

City of Edmonton

Aquatic Safety Report

November 7, 2012

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A Message from the General Manager, Community Services, City of Edmonton

Each year, more than 3.5 million visitors enjoy City of Edmonton recreation centres, and we take our responsibility to these Edmontonians seriously. When our aquatic staff go to work each day, safety is top of mind and they strive to make sure visitors are safe and enjoying their experiences. So, when two lives were lost following incidents at City of Edmonton pools this summer, we were all deeply saddened and profoundly impacted. Our hearts went out to the families and friends who suffered loss.

Because we take our responsibilities to heart, we regrouped following the tragedies and rallied. We came together and said, let's make sure we are doing everything we can to keep our pools safe and to let pool visitors know the important role they can play to help prevent incidents.

With this goal in mind, we acted quickly, deliberately and thoroughly. We immediately conducted an emergency debrief and introduced changes as a result. We also asked the Lifesaving Society to investigate the incidents. We have accepted and acted on all of the Society's recommendations.

While these important reviews of the two serious incidents took place, we decided to simultaneously conduct a broader review. Our staff studied aquatic trends, research and the approaches of other facilities in Canada and the United States. We considered how to apply those learnings across the City's aquatic facilities and are working to implement these changes.

It's important to clarify that our pools are safe. Our aquatic operations have met or exceeded applicable regulations and standards, and these two fatalities are the first water-related deaths at a City of Edmonton operated pool in more than 20 years. In 2011, there were 56 emergency incidents where a swimmer was in trouble and lifeguards were called upon to perform a rescue or provide first aid.

Our success stories outweigh the tragedies, but in cases like this there is only one number that matters. One life lost is one too many. So it's important to continue learning and implementing new and better ideas and technology.

This report sums up the extensive work by our Community Services staff. These pages represent real and substantive changes that have been made to make our pools safer.

We are continually enhancing the measures in place to respond to and prevent critical incidents. We acknowledge incidents can be reduced by enhancing, and in some cases fine-tuning our safety measures.

We felt it was important to let Edmontonians know the full extent of our willingness to move forward, and so we have summarized, in this document, our journey and the changes they can expect to experience when they are visiting a City of Edmonton pool.

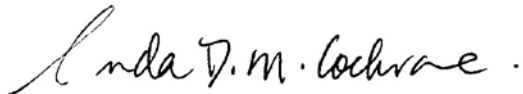
Through the work of our staff and the changes outlined in this report, the City of Edmonton is making a commitment to be a leader in aquatic safety.

Patrons may notice new signage, new rules and new ways of doing things. For instance, we will practise pool clears and other safety drills more often. These activities, like fire drills in schools and places of work, allow our lifesaving teams to practise frequently so they are ready when an emergency arises. As well, emergency drills help educate our swimmers about water safety.

Working harder to educate the public and raise awareness around water safety will be a top priority following these incidents. We've learned that creating a safe environment can only be accomplished by working together with pool visitors. Going forward, we'll work with our partners in the aquatic industry to further enhance our public awareness and education efforts.

City pools must be safe places for learning, for exercise and for fun. But we must never forget that pools can be dangerous for those who are not properly prepared when they use them.

Let's work together to be water safe and enjoy the full benefits of our city's indoor and outdoor pools.

A handwritten signature in black ink that reads "Linda D. M. Cochrane .". The signature is fluid and cursive, with a period at the end.

Linda Cochrane
General Manager, Community Services
City of Edmonton

PART 1

Introduction

Guided by the principle of ensuring the highest standards of safety at City aquatic facilities, the City of Edmonton executed a multi-pronged review of aquatic operations, standards, and practices. This review process follows two serious incidents at City-owned facilities this past summer. The process has led to a number of key actions implemented by the City to reinforce and improve safety measures and increase the focus on public education and awareness among pool users.

Two lives were lost due to the incidents at City of Edmonton pools in July 2012. The first incident took place on July 7. There were three lifeguards on deck and approximately 150 people in the pool, when a lifeguard observed something at the bottom of the pool. The guard entered the water and recovered an adult male, assisted by a patron at the pool's edge. The lifeguards immediately started resuscitation efforts. Emergency Medical Services (EMS) was contacted immediately and responded, transferring the patient to an Edmonton-area hospital.

