



LIFESAVING SOCIETY

*The Lifeguarding Experts*

*Lifesaving Society BC & Yukon Branch*

## AQUATIC SAFETY AUDIT

The Town of Ladysmith



Cheryl Sibany

2-28-2019

<b>TABLE OF CONTENTS</b>
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**Section 1      GENERAL STATEMENTS**

1.1.    Aquatic Safety Audit ..... 2

1.2.    Aquatic Safety Audit Process..... 2

1.3.    Lifesaving Society Audit Personnel ..... 2

1.4.    Facility Tour Safety Inspection ..... 3

1.5.    References and Resources..... 3

1.6.    Staff Interviews..... 3

1.7.    Documentation Review ..... 3

1.8.    Summary of Findings ..... 4

**Section 2      RECOMMENDATIONS AND RATIONALE**

Primary Recommendations ..... 7

Secondary Recommendations..... 17

**Section 3      APPENDICES**

Appendix A    Best Practices for Day Camps and School Trips ..... 20

Appendix B    Signage ..... 30

Appendix C    Recommendations concerning floats/docks/rafts..... 39

## **Section 1      GENERAL STATEMENTS**

The Town of Ladysmith retained the Lifesaving Society to undertake a Comprehensive Waterfront Aquatic Safety Audit of Transfer Beach Park.

An initial discussion was held with Clayton Postings, Director of Recreation & Parks, Town of Ladysmith and Cheryl Sibany, Program Manager for the Lifesaving Society, BC & Yukon Branch. It was agreed that the Aquatic Safety Audit objective is to make recommendations and to identify any safety issues to assist the Town of Ladysmith Recreation & Parks staff to maximize safety at the Transfer Beach Park.

### **1.1.    It was agreed that the scope of the audit would consist of:**

- An inspection of the public changerooms
- Evaluation of activities in adjacent areas and their impact on safety
- An evaluation of the current swim area
- Recommendations for the placement of appropriate signage and signage design
- A review of documents related to management of the waterfront

### **1.2.    Aquatic Safety Audit Waterfront Process**

The audit team followed a process that included:

- An on-site safety inspection of the waterfront and park
- Interviews with staff members
- Review of documents provided
- Completion of the final report

### **1.3.    Lifesaving Society Audit Personnel**

The Lifesaving Society appointed Cheryl Sibany, Program Manager for the Lifesaving Society BC & Yukon Branch as the Chief Auditor. The Lifesaving Society appointed Denise Yoreff, Director of Operations – HFA, YMCA-YWCA of Vancouver Island, as an Auditor. Ms. Yoreff has extensive experience as an auditor and a significant aquatic management background in programming, operations and staff training.

#### **1.4. Facility Tour Safety Inspection**

The Aquatic Safety Audit was completed on September 24, 2018.

#### **1.5 References and Resources**

The Transfer Beach Park waterfront was examined applying criteria developed by the Lifesaving Society from sources that include:

- American National Standards Institute (ANSI)
- American Society of Mechanical Engineers (ASME)
- B.C. Building Access Handbook 2014
- Canadian Coast Guard
- Canadian Standards Association
- Fraser Health Authority
- Lifesaving Society Waterfront Safety Guidelines
- Model Aquatic Health Code guidelines published by the Centre for Disease Control
- Occupational Health and Safety Act, WorkSafeBC
- Transport Canada Small Craft and Vessel Safety

#### **1.6 Staff Interview**

An interview was held with Clayton Postings, Director of Recreation & Parks for the Town of Ladysmith, to provide a view of the operations from the perspective of his position within the organization. This discussion provided context to the findings of the onsite visit.

#### **1.7 Documentation Review**

No documents were provided to the Lifesaving Society.

## **1.8 Summary of Findings**

This report features recommendations concerning improvements to the operations of Transfer Beach Park public waterfront.

- ▶ The swimming area intended for use by the public should be more clearly identified to prevent non-powered as well as powered craft from encroaching on the swim area.
- ▶ Improvements to Transfer Beach signage would enhance public safety including the use of ANSI Z535 safety sign formats and ISO graphic symbols. Provide consistent public information, both printed and posted, using a combination of symbols and text.
- ▶ Establish a policy for all user groups accessing Transfer Park.
- ▶ Install public access rescue equipment stations to enhance public safety and to heighten awareness of the importance of being WaterSmart.
- ▶ Install a Lifejacket Loaner Station on the waterfront to provide additional opportunity for public education and contribute to a culture of safe practice.



### **Priority Concerns**

Priority Concerns represent significant safety risks to the public and merit immediate action. The Lifesaving Society alerts aquatic facility operators to Priority Concerns at the time of facility inspections. The Society's Aquatic Safety Audit of the Transfer Beach Park revealed no problems to warrant Priority Concern status.



