that specific comments would be unattributed.

Recommendations

Located on the shores of Lake Huron, Station Beach is the main beach in the Municipality of Kincardine. The one kilometer sand and pebble beach is popular among residents and tourists that travel to the area. There are extensive boardwalks, change facilities, free parking, and several lifesaving stations along the beach. Station Beach runs south from the south pier which protects the entrance to Kincardine Marina.

According to data from the Drowning Prevention Research Centre, since 2010 there have been three fatal drownings at Station Beach. In most of these instances it is reported that rip currents had formed and may have contributed to these deaths.

Rip currents may occur at fixed locations such as groins, jetties, piers, or other man-made structures where water can be funneled out to sea in a narrow channel. In coastal areas with structures, rip current may result when currents running parallel to the shore are deflected offshore by the structure. As waves approach the shoreline, they usually break at an angle, generating a longshore current that flows parallel (along) the beach. When the longshore current (moving along the shore) encounters coastal structure (such as a groin, jetty, or pier) it is deflected in an offshore direction. This offshore-directed flow of water is called a rip current.

Station Beach is susceptible to the effect of prevailing winds from the S and SW creating waves that come in on an angle to the shore creating lateral currents. When these currents reach the pier they are deflected creating a rip current parallel to the pier and moving away from shore. As the wind and waves increase in strength and height the speed of the rip current also increases. Similar currents may also form on the north side of the north pier when strong winds and waves are from the N and NW although this area is not as popular for swimming.

The Lifesaving Society directs your attention to the following recommendations which have been categorized into two levels:

Primary Recommendations – The Society’s aquatic safety audit presents five Primary Recommendations. Primary Recommendations address situations in contravention of a relevant Province of Ontario statute or the Lifesaving Society’s position on what constitutes reasonable safe practices. Primary Recommendations should receive focused attention by facility management.

Secondary Recommendations – The Society’s aquatic safety audit presents six Secondary Recommendations which are designed to enhance the safe use of the aquatic facility. Action on Secondary recommendations can proceed within the facilities ongoing operations.

Primary Recommendations

1. Institute ‘patrol supervision’ staffing on Station Beach.

The Lifesaving Society Waterfront Safety Guidelines list criteria for the determination of supervision a public waterfronts in Ontario.

According to these criteria, the Municipality should provide at a minimum ‘patrol supervision’ during the swimming season (refer to page 9, Waterfront Safety Guidelines, November 2011). This patrol person should be at least 16 years of age, hold at least the Lifesaving Society Bronze Medallion award or higher (Lifesaving Society National Patrol award is preferred), have training in waterfront patrolling and emergency procedures relevant to Station Beach , and be equipped to permit a response to situations.

This person will have a variety of responsibilities including: response to aquatic rescue and first aid situations, provide public education, inspect and maintain safety equipment, perform maintenance duties, etc.



2. Designate the beach area adjacent the south and north piers as a non-swimming areas.

Due to the presence of strong rip currents, this area is extremely dangerous for swimming especially when winds and waves are high. A "No swimming" zone should be designated that extends at least 250 meters south of the south pier and north of the north pier.

The area should be signed using pictogram signage - No swimming and Warning- Strong currents. These signs should be installed on the beach in numerous locations adjacent the piers so that the public will clearly see them when they are in these areas. The Lifesaving Society would be pleased to assist with an on-site visit to identify exact signage installation locations.



3. Designate a safe swimming area.

The swimming area intended for use by patrons should be clearly designated through signs, beach flags, and buoy markers. The distance between buoy markers should be no more than 100 meters. These markers should be no more than 150 m from shore. The north boundary of this designated area should be located at least 250 meters from the south pier. A sample buoy marker is shown below.

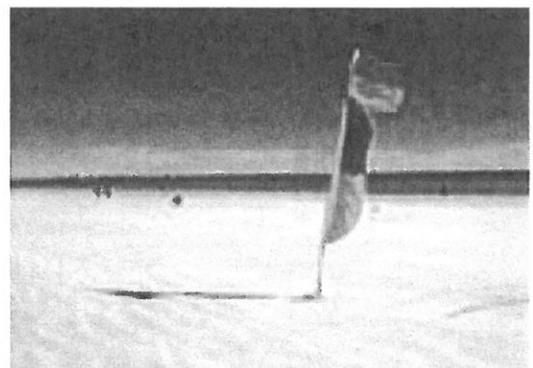
In addition, beach flags should be installed on the beach at the north and south boundaries of the designated swim area. This will reinforce an understanding by the public of the area as the designated safe swimming area. These flags should be installed and removed daily by the Patrol. Pictogram signage with words should be provided explaining the flags purpose.

The designated swim area would be determined after a spring assessment of the beach. Buoys would then be installed delineating this area. The Lifesaving Society would be pleased to assist with this assessment.