The second incident occurred on July 31, when a 7-year-old boy went to O'Leary Pool with a caregiver and two other children. The boy entered the main pool where the water was over his head. A patron notified a lifeguard that a boy in the water was not moving. The lifeguard entered the water, retrieved the boy and brought him to the edge of the pool. A second lifeguard removed the boy from the pool and resuscitation efforts were started immediately, and EMS was contacted. When they arrived on scene, EMS took over the lifesaving efforts and transferred the patient to a nearby hospital.

City of Edmonton staff and elected officials were deeply impacted by these events and took immediate and thorough action; reviewing not only the incidents in question through the emergency debrief process, but going beyond to also study aquatic safety trends and practices, research, and the approaches of other facilities in Canada and the United States. In addition, the Lifesaving Society was asked to investigate each of the incidents.

The Society provided their report and recommendations to the City in mid-October. We have accepted their recommendations in full and are implementing all changes.

The City review process also led to a number of recommended actions to increase safety and water safety awareness at aquatic facilities. Most of these improvements have been implemented, while a few are in the process of being implemented or are being further researched.

Each of these actions goes above and beyond current regulations and standards for aquatic facilities. These activities are summarized in this report to Edmontonians under the three themes of:

- Public Education and Awareness,
- City Aquatic Practices and Standards and
- Aquatic Leadership

These themes underscore the City's desire to do everything possible to continue keeping the millions of Edmontonians safe while they enjoy City pools each year.

Working with our partners in the aquatic industry and our citizens, the City of Edmonton will do all it can to be a water safety leader.

PART 2

Environmental Scan

It was important for the City to conduct a thorough environmental scan to understand more fully emerging trends and challenges in the area of water safety. This research allowed the City to better determine and treat root causes of the challenges, rather than simply develop “Band-Aid” solutions. The following summarizes this research and outlines the City’s current practices.

City of Edmonton Aquatic Facilities and Attendance

Each year, more than 3.5 million visitors enjoy the variety of pools at 19 different City operated recreation facilities around Edmonton. In recognition of the increasing public demand for and increased use of aquatic facilities, the City recently opened new pools within the new Commonwealth Community Recreation Centre and the new Terwillegar Community Recreation Centre.

The City’s aquatic facilities are each supervised by facility managers. These managers supervise the 258 lifeguards who are responsible for monitoring the pools and keeping visitors safe. Aquatic facilities are also staffed by programmers, instructors, slide attendants and cashiers and maintenance staff.

Indoor and outdoor pool maximum occupancies are based on a standard of 1 person for each 1.5 square metres of water area. This is specified in the Alberta Health Services Act, Swimming Pool Regulations. The City of Edmonton ensures there is strict adherence to the standards set in these regulations and by other agencies. As each facility houses pools that vary greatly in size, shape and depth, the regulations lead to a wide-range of occupancy rates for City pools.

In addition, some facilities have four different pools, while many others have two or three (see Appendix C for a listing of pools at each facility). These variations mean the safety needs for each pool can vary greatly, as can occupancy limits. Outdoor pools pose a further challenge as there are always many patrons going back and forth between the pools and the sunbathing areas around the perimeter.

Trends

Newly built facilities tend to include larger pools with irregular shapes, while new pools and major renovation projects at older facilities also incorporate special features to meet public demands.

Examples of new aquatic features include the climbing wall at Commonwealth; the lazy river at Terwillegar; and the spray features, larger water slides and bulkheads at both Terwillegar and Commonwealth.

While no studies were identified that indicate a direct correlation between tank shapes and/or sizes and submersion or other safety-related incidents, anecdotal evidence and common sense suggest that these specialized features bring new challenges to lifeguarding and water safety awareness.

Other emerging trends also pose new challenges to lifeguards. Our aquatic staff have observed the following changes at City pools over the last several years:

- An increase in non-swimmers and inexperienced swimmers
- An aging population with age-related health issues
- A growing number of disabled patrons
- An increase in new users who are unfamiliar with pool rules.

Drowning Statistics

The following is an overview of drowning statistics from the Canadian Drowning Report - 2012 Edition, published by the Canadian Lifesaving Society. These statistics are for water-related deaths including natural bodies of water and swimming pools. The data does not include deaths due to natural causes, suicide or homicide.