### **Primary Recommendations**

Primary Recommendations address situations in contravention of a relevant Province of British Columbia statute or the Lifesaving Society's position on what constitutes reasonable safe practices. Primary Recommendations should receive focused attention by facility management. The Society's aquatic safety audit of the Transfer Beach Park Springs presents 9 Primary Recommendations.



### **Secondary Recommendations**

Secondary Recommendations are designed to enhance the safe use of the aquatic facility. Action on Secondary Recommendations can proceed within the facility's ongoing operations. The Society's Aquatic Safety Audit of the Transfer Beach Park Springs presents seven 5 Secondary Recommendations.

**Recommendations in this report are presented in descending order of significance as perceived by the Audit Team.**



### **Primary Recommendations**

The Lifesaving Society recommends:

1. Review the current location of all swim buoys.
2. Install additional 'Keep Out' buoys on the south side of the swim area.
3. Mark all hazards located inside the swim area.
4. Address group admissions requirements to the waterfront area.
5. Install public access lifesaving equipment.
6. Install public information signage noting the need for direct supervision of children.
7. Post information on how to access emergency assistance.
8. Ensure all power outlets are GFCI compliant.
9. Post information on the status of water quality.



### **Secondary Recommendations**

The Lifesaving Society recommends:

1. Review the content and enhance the design of all health and safety information, rule and general information signage.
2. Conduct an accessibility audit.
3. Install a Lifejacket Loaner Station.
4. Post fresh water signage adjacent to the foot shower.
5. Inspect and complete minor repairs to public washroom facilities.

## SECTION 2 RECOMMENDATIONS AND RATIONALE



### Primary Recommendation #1 -

#### Review the current location of all swim buoys.

Swimming area and beach intended for use by patrons are clearly designated through signs, buoy lines, buoy markers or a combination of these (markers are defined in the *Canada Shipping Act, 2001* and described in the *Transport Canada Safe Boating Guide* and *An Owner's Guide to Private Buoys in Canada*. Swim markers are white with a yellow light (if lighted). The light must conform to standards and guidelines in the Canadian Aids to Navigation System (TP 968); have yellow retro-reflective material (if material is used) and have minimum above-water dimensions of 15.25 cm (6 inches) in width and 30.5 cm (12 inches) in height. <sup>1</sup>

- Reassess the placement of all swim buoys. Consider the distance from shore, tidal changes, and distance from shipping lanes.

1.1. Place swim buoys<sup>2</sup> inside the boating keep-out<sup>3</sup> limit to create a safety buffer.



#### Swimming

A swimming buoy marks the outer limits of swimming areas. It may not appear on your navigation charts.



#### Keep out

A keep out buoy marks areas your vessel may not enter.

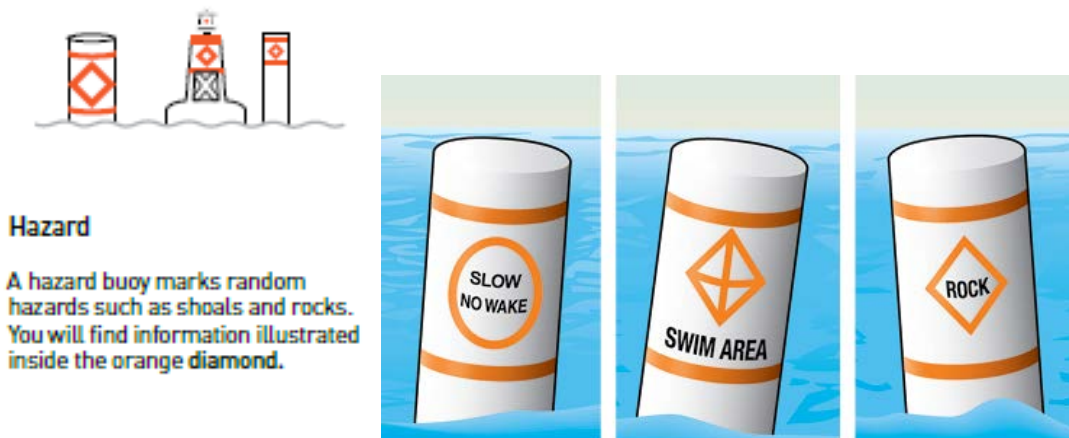
1.2. Mark all hazards adjacent to the swim area, such as rocks and sandbars.

<sup>1</sup> Waterfront Safety Guidelines – Lifesaving Society – page 6

<sup>2</sup> Safe Boating Guide – Transport Canada 2014 – Special Bouys – page 76

<sup>3</sup> *ibid*





**Primary Recommendation #2 -**

**Install additional 'Keep Out' buoys on the south side of the swim area.**

- The designated swim zone should be seen and recognized from the water as such by users of personal watercraft and other boaters.
- This signage should instruct users of human-powered craft to stay out of the swim zone. These vessels (kayaks, canoes, sailboards) have been shown to be a hazard to bathers.