Buoy



Beach Flag



4. Install at least one lifesaving station on each pier.

There is a need for these stations to be installed to ensure the public has access to rescue equipment to assist with an in water emergency.

Equipment located at each rescue station should include:

- A buoyant throwing aid attached to a 6mm line at least 8m in length.
- A reaching pole at least 3.65 meters in length.

The stations should be installed at the midpoint from shore to the end of the pier. Signage should be installed at each station indicating the purpose of the equipment and warnings relating to misuse. Appended to this report are photographs of suggested design of these stations and signage wording.

5. Create written policy and procedures for beach patrol operations.

To ensure staff are aware of policies and procedures for the safe operation of the beach a Policy and Procedure Manual should be created. Staff who have responsibilities at this site should review this Manual and be familiar with its procedures. This Manual should include but not limited to the content as listed in the Lifesaving Society Policy and Procedure Manual Table of Contents document appended to this report.

Secondary Recommendations

1. Install new safety signage.

The Municipality should install safety signage as:

i. Beach access points signage.

The Municipality should install the following signage at each of the current seven access points to Station Beach. The signs should include at a minimum:

- Purpose of the Patrol service
- Identification of the designated safe swimming area
- Identification of the No swimming area
- Information on rip current formation and self-rescue
- AED location
- emergency telephone location

In addition the Municipality should consider restricting other access points to the beach through the dunes.

Existing access point to beach



ii. Existing Rip Current Safety Sign

The existing rip current sign should be removed. It is currently poorly positioned too far from the water's edge and not clearly evident to bathers accessing the beach. This sign does not illustrate the relationship of a rip current to the existing piers.

A simplified version of the existing rip current signage should be provided on each access point sign and in other locations along the boardwalk. These signs should explain how a rip current forms and how a bather self-rescues from a rip current.



iii. Emergency Phone Sign

The current emergency telephone is located at the Fish Station. To ensure the public is aware of its location, the current signage should be enhanced by increasing the size of the signage and using more visible colors (e.g. red, orange, or yellow) to identify telephone location. A pictogram is recommended.

In addition, consideration should be given to providing additional emergency telephones at the pier, and in closer proximity to the designated safe swim area.



iv. Pier signage

Presently there are some signs painted on the surface of the pier. Many of these are faded and deliver inconsistent messages.

Swimming should not be permitted off the pier because of the boating activity in the immediate area and strong rip currents. No swimming and strong current signage should be installed on the floor of the pier or on vertical sign posts along the lake and harbor side.

In locations where the seasonal water depth is less than 2.75 m signage should be installed indicating "Shallow Water No Diving."

The use of pictograms is recommended.

Existing signage on pier



Recommended signage on pier



To enhance the visibility of the pier edge, a yellow band approximately 100 mm wide should be painted along the entire horizontal edge of the pier (harbor and lake sides). This will visually enhance the edge and therefore reduce the likelihood of the public from accidentally falling into the water.

2. Regularly inspect Station Beach.

An inspection schedule should be established to check lifesaving stations, the designated swim area and signage placements. This will help to ensure equipment and signage remains in place so that this will be available in an emergency situation and there is a timely follow-up action on repairs and replacements. Records should be kept of regular inspections and of those at the start and end of season.

3. Implement a public education campaign.

A public education campaign should be developed and delivered to all residents of the Municipality of Kincardine. Messages should include information on the: the patrol purpose and schedule, designated swimming area on Station Beach, rip current identification and self-rescue, the purpose and placement of rescue stations, and the consequences of equipment vandalism.

4. Establish emergency procedures for the beach patrol and marina staff when dealing with the waterfront and beach emergencies.

Emergency procedures should be prepared and the Beach patrol and marina staff should be trained in their application. This should include but not be limited to knowledge of the location and use of emergency communications and rescue equipment, as well as guidelines limiting their own risk if exposed to a rescue situation. The Municipality should also establish a communication plan so that all staff are able to communicate and respond effectively when an emergency situation occurs. Simulated emergency training should take place with all staff at least annually.

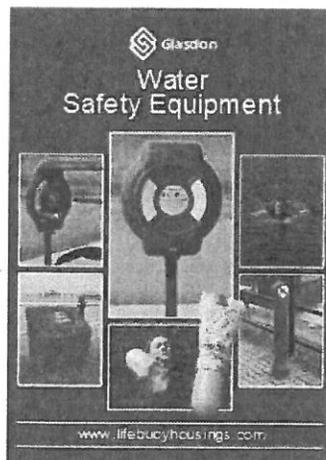
Appendix

Lifesaving station

A good example of a lifesaving station holder is shown below. This has been installed at Port Elgin Main Beach, Port Elgin, Ontario. The Town has provided enclosures for their lifesaving ringbuoys which has helped to both identify their location and reduce the loss from vandalism.