- 31 drowning deaths were reported in Alberta in 2011.
- 347 drowning deaths were reported in Canada in 2011.
- Alberta has seen a 25 per cent increase in drownings in the most recent reporting period (2004 – 09)
- The vast majority of drowning victims continue to be men. Overall men account for 82% of Canada's water related deaths during 2005-2009.
- Reasons for drownings noted by the Lifesaving Society:
 - 34% unable to swim
 - 31% alcohol consumption
 - 22% swimming alone
 - 20% heart disease/suffering a heart attack while swimming
- Until 2004 there was a long-term decline in drownings. However, after reaching an all time low in 2004, we have seen the number of drownings increase again.

City of Edmonton Aquatic Safety and Emergency Practices

The City has a number of water safety systems in place at all facilities. These safety and emergency management systems are a combination of City-wide and pool-specific procedures, processes, reports and records. Many of these systems are legislated or required to meet industry standards. However, the City has also introduced its own improved practices and standards over the years.

The goal of these incident prevention systems is to prevent incidents and emergencies. However, the reality is that accidents and injuries will occur due to human error, unanticipated circumstances and natural causes. When these incidents or emergencies occur the goal is to minimize the impact and severity of the incident through staff training and other established control systems. When the incident cannot be minimized, an effective emergency response system is required.

City emergency systems for aquatic facilities were created to ensure all staff followed the same set of procedures with some modifications that consider unique elements of each facility. These procedures are updated annually, and include evacuation checklists, maps, and assigned staff roles and responsibilities.

Each aquatic facility holds a mock emergency training event annually so staff can thoroughly practise and review the procedures with the eye to updating and improving.

Along with mock emergency training, other training and evaluation activities take place. These include in-service training, safety talks and emergency debriefs following significant emergency incidents.

Lifeguards must also meet all the annual training and skill evaluation requirements for their certification. These requirements have increased over the last five years. These changes include:

- 1 An increase in in-service training hours required
- 2 Annual lifeguard fitness testing
- 3 Site Safety and Supervision Plan Training and Deck Management program testing
- 4 Improved safety training for a variety of issues, such as chlorine safety and dealing with abusive patrons
- 5 Increased frequency of lifeguarding assessments from one to three times per year.

PART 3

City of Edmonton Aquatic Safety Improvements

Following the two fatal incidents in July, an emergency debriefing was conducted with the staff to review all aspects of the emergency response and identify actions that could lead to future improvements. The emergency debrief is an important process that is undertaken following any major incident. While aquatic staff were working through the debrief process, the City also asked the Lifesaving Society to conduct a third-party incident analysis of each event and provide recommendations for improvement. With these processes underway, Community Services staff broadened the scope of study to investigate best practices, review research and seek guidance from other agencies and jurisdictions in Canada and the United States.

This report brings together the results of this work, and it must be noted that while research was completed independently, the resulting learnings and recommended actions were similar in many areas. **As summarized by the Society, in both incidents the City met all applicable legislation, regulations and standards.** The Society states that the City should consider a review of and adjustments to policies and procedures related to: 1) recognizing problems and intervening before problems escalate, and 2) the initial response to an incident. The Society refers to these as the Recognition and Reaction Phases.

In addition, both the City and Society recognized the need to emphasize public education and awareness, particularly given the changing landscape of City pools and the changing demographics of pool users.

Following the analysis phase the City moved quickly to make improvements. Over the three months since these incidents occurred, staff implemented a number of significant changes. **The City accepted and acted on all of the Lifesaving Society's recommendations. (See Appendix A and Appendix B for full details.)**

It's important to note that City pools are safer today than ever before, but safety is about continuous learning and continuous improvement. Therefore, while most action items are specific and tangible, some actions require further research and work with partners to identify specific safety improvements, lifeguard training models, or lifeguarding techniques.

All actions are highlighted under the three categories of Public Education and Awareness Tools, Aquatic Leadership, and City of Edmonton Practices and Standards.

Public Education and Awareness

Research in drowning prevention suggests that no pool or body of water can be guaranteed 100 percent safe. There are risks inherent in any activity involving water. Given this, the City and the Society both recognized that public education is key in preventing drownings.

As noted earlier, the main reasons for drownings according to the Society are being unable to swim, intoxication, swimming alone, and having heart issues or a heart attack while swimming.

It follows that the first step in awareness is helping the public understand these dangers, so as individuals they are more likely to follow the rules and/or use the safeguards in place in a pool environment.

The Lifesaving Society recommendations are clear that the City has several measures in place to increase awareness of aquatic safety; however, the Society also recommends heightening awareness around

particular issues. The City has accepted and implemented these recommendations but also resolved to go further with a broader public awareness program.