2.1. Apply the Vessel Operation Restriction Regulation (VORR)<sup>4</sup> to create a legal swim zone. This regulation restricts all power and sail craft from entering the swim zone.



<sup>4</sup> Vessel Operation Restriction Regulations (SOR/2008-120) last amended on 2018-10-10 <https://laws-lois.justice.gc.ca/eng/regulations/SOR-2008-120/>



### **Primary Recommendation #3 -**

#### **Mark all hazards located inside the swim area.**

Swimming area and beach should be free from hazards, such as broken glass and hidden underwater dangers.

3.1. Install warning signage for hazards that may be hidden during high tides.

- a. Attach a buoy to rocks in the swim area
- b. Post signs adjacent to water hazards – ‘Caution underwater hazards’
- c. Caution slippery rocks
- d. Changing water depth.

Examples:



### **Primary Recommendation #4 -**

**Establish and implement a policy for day camps, school groups and all user groups and required by recreation staff.** (See Appendix 2 Best Practices for Day Camps and School Trips) <sup>5</sup>

Day camps, school groups and all user groups can pose an elevated risk as camp staff and visitors may have little or no aquatic rescue skills.

- 4.1. Ensure that all user groups, camp and group supervisors are informed of all policies surrounding the use of Transfer Beach Park including;
- Emergency and evacuation procedures and routes.

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<sup>5</sup> Appendix 1 -Best Practices for Day Camps and School Trips

- Rules of behaviour and their role in safety supervision.
  - Camp and group supervisors should also be aware of their own staff members' swimming ability.
- 4.2. Provide all information in a brochure and website to potential user groups and community groups who may use the facility.
- Members of the public, community groups, who are unfamiliar with the facility, new Canadians and foreign visitors, are at a higher risk of an aquatic emergency.
  - Providing information in advance of their visit to the facility will help in drowning prevention.
- 4.3. Provide the Lifesaving Society 'Safeguard' program to day-camp operators.
- **The Lifesaving Society Safeguard program** (3.5-4 hr.) provides safety supervision training for guardians (e.g., day camp counsellors, counsellors-in-training and others) who accompany groups of young people to pools or waterfronts. The course stresses the responsibility undertaken by these group leaders for safeguarding the young people in their care even when under lifeguard supervision.



#### **Primary Recommendation #5 -**

##### **Provide lifesaving equipment to the public in accessible locations along the waterfront.**

- Statistics show that 60% of all drownings occur in lakes, ponds, rivers, streams and waterfalls. Most people drown less than 5 metres (16 feet) from safety and over half of the incidents occur in the company of others.
- If a waterfront does not have a lifeguard, a lifesaving device should be made available to provide the public with the means to perform a rescue.
- Public access to rescue equipment is an established norm with such equipment as fire extinguishers and now AEDs (Automated External Defibrillators) being available.
- Access to public rescue equipment would complement existing and future safety signage and further promote a culture of water safety.

As per the Lifesaving Society BC & Yukon Waterfront Safety Guidelines 2012:

*The following rescue equipment is provided in places conveniently located for emergency use at waterfronts where the public is invited to swim, but where the swimming area is not supervised, or when lifeguards have gone off duty:*

- a reaching pole at least 3 m in length
- a buoyant throwing aid attached to a 6 mm line at least 8 m long.

5.1. The Lifesaving Society recommends the waterfront be equipped with public access rescue equipment and accompanying information signage.

- Ring buoys (as approved by Transport Canada) should be a minimum of 50 cm (20 inches) in diameter and have an 8 metre (25 foot) long rope attached to it. The rope should be a minimum of 6 mm (0.6 cm) in diameter. Public Access Lifering (PAL) stations, promoted by the Lifesaving Society, meet these criteria.
- Public Access Lifering (PAL) stations also provide an excellent opportunity to provide public education through pamphlets or posters through an ‘education station.’ With public service as the aim, local service clubs may be keen to support the initial purchase and associated ongoing maintenance. Each ring buoy is placed in a cabinet that is marked for easy recognition by the public.

**Option #1** Install custom-made cabinets to hold a standard ring buoy. Proper identifying signage should be affixed to the cabinet.



- Option #2** Install a Public Access Lifering (PAL) station. Proper identifying safety signage (Appendix B) is also available.



**PAL Life Rings Housings**

Are manufactured from Durapol® material and help to protect water rescue equipment. The Housings also act as a deterrent to vandals and thieves, reducing the frequency of costly Lifebuoy replacement.





- 5.2. Establish an equipment inspection and maintenance program for public access rescue equipment.
- Include a follow-up action plan for monitoring, repairs and replacements.
  - Consider keeping an additional ring buoy in stock for replacement.



**Primary Recommendation #6 -**

**Install public signage that addresses the direct supervision of children in and near the water.**

Drowning is a leading cause of death for children and near-drowning can result in lengthy hospital stays and have life-long effects such as brain damage.