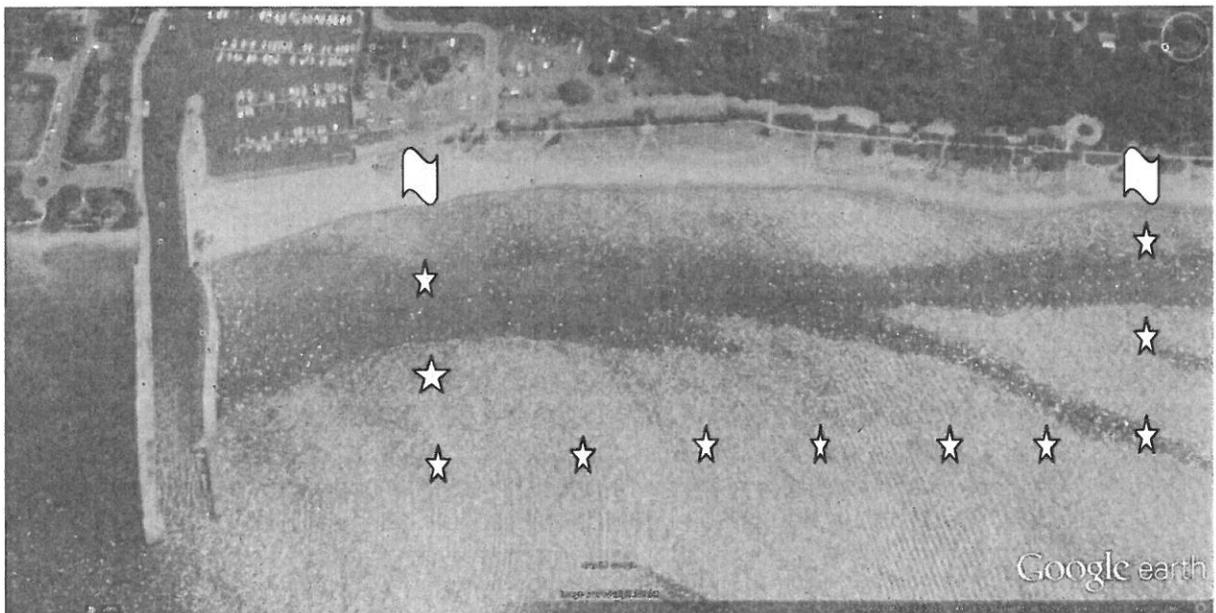
Other types of lifesaving station holders are also available.



Suggested signage at each lifesaving station



Suggested location of designated swim area buoys and flags



Not to scale

Flag 

Buoy 



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The Lifeguarding Experts

Aquatic Staff Manual Suggested Contents List November 2014

Overview

The Lifesaving Society takes the position that:

1. Staff Manuals are an effective means of communicating policies, procedures and practices to patrolling, lifeguarding, and instructional staff charged with the responsibility of delivering aquatic programs and ensuring patron safety.
2. Owner/Operators of swimming pools, spas, wading pools and waterfronts must develop a Staff Manual and must distribute that Manual to appropriate staff groups within their organization.
3. Owner/Operators must train staff on the contents of the manual. This training must be sufficiently comprehensive in order that staff become proficient with its contents. Owner/Operators should include testing and must ensure a system wherein staff sign off that they have received and understood this training.
4. Content of the Manual(s) must be consistent with the "Aquatic Staff Manual—Suggested Contents List". (format and style is at the discretion of the owner/operator)
5. Content and format of the Manual(s) must be appropriate for the intended audience, (i.e. Full time staff vs. Part Time staff, Supervisory staff vs. Patrolling, lifeguarding, and Instructional staff).
Owner/operators should consider developing separate manuals for full-time and part-time staff as part-time staff may not require all the information required by full-time staff. The Society recognizes that manuals with too much information of little importance, is a deterrent to staff reading and absorbing relevant and important information.
6. Owner/operators must determine what information is standardized practice for all pools and what information is pool-specific. It is recognized that standardized procedures may have some pool-specific elements.
7. Owner/operators should consider reprinting excerpts from the manual as posters for display in staff areas or as staff handouts. Examples of topics include; emergency procedures, guarding positions etc.
8. Owner/Operators must establish a review process and cycle to ensure that information contained in the Manual(s) is always current.

Resources Available for Creating and Editing Aquatic Staff Manuals

- Lifesaving Society Aquatic Staff Manual Suggested Contents List
- Health Regulations, (Pool, Spa, Waterslides, Waterfront)
- Ontario Building Code
- Lifesaving Society Guides to Pools and Spa
- Lifesaving Society Standards Journals
- ALERT Manual
- Lifesaving Society Instructor Manual

Tips for Excellent Staff Manuals

Excellent Staff Manuals are:

Complete: All necessary topics in the above listed resources are covered.