The City will work to the goal of ensuring all Edmontonians are aware of the importance of water safety and how to access swim lessons that teach survival skills. The following sections outline these two components: 1) *Learn to Swim* and 2) *We're All in This Together*, a water safety awareness program.

Learn to Swim

Teaching people how to swim saves lives. Teaching swimming lessons to children has been the traditional, primary way of educating the public about water safety. However, given the changing demographics and trends in pool use, City staff identified the need to go beyond this traditional approach and introduce Learn to Swim programs for adults, parents and new Canadians, while continuing to improve access to swimming lessons for all Edmonton children.

The City will work with partners, such as school boards, immigrant associations and service clubs to ensure all children and new Canadians have access to water safety and swim lessons. In addition, a Learn to Swim awareness program will be launched. The program will stress the importance of learning to swim and detail how to access lessons. This work is in-development and will be rolled out in the coming months.

We're All in This Together

The City is rolling out an enhanced public awareness program to support safety in City aquatic facilities. We're All in This Together focuses on the basics of water safety awareness and stresses the need for all swimming pool visitors to watch out for each other.

We're All in This Together incorporates the recommendations made by the Lifesaving Society in both of its incident reviews and goes further to incorporate actions identified by City staff through their additional safety research as outlined earlier in this report.

The We're All in This Together program implements the following recommendations resulting from the Society reviews and the City's internal research:

- Introduce regular pool clear drills
- Introduce public safety announcements
- Provide enhanced information on Within Arms Reach
- Provide enhanced information about the no-alcohol policy
- Reinforce with aquatic staff that educating the public is customer service and supports building public awareness
- Pilot self-measuring signage to increase awareness of the depth of the pool
- Introduce a public education continuum so the same safety messages delivered consistently to visitors by all aquatic staff, from lifeguards to cashiers to swimming lesson teachers.
- The City will work with outside agency experts as partners on a public awareness campaign to include literature, website information, educational talks, public service announcements, instructional program content and internal messaging for multiple types of facility staff.

City Aquatic Practices and Standards

As the City analyzed the research conducted in the review phase, staff looked for ways they could improve aquatic standards and practices within City-owned aquatic facilities, beyond what is mandated by external bodies. The findings of both the Society's reviews and the City's work highlighted the need to support lifeguards with tools that enable them to better manage environmental and job-related factors that affect lifeguard vigilance. These factors include: noise, monotony, stress, fatigue, and heat. The City also worked to identify tools that could immediately help lifeguards deal with the challenges at new and/or recently renovated pools. Working with the Lifesaving Society, the City developed and implemented many new City-wide standards to enhance safety.

These actions will enable City lifeguards to be more effective in their roles. From ideas like supplying polarized sunglasses for outdoor lifeguards to more complex solutions like reducing the maximum time a guard spends on deck, these revised standards support water safety.

The following actions and policies have been implemented since the incidents in July:

- Formalized black dot tests (for pool clarity) have been implemented at O'Leary pool and will be completed at all pools by year end.
- The lifeguard positioning analysis has been completed and changes were implemented for O'Leary pool. The City will work with the Lifesaving Society to conduct a lifeguard positioning analysis for each pool and will implement changes that result. The analysis includes lifeguard positions and rotations, lifeguard to swimmer ratios, and identifies blind spots and issues like pool glare.
- Pilot projects for a variety of pool depth indicators (i.e. ropes, wall markings, deck markings) are underway at O'Leary pool.
- A review of the caregiver to child swimmer ratio is underway.
- A minimum of two lifeguards will be on deck for all public swims and a third staff member will conduct swim tests at O'Leary Pool.
- Emergency procedures have been enhanced at O'Leary to ensure that responsibilities are identified for all staff. The same steps will be taken and in place at all pools by December 31, 2012.
- Forms and use of forms during emergencies have been enhanced (i.e. first aid reports). As well, all relevant documents will be placed in easily accessible stations.
- The maximum time on deck for lifeguard has been reduced from 2.5 hours to 2 hours at 16 of the City's 19 aquatic facilities with the remaining facilities to achieve this standard by the end of the year.