On average in BC, 41 near-drowning cases resulted in an acute hospitalization and 53 drowning deaths per year.

- 6.1. Consider the following public education messaging:
- Watch me, not your phone
  - Always directly supervise children around the water
  - If you are not within arm's reach, you have gone too far



#### **Primary Recommendation #7 -**

**Post information on how to access emergency assistance to be installed and located in visible and readily accessible areas.**

Signage should be located in a visible and readily accessible area from the waterfront and in areas frequented by visitors, swimmers and boaters.



**Primary Recommendation #8 -**

**Inspect all electrical outlets located in the park to ensure all are GFCI protected.**

- 8.1. Check all outlets regularly (monthly) to ensure proper function.



**Primary Recommendation #9 -**

**Post information on the status of water<sup>6</sup> quality, the agency responsible for testing and a contact number for information and to report any health issues.**

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<sup>6</sup> Health Canada Guidelines for Canadian Recreational Water Quality is available on Internet at the following address:  
<http://www.healthcanada.gc.ca/>



Swimming areas are encouraged to follow standard protocols to ensure safe water quality. Signs are in place advising the status of recreational water quality, the agency responsible for testing and a contact number for information and to report any health issues.<sup>7</sup>

Recreational water includes pools, hot tubs, and bathing beaches at lakes, rivers and the ocean. Children and adults use recreational water for sport, health and relaxation, so it is essential to keep it safe, clean and healthy.

- In B.C. Health authorities may sample recreational water quality or respond to public concerns. At their discretion, they may decide to close beaches, issue public advisories or post warning signs based on these sampling results. The Recreational Water Quality Guidelines (RWQGs) are specifically used to help manage recreational water quality and assess the risks to human health. (For additional information on water quality<sup>8</sup>)

9.1. Regular water samples should be collected on a weekly basis during the spring and summer months, to monitor the bacteriological quality of the water.

- Sampling should be done at the same general location each time, but the time of day and day of the week can vary.
- Water samples give a broad indicator of the overall water quality at a location but are not a definitive statement of the entire body of water.
- Include updated water quality information on your website and a link to the information on the Island Health Authority website.
- While this information is on the Island Health Authority website, visitors may not be aware of where to look for this information. Update the information as needed.

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<sup>7</sup> Waterfront Safety Guidelines – Lifesaving Society – page 6

<sup>8</sup> Parameter specific guidelines visit: <http://www2.gov.bc.ca/gov/content/environment/air-landwater/water/water-quality/water-quality-guidelines/approved-water-quality-guidelines>

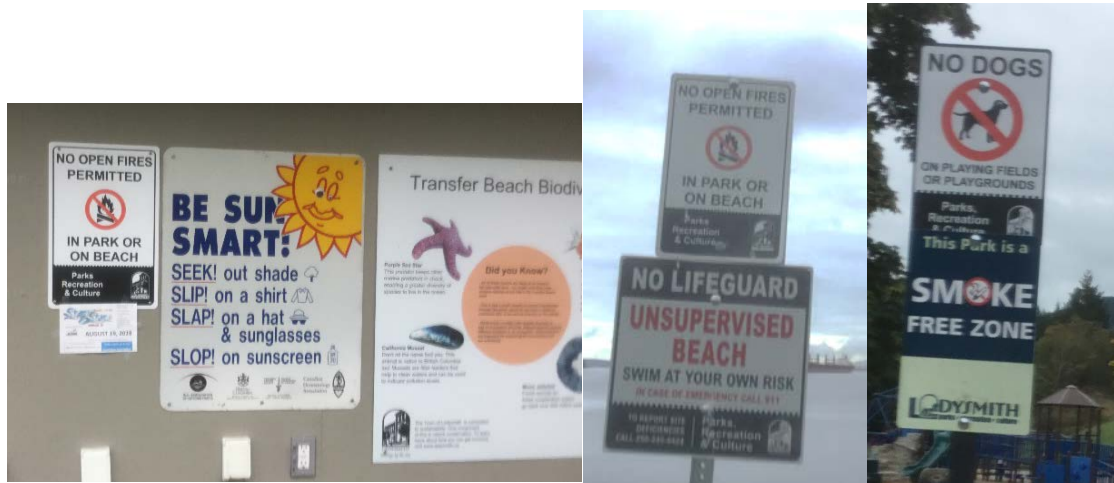




### Secondary Recommendation #1 -

**Review and revise the content and design of health and safety information, rule and general information signage.**

- Consistent information and warning signage should be posted at primary beach entrances/exits, and at intervals along/near the swimming area.
- Consistent signs at all primary entrances will greet visitors with important safety messages and wayfinding details, including how and where to find help.