Technically Accurate: Information is accurate when compared to the above listed resources.

Reader-Friendly: Reader-friendly manuals are more approachable and the information is more readily retained. A number of factors influence the effectiveness of manuals in terms of staff absorption and retention of information. These include: Brevity, Order of Content, Clarity of Language, Format and Use of the Intranet. In addition, lack of clarity may result in incorrect outcomes through misinterpretation or lack of standardized approach among different staff. The following approach is suggested:

Brevity:

- Provide only one manual to patrols, instructors and attendants. Limit the content to the most important job –related items.

Order of Content:

- Put the most relevant safety topics near the beginning of the manual and review order of content to achieve most logical flow from topic to topic.
- Place all parts of a topic, (guidelines, phone numbers, forms), together for easy reference.

Clarity of Language:

- Use simple terms and straightforward language.
- Avoid the use of acronyms.
- Avoid the use of passive sentences (e.g. "Parents on Deck" policy "Parents should receive written information"—change to "the (name of position) *will provide* information. Include timeframe if appropriate.

- Do not use “should” unless the action is clearly optional.

Format:

- Improve the readability, (and therefore the retention), of step-by-step procedures by considering the use of flow charts, forms with text bubbles, sections separated by tabs, colored pages, calendars, FAQ etc.
- Edit “City Council-type format” report or policy documents down to the key parts that staff need to absorb and retain.

Use of the Intranet:

- A reference in a paper manual requesting part time staff to refer to the organization’s intranet for further information may cause him/her to not complete this step as he/she may not have approved access, may not be at a computer or may perceive this as a barrier/waste of time. As a result he/she may miss important safety information. Such a reference should be avoided for safety related topics.

Aquatic Staff Manual: Suggested Contents List

Introductory Section

Welcome
Table of Contents
Vision/Mission

Emergency Procedures (Aquatic—Major/Minor Incident)

Rescues
Victim treatment
Crowd supervision and control
Bystander Use Policy
Telephone call to emergency services
Transfer of victim to emergency services personnel
Notification of family (or contact with family if present)
Dealing with the media
Contacting senior staff
Resumption of swim activities as applicable
Staff debrief and accident reporting
Post-event staff counselling (if required)
Follow-up with victim's family
Aquatic Emergency Defibrillation Use/Training

Emergency Procedures (Non-Aquatic)

Missing Person(s)
Fire
Power Failure
Report or witnessing of abuse of a Child or Vulnerable Adult
Theft
Aggressive or Unruly Behavior, Assault, Fighting
Responding to medical emergencies in other areas of the building
Conditions for facility closure

Safety Supervision (Patrol)

Patrol Technique

- Definition
- Role/responsibility of the patrol in this environment
- In uniform
- Opening procedures
- Signals
- Patrol positioning and zones
- Communication/signals
- Rotation (purpose, frequency, technique)
- Patron correction (when/why and without interrupting scanning)

- Discipline
- Waterfront checks (purpose, frequency, how-to)
- Safety in change rooms
- Closing procedure: (pool clear (maintaining supervision, all swimmers out, lock change room doors)

Patrol Technique

- Definition
- Role/responsibility of the patrol in this environment
- Patrol positioning
- Communication/signals among staff
- Rotation

Facility Operational Procedures

Opening Procedure
 Equipment required
 First Aid stations, supplies required
 Daily telephone check
 Closing Procedure
 Record of Safety Checks

Patron Rules

Posted Rules for the Public
 Patron Discipline
 Appropriate Swimming Attire
 Breath Holding
 Breast Feeding Policy
 Customer Service Guidelines

Human Resources and Administration

Staff Conduct
 Position Job Descriptions
 Application
 Tryouts
 Terms of Employment
 Staff Qualifications/record of same
 Staff In-Service training requirement
 Staff Work Attendance-replacements
 Staff Evaluation
 Staff Discipline
 Staff Uniform
 Pay Rates/Payroll procedures
 Time Sheets
 Facility Keys

Facility Rental-procedures for booking
Facility Log Book
Corrective Vision
Personal Cell Phone use while on duty
Wearing of City Uniform while off duty
Police Reference Check
Staff Call-out in case of critical incident
Harassment Policy
Smoking, alcohol, drugs
Internet, Social Media policy
Cash/Reception Procedures

Occupational Health

WHMIS
Sun/Heat safety for aquatic staff
Cash/reception robbery
Sharps Handling/Hazardous Waste Disposal
Protective measures to prevent cross contamination (victim to staff)
Safety procedures for working on deck where there is no patrol (wearing of PFD)
Procedure for staff to identify Risk Issues
In house Safety Inspection
Hazardous Waste Disposal
Clean up of Bodily Fluids
Handling of Sharps

Maintenance and Water Treatment

Cleaning Procedures
Equipment Repairs/Annual Shutdown