- Taking into account the numbers of sunbathers vs. swimmers at outdoor pools, the City is reviewing and revising total occupancy limits and will introduce the new limits in Spring 2013.
 - All staff working at outdoor pools will receive pre-season training for emergency procedures that identifies their role and responsibility by spring 2013.
 - Outdoor pool lifeguards will wear polarized sunglasses and wide brimmed hats while on duty.
 - The Queen Elizabeth Pool safety and supervision plan has been separated from the Kinsmen plan and will be treated as a fully separate facility with its own manager in the coming 2013 season.
 - The shift lead role has been formalized.
 - The missing person protocol documentation and training procedures have been clarified to ensure staff know that the protocol applies to adults and children.
 - On deck communication protocols (i.e. talking, use of radio, hand signals) clarified at an in-service for O'Leary lifeguards and all staff will have same training by end of year.

Aquatic Leadership

Through research conducted by the City, evidence suggests that new and renovated pool designs create requirements for additional lifeguards and safety measures. The research into pool user trends also highlights that user demographics are changing.

The City therefore continues to investigate new techniques in lifeguarding, advanced training for City lifeguards and new technologies, all with the goal of making Edmonton pools safer than ever.

Aquatic staff are continuously researching, piloting and implementing best practices in water safety. Appendix D to this document outlines some of the initiatives implemented in the last year, including introducing an Alcohol Awareness Program for Outdoor pools.

However, throughout the City's review process, Community Services staff recognized more can be done to better understand how changing infrastructure and demographics affect lifeguards while on duty. The City wants to show leadership in this area and is adopting several ways of working collaboratively with partners in the aquatic industry to identify improvements and address these emerging challenges. The following actions support this important work:

- Designating a staff member to serve as an aquatic technical expert who will focus on research, training, benchmarking and best practices.
- Providing new opportunities for lifeguards to practise and demonstrate lifeguarding skills through:
 - Implementing bi-weekly pool clear drills at all aquatic sites to allow lifeguards to practise pool clears on a more regular basis.
 - Purchasing Automated External Defibrillator (AED) trainers for each aquatic facility so that lifeguards may practise their AED skills on site.
 - Conducting lifeguard positioning analysis in-services at all aquatic facilities to allow lifeguards to play a role in the lifeguard positioning decisions within the sites.

- Completing deck management and emergency procedures training at O'Leary and all other sites before the end of the year.
- Exploring emerging surveillance and warning technologies that help lifeguards monitor what is happening in the pool. These technologies can alert lifeguards in seconds to a swimmer in trouble, and help them quickly initiate a rescue to save a life.
- Developing centralized staff training facilities and programs.
- Developing relationships and networks in the aquatic industry by hosting meetings, workshops and symposiums on best practices.
- Collaborating with the Lifesaving Society in developing additional education and proficiency modules for lifeguard surveillance and lifeguard response.
- Incorporating the 4-D approach: discuss, demonstrate, do and document in all lifeguard training.

Conclusion

City aquatic staff have done extensive work over the last three months to reinforce and improve safety measures and increase the focus on public education and awareness among pool users. The City is committed to doing everything possible to keep people safe while they swim at City pools. This report details the improvements that have been made at this time and those being implemented shortly. Aquatic Safety is continually evolving, and so this is a process of continuous improvement. The City will continue to research, work with partners and update Edmontonians as more work is done in this area.

Appendices

QUEEN ELIZABETH OUTDOOR POOL INCIDENT ANALYSIS REVIEW REPORT

OCTOBER 2012

Final Report: October 16, 2012



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QUEEN ELIZABETH OUTDOOR POOL, EDMONTON INCIDENT ANALYSIS REVIEW REPORT

Published by the Lifesaving Society. October 2012.

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

Annually, well over 800,000 Canadians participate in the Society's swimming, lifesaving, lifeguard, and leadership training programs. The Society sets the standard for aquatic safety in Canada and certifies Canada's National Lifeguards.

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

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

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INCIDENT ANALYSIS REVIEW REPORT

QUEEN ELIZABETH OUTDOOR POOL,
CITY OF EDMONTON



LIFESAVING SOCIETY®

The Lifeguarding Experts

About the Lifesaving Society

- Saving lives for over 100 years



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

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

Teaching Canadians to save themselves and rescue others

Annually 800,000 Canadians participate in the Lifesaving Society's swimming, lifesaving, lifeguard, first aid, and leadership programs. Each year, the Society certifies thousands of instructors who provide the leadership for its training programs. Over 30,000 Canadians earn the Society's Bronze Medallion each year. As Canada's lifeguarding experts, the Lifesaving Society sets the standard for lifeguard training and certifies Canada's National Lifeguards.