- 1.1.1. Revise sign design with consistent branding and use the latest internationally recognized ISO symbols and format consistent with OSHA/ANSI Z535 to better inform visitors and be consistent with area parks which display those international signage standards. (Appendix B)



- 1.2. Signage should be posted at the beach entrances/exits or intervals along the waterfront.



**Secondary Recommendation #2 -**

**Conduct a comprehensive accessibility audit to make the park and beach more accessible and inclusive for people with disabilities.<sup>9</sup>**

Review beach access including parking provisions.

- 7.1. Review change and toilet facilities.
- Ensure accessible signage is posted.
- 7.2. Provide accessible features such as a beach walkway. Consider improving the visitor experience by providing beach access matting from parking lot to shoreline. By adding accessibility features, waterfront visitor enjoyment will be enhanced by easier and safer inclusion of all family members.



**Secondary Recommendation #3**

**Install a Lifejacket Loaner Station on the waterfront.**

The current station at the marina is an excellent example.

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<sup>9</sup> The Building Access Handbook : Building requirements for persons with disabilities, British Columbia Building Code - 2012





**Secondary Recommendation #4 -**

**Post signage adjacent to the foot shower that indicates the water is fresh municipal water.**



**Secondary Recommendation #5 -**

**Inspect and complete minor repairs to public washroom facilities.**



## **Appendix A - Best Practices for Day Camps and School Trips**

**Camp Director** = a person who is responsible for the overall management of the camp.

Has had at least 2 years of leadership and administration experience in camping or a related field.

**Camp leader/councilors** = a person who is responsible for a group of campers

Is at least 16 years old and at least 2 years older than the oldest camper that he/she is supervising.

1. Written safety rules, emergency procedures and a safety plan or other emergencies that have the potential to affect camper safety must be in place for all programs and staff are trained in those procedure.
2. The camp leadership must have a pre-camp on-site training program safety rules, emergency procedures and the safety plan, as they relate to each activity prior to participation as they relate to each activity prior to the start of the camping season.
3. Are all camp participants must be made aware of the safety rules, emergency procedures and the safety plan procedures as they relate to each activity prior to participation.

### **ADMITTANCE REQUIREMENTS FOR DAY CAMPS AND GROUPS**

- Children who cannot pass the facility swim test must remain in the shallow end of the pool and remain directly supervised by their group caregivers, camp leaders/councilors
- Group caregivers, camp leaders/councilors must be reminded that they are entirely responsible for their group while in the facility. They must effectively supervise the group at all times
- The wristband policy must be implemented and followed.
- Children who are 6yrs of age or under and children who have not passed the facility swim test must be supervised in a ratio of 4:1 without lifejackets or 8:1 with lifejackets
- In addition, children 7 years or older, who can pass a facility swim test, must be accompanied and supervised in a ratio of 8:1 ratio

- Caregivers, leaders/councilors not in the water must remain on deck and be visible to the group and aquatic staff to assist with supervision.
- Groups/Camps must plan with the facility staff in advance of their arrival
- All groups/camps must sign-in with facility staff prior to entry each visit. The numbers of male and female, participants and caregivers, leaders/councilors must be clearly indicated.
- All camp/group staff must wear identifiable uniform or clothing.
- Male and female caregivers, leaders/councilors must be available for appropriate supervision in respective change rooms
- All camps/groups must enforce a buddy system for all participants

#### **SWIM ASSESSMENTS'**

- Swim assessments are an important aspect of water safety. Non-swimmer restricted to water less than chest deep unless directly supervised during a learn to swim program. Bathers become buoyant in water chest deep and above, which causes them to lose contact with the bottom. Non-swimmers who lose contact with the bottom may not have the ability to prevent themselves from entering deeper water\*. Non-swimmers in greater than chest deep water has been identified as a contributing factor in all non-swimmer drownings. Some pools may be too deep for the shortest non-swimmers, in that case lifejackets should be worn at all times.
- All camp councilors participating in water activities must also be swim tested prior to the start of camp to ensure they are safe and assigned an appropriate task during water activities.
- All campers regardless of age **MUST BE** swim tested when participating in activities in open water. Self-assessment is not recommended.

***\* Natural bodies of water may have depth fluctuations.***



**Wrist-bands (suggested colours)**

<b>Red</b>	5 yrs. Or younger (always accompanied in the water ‘within arm’s reach’) – no assessment required.
<b>Yellow</b>	6 yrs. of age, children who are non-swimmer or do not want to be tested must be accompanied in the water ‘within arm’s reach’)
<b>Orange</b>	7 yrs. of age and over who are comfortable in the water & can swim 15 meters (shallow-end only)
<b>Blue</b>	7 yrs. of age and over who are comfortable in deep water & successful completion of swim test

**Notes**

- Max ratio for Red and Yellow bands: 4:1 without lifejackets; 8:1 with lifejackets.
- All campers & councilors must wear wristbands at all times.
- Councilors must identify the children in their charge and wear corresponding wristband.
- In-water councilors must not leave their group unless the entire group exists the water.