Making Canadians Water Smart

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

Drowning Research

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



Setting the Standard

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



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Incident Analysis Review

Section 1

Agreement

The Royal Lifesaving Society Canada, Alberta and Northwest Territories Branch (the Society) was engaged by the City of Edmonton (the City) to do a incident analysis review (the review) on the Queen Elizabeth Outdoor Pool (the site).

The Society and the City have had a long standing relationship and affiliation for many years in respect to Society services and programs.

When an incident occurs such as a drowning it is tragic and may affect many individuals and organizations. A drowning does not usually occur due to a single reason but most often it is a series of events that leads to the tragedy.

Purpose

The purpose of an incident analysis is to have an independent objective review and opinion that is based on facts and data that can lead to learning for all involved. The investigation of the incident is with an "eye" to prevention, adjusting policies and procedures if needed to close any gaps discovered to enhance safety in the future.

"If it is foreseeable it is preventable." It is not "if" an incident will occur but "when" and we must all be ready.

Incidents can and do occur in aquatic facilities. Planning and training to prepare for a variety of emergency occurrences is a necessary part of responsible/reasonable facility management. A major incident can be described as an occurrence or event that requires an emergency response. In this case it was a submersion that lead to loss of life.

The Society has a standardized process for a review of this nature and the intent is to have a collaborative and supportive process that results in recommendations for consideration that may enhance safety, systems, procedures and training for the public and staff.

Major Incident Management

A major incident is an event or situation that may cause serious damage to a facility its patrons, guests or staff. Successful management of a major incident requires an inclusive ongoing process of risk analysis and a thoughtful planned response, integration of existing decision making structures and establishing clear roles, responsibilities, and reporting.

Phases of incident management

Recognition phase

Intervention = Prevention - The emergency begins, deciding on the course of action required communication (ongoing)

Reaction Phase

Initial response to the incident taking action linking with others and outside assistance (EMS, etc.)

Recovery Phase

Incident resolution and debriefing of staff

Restoration Phase

Return to normal operations providing support to staff involved and preparing for the aftermath.

On-going Support

The Lifesaving Society is a national charity working to prevent drowning and water-related injury. The Society saves lives and prevents injuries through its training programs, water smart, public education, water incident research, aquatic safety management services, and lifesaving sport.

The Lifesaving Society enhances the quality of life of Albertans and Northerners by setting health and safety standards and collaborating with partners for injury prevention, sport, recreation, and active living initiatives, making Alberta and the Northwest Territories the safest place to live, work, and play.

The Society is committed to working together for optimal safety for public and staff with the City of Edmonton.

Acknowledgment

The Lifesaving Society would like to thank the City of Edmonton for its support and cooperation with the review. The time and effort the City has put into obtaining relevant documentation, assisting in providing information about the incident and working diligently with the Society during the review clearly indicates the City's priority to optimal safety for the public and willingness to identify gaps and enhance its current systems.

Incident Analysis Review Process

Section 2

Personnel

The Lifesaving Society appointed Ms. Barbara Kusyanto, Chief Administrative Officer as the analysis review coordinator; Dr. Edward Montgomery and Mr. Ron Lowe were appointed as part of the analysis review team. The team is all Lifesaving Society certified Aquatic Safety Auditors. The Lifesaving Society has extensive experience in aquatic safety management, audits, and inspections.

Incident Analysis Components

The incident analysis team followed a process that included the following:

- On-site inspection of the aquatic facility;
- Interviews with selected staff involved in the incident;
- A review of relevant literature provided to facilities and staff concerning the operation of aquatics in the centre; and
- Preparation and completion of a draft and final report.

Facility Safety Tour

The tour of the aquatic facility was completed on August 20, 2012. During the tour, the team examined the facility applying criteria developed by the Lifesaving Society using sources that include:

- Government of Alberta statutes and regulations governing public swimming pools;
- Recommendations from fatality inquiries, coroners' inquests;
- Lifesaving Society standards concerning the operation of public swimming pools;
- Lifesaving Society research into drowning in swimming pools; and
- Lifesaving Society safety management services, education and training program materials.

The source materials used to formulate recommendations to enhance safety in the incident analysis review will be retained by the Lifesaving Society.

During the tour staff were accessed for additional information and clarification regarding specific facility operations, staff training and certifications, and other general topics.

Staff Interviews

The review team conducted interviews with selected City of Edmonton employees, including lifeguards and recreation facility attendants.

The review team had a standard interview agenda and asked questions of each interviewee as to his or her staff position, responsibilities, recollection and experience of the incident pre, during and post.