**Procedure**

***Lifeguards facilitating the swim tests must have rescue aid on their person and be rescue ready.***

Facility Swim Test (Orange wristband)

- Beginning in the shallow water, designate 15m mark (swim skill – non-stop swim in any method)

Deep End Swim Test (Blue wristband)

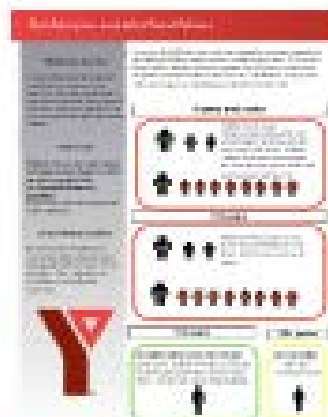
- Beginning in shallow water designate, 25m or 50m mark (swim skill – non-stop swim in any method)

All tests in open water must have lifeguard accompaniment in the water and on the dock or beach

(2 staff)

- Anyone (6-12 years) who does not want to be tested will wear yellow bands.
- Retesting can take place at any time; max 2 x per swim.

## SIGN EXAMPLES:



## **Buddy/Board Systems**

### **Buddy system**

The “buddy system” provides each camper with a partner to summon help in case of an emergency. Provides each camper with a personal “lifeguard”. “threesomes” dilute the concept of the “buddy system”.

### **Procedure**

- Assign each camper to a buddy
  - Pair campers with the same swimming ability
  - If a non-swimmer is paired with a swimmer, both must remain in the non-swimmer area. One threesome is allowed per group as it reduces safety.
- Buddies must be instructed to:
  - Notify lifeguards/counselors when their partner is in distress or missing
  - Stay in close proximity to their buddy
  - Stop all movement during buddy checks and hold their buddies hand wherever possible.
  - Both respond when their number is called

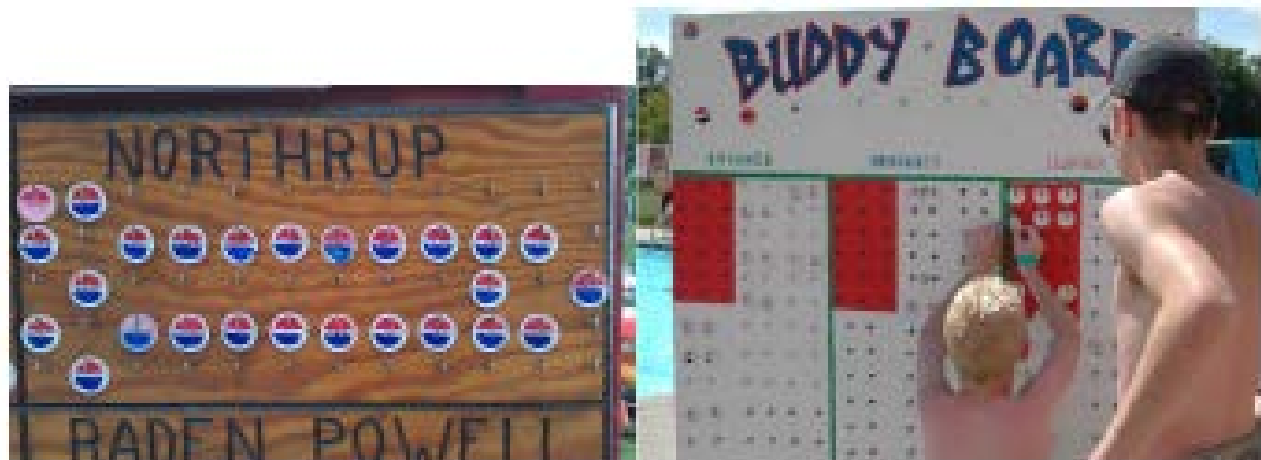
### **Buddy Boards**

System does not need to account for the entire camp when groups enter separately enter swimming pool area.

Types of accountability devices used

- Clipboard (use for small groups)
- Pocket charts

- Tag boards



### Buddy Checks

- Buddy checks of bathers should be conducted at least every 15 minutes.
  - Checks must be referenced against the accounting system.
  - Buddy checks, on average, should take no more than 60 seconds.
- 
- Staff should count the number of buddy pairs in each section and verify the count with the staff maintaining the board/accounting system.
  - If the count does not match, count pairs again if the count still does not match immediately initiate the lost swimmer plan.
  - All campers should stop activity and hold the hand of their buddy or be in close proximity.
  - Buddy checks that take longer than 60 to conduct may be an indication that the camp is not routinely implementing or not understanding the mechanics of the system.
  - Buddy checks do not require camper exit the water; exiting the water may add to the time to implement.