Interviewees were given the opportunity for input and additional thoughts with assurances that specific comments would be unattributed and were also informed of the Lifesaving Society FOIP policy.

Documentation Review

The relevant documentation and aquatic related literature supplied by the facility was examined, with more focus on policies and procedures and incident reports, which appeared to be the main sources of incident information. Such information included the following:

- Review of policies and procedures, including checklists;
- Review of safety and supervision plan;
- Review of select areas in aquatic staff manual;

- Review of staff qualifications;
- Examination of Lifeguard positions; and
- Incident documentation and reports from July 7, 2012.

The Society also reviewed its own literature and resources in respect of standards and training, such as Public Aquatic Facility Safety Standards and National Lifeguard materials and literature governing aquatic operations in Alberta.

Reporting Process

Drawing on all documentation supplied by the facility, notes, assessments and observations, the Lifesaving Society has prepared a report for the City of Edmonton.

This final report will be for consideration of implementation.

Activity taking place at time of incident:

On July 7, 2012 it was a hot, sunny, busy day at the pool. There were 3 lifeguards on deck and approximately 150 patrons in the pool. A lifeguard heard a call for help and noticed a young girl in distress clinging on to 2 patrons in the middle section of the pool. Another lifeguard was notified and the child was pulled out of the water by a patron. The lifeguard had previously noticed this child jumping to an adult male. The child was in some distress and was asking where her uncle was. The lifeguard took the child back to her family on the grass area and then returned to the pool deck. A lifeguard observed something on the bottom of the pool in the deep end between the diving boards. The lifeguard entered the water and recovered an adult male. A patron helped the lifeguard remove the adult male at the side of the middle section of the pool. The lifeguards immediately started resuscitation efforts. EMS was also immediately contacted and responded.

Findings:

At the time of the incident it is the opinion of the Lifesaving Society that the City of Edmonton was operating within safe practices and was in compliance with applicable legislation and regulation, including the following:

- Swimming Pool, Wading Pool and Water Spray Park Regulation; and
- Lifesaving Society Public Aquatic Facility Safety Standards.

In addition City of Edmonton operates within the following legislation:

- Alberta Building Code;
- Alberta Occupational Health and Safety Code and First Aid Regulation; and
- Occupiers' Liability Act.

The City also had documented policies and procedures in place that were followed by the staff, at the time of the incident, including the following:

- Emergency management plan and facility emergency procedures;
- Safety and Supervision plan using a 2009 template developed in collaboration with the Lifesaving Society (updated by the City in 2011);
- Admission Policy; and
- Operational Checklists.

It is the opinion of the Lifesaving Society that, at the time of the incident, the lifeguard staff on duty met the recommended standard for Lifeguards in Canada, including the following:

- Current National Lifeguard certification;
- Current Aquatic Emergency Care or Standard First Aid;
- Minimum 16 years of age; and

- Trained in the facility safety systems and emergency procedures.

It is the opinion of the Lifesaving Society that, at the time of the incident, the following were true:

- An admission policy was in place;
- Lifeguard to bather ratios met or exceeded the recommended guideline in the Lifesaving Society Public Aquatic Facility Safety Standards; and
- Lifeguards were in position and equipment was in place as per the facility's 2011 Safety and Supervision Plan and in compliance with the Lifesaving Society Public Aquatic Facility Safety Standards.

In summary, it is the opinion of the Lifesaving Society that at the time of the incident the City of Edmonton major incident management documentation was in place and followed. Specifically the Recovery and Restoration phases were managed well. The Recognition and Reaction phases should be reviewed for enhancement and adjustments to policies and procedures considered.

Recommendations

Section 4

Lifesaving Society recommendations are to be considered to enhance safety in the future.

1. Emergency Response Plan

At the time of the incident, the City had documented policies and procedures in place that were followed by the staff, including an emergency management plan and facility emergency procedures, Admission Policy, Operational Checklists and a Safety and Supervision Plan (updated in 2011).

To enhance safety in the future, it is recommended that the City of Edmonton evaluate its existing emergency management plan as it applies to the aquatic environment. The evaluation should consider the following:

- Enhancing existing facility emergency procedures to ensure specific roles for all staff are identified, including the role of the Incident Commander;
- Evaluating the emergency pool clear procedure, evacuation routes and muster points and incorporating the use of the public address system into emergency procedures;
- Designating a shift lead on the schedule