## **Supervision at Swimming Pools**

1. All children's (aged 18 and under) swimming activities must supervised by:
  - A current National Lifeguard (NL) certified guards who are at least 16 years old.
2. All adult (19 and over) swimming activities must be supervised by;
  - A lifeguard who holds a current NL certification.
3. When more than one lifeguard is on duty, one must be identified as "in charge"?
4. All lifeguards must be trained in operational and emergency procedures?
5. The camp must meet all the following lifeguard/swimmer ratios:
  - The maximum swimmer/lifeguard ratio is 40:1.
  - At least two lifeguards are on duty if there are more than 30 swimmers;
  - All swimmers are supervised by a lifeguard while swimming;
6. Lifeguards must be free of all other duties while lifeguarding.
7. There must be at least one 'back up' for the lifeguard on duty at all times and free from other duties that prohibit immediate response to an emergency.
8. All campers must have evaluated as to their swimming ability before participating in activities.
  - Campers must have some visible means of identification when they are non-swimmers

## **Supervision on Waterfronts**

**Waterfront Director** = a person who is responsible for the overall management of the waterfront swimming operations.

- Must be 19 years of age and cannot supervise other aspects of the waterfront while lifeguarding.
  - Have the required certification for a lifeguard is a current National Lifeguard (NL) award (waterfront option preferred)
1. All children (aged 18 and under) swimming activities must be supervised by:
    - A current NL certified guard (waterfront option preferred) who is at least 18 years old
  2. All adults (19 and over) swimming activities must be supervised by a lifeguard who holds current NL certification (waterfront option preferred).
  3. When there is more than one lifeguard on duty, one must be identified as “in charge”.
  4. All lifeguards must be trained in operational and emergency procedures.
  5. A waterfront safety inspection must be carried out daily by the camp operator, camp director, or waterfront/swimming director and recorded in writing in a daily log before the start of each day while the camp is in operations.<sup>b</sup>
  6. The camp must meet all the following lifeguard/swimmer ratios<sup>c</sup>:
    - All children are supervised by a lifeguard while swimming;
    - At least two lifeguards are on duty if there are more than 30 swimmers;
    - And the maximum swimmer/lifeguard ratio is 40:1.<sup>d</sup>
  7. The lifeguard must be free of all other duties while lifeguarding.

8. There must be at least one 'back up' for the lifeguard on the waterfront at all times who is a and who is free from other duties that prohibit immediate response in an emergency.
9. All campers must be evaluated as to their swimming ability before participating in swimming or boating activities.
  - There must be a visible means of identifying non-swimmers.
10. Swimming alone or from dusk to dawn must be forbidden.
11. There must be a system to monitor entry and exit of staff and campers into all waterfront area.

## **Training<sup>9</sup>**

Consider training for all leaders in the Lifesaving Society Safeguard Program

1. The camp leadership must have a pre-camp on-site training program safety rules, emergency procedures and the pool/waterfront safety plan procedures safety rules, emergency procedures and the pool safety plan procedures as they relate to each activity or other emergencies that have the potential to affect camper safety prior to participation as they relate to each activity prior to the start of the camping season.
2. Each camp staff person adequately instructed regarding the specifics of his/her duties in the pool area.
3. The camp director must document and maintain training for the camp leadership staff.



## **Make This Your Camp Challenge!**

**For all campers 6-12 years**



**With older (10-12) campers add Swim to Survive +**

**For more information on Residential Camps, Waterfronts (Supervised and Unsupervised), and Boating, consult the following resources:**

- **British Columbia Camps Association**
- **Lifesaving Society Waterfront Guidelines**
- **Health Protection Environmental Health Services Guide and Pool Safety Plan for Pool Operators - Pool Regulation (BC Reg.296/2010)**
- **Transport Canada, Safe Boating Guide, 2014.**  
<http://www.tc.gc.ca/media/documents/marinesafety/TP-511e.pdf>
- **Transport Canada, Licensing A Pleasure Craft:**  
[http://www.tc.gc.ca/eng/marinesafety/debs-obs-paperworkpaperwork\\_boat\\_licence-1898.htm](http://www.tc.gc.ca/eng/marinesafety/debs-obs-paperworkpaperwork_boat_licence-1898.htm)



## Appendix B - Signage

### The international language of **ISO graphical symbols**

Graphical symbols are vital for giving information when written words are not adequate. International Standards developed by ISO (International Organization for Standardization) provide people all over the world with a coherent set of graphical symbols to help overcome language and other barriers.

A technical committee, *ISO/TC 145, Graphical symbols*, has defined internationally accepted requirements for designs, colours, content and shapes of graphical symbols.

These symbols convey important messages about product features, directions and other aspects of daily life – whether at work, at home, or for leisure. Critical areas include health and safety-related warnings, prohibitions and mandatory actions.

We invite you to see first-hand how ISO graphical symbols help keep you safe and well-informed. **Join the Smith family as they discover just how useful ISO graphical symbols can be when they leave on holiday for the fictitious country of “Ambrosia”.**

After your tour is over, visit us at [www.iso.org](http://www.iso.org)



## Warning sign

### How to recognize ?

Yellow triangle with black border and black symbol.

### What is the type of safety message ?

Warns of hazards which could result in personal injury or threat to health.

*This sign will be accompanied by text or additional signs to explain the reasons for the warning.*



*General warning sign*



*Warning : Electricity*



*Warning : Hot surface*

## Prohibition sign

### How to recognize ?

Red ring and diagonal bar with black symbol on white background.

### What is the type of safety message ?

Specifies behaviour that is prohibited because it would result in an immediate or potential risk of personal injury or threat to health.

*This sign will be accompanied by text or additional signs to explain the nature of the prohibition.*



*General prohibition sign*



*No smoking*



*Do not use lift in the event of fire*

## Mandatory action sign

### How to recognize ?

Blue circle with white symbol.

### What is the type of safety message ?

Specifies an action required to safeguard personal health and/or avoid risk of personal injury.

*This sign will be accompanied by text or additional signs to explain the nature of the required action.*



*General mandatory action sign*



*Wear protective gloves*



*Refer to instruction manual/booklet*

## Safe condition sign

### How to recognize ?

Green square with white symbol.

### What is the type of safety message ?

Identifies evacuation routes and assembly points.

Indicates the location of first aid and emergency equipment or a safety facility or a safety action.



*Emergency telephone*



*Break to obtain access*



*Emergency exit (right hand)*

## Fire safety sign

### How to recognize ?

Red square with white symbol, and always including representation of flames in white.

### What is the type of safety message ?

Indicates the location of fire equipment.



*Fire extinguisher*



*Fire alarm call point*

## References and useful Websites

- ISO Online : **www.iso.org**
- ISO Online Browsing Platform (including standards previews, graphical symbols, codes, and terms and definitions) : **www.iso.org/obp**

## Relevant International Standards

- The ISO 3864 series of standards which specify design requirements, including shapes and colours, for safety signs
- The ISO/IEC 80416 series of standards which specify basic principles for graphical symbols for use on equipment
- ISO 7000, *Graphical symbols for use on equipment – Registered symbols*
- ISO 7001, *Graphical symbols – Public information symbols*
- ISO 7010, *Graphical symbols – Safety colours and safety signs – Registered safety signs*
- ISO 17724, *Graphical symbols – Vocabulary*
- ISO 20712-1, *Water safety signs and beach safety flags – Part 1 : Specifications for water safety signs used in workplaces and public areas*
- ISO 20712-2, *Water safety signs and beach safety flags – Part 2 : Specifications for beach safety flags – Colour, shape, meaning and performance*
- ISO 20712-3, *Water safety signs and beach safety flags – Part 3 : Guidance for use*
- ISO 22727, *Graphical symbols – Creation and design of public information symbols – Requirements*
- ISO/IEC Guide 74, *Graphical symbols – Technical guidelines for the consideration of consumers' needs*

## **Appendix C - Recommendations**

### **Concerning the addition of floats/docks/rafts to Transfer Beach**

As Transfer Beach does not currently have a floating raft and has no lifeguard supervision, the Lifesaving Society does not recommend the addition of a raft to Transfer Beach.

Many public and private flat-water beaches in Canada install floating rafts to provide additional recreational amenity. Operators often include diving boards and slides to rafts not realizing that with each additional feature, the potential for injury increases as does the owner/operator's liability. While these features are common, they increase the level of risk to the waterfront owner/operator, the severity of which may not be fully appreciated.

A major risk factor at Transfer Beach is the fact that it is a tidal beach with changing water depth throughout the day.

- Floating rafts are far more suited to lakes where there is little fluctuation in water level or the water is very calm and without extreme wave action.
- Rafts attract weaker swimmers who may view the raft as an opportunity to attempt to swim farther from shore than they would otherwise go due to the perception of safety provided by the raft or dock. Even experienced swimmers have difficulty in estimating how far an object is from shore in an unfamiliar location.
- Water often appears to be deeper than it is, which can lead to devastating errors in decision-making even for experienced swimmers and divers. Deep water at one point in the day where one can dive safely can become shallow and dangerous at a different time of the day.
- Despite clear warning signs being posted, risk-takers will not be prevented from jumping and diving from docks or rafts. Diving is the fourth leading cause of spinal cord injury for men and the fifth for women according to the National Spinal Cord Injury Statistical Center. According to Shepherd Center, diving makes the list of the top five causes of spinal cord injury causing paralysis with 89% of victims being male and 11% female. Most of those injured are between 20 and 29 years old.
- Adding a floating raft may increase the use of the waterfront, however, the lack of supervision at Transfer Beach adds to the risk for the Town of Ladysmith. This means there will be no opportunity to monitor members of the public, in particular, their activity on any added structures.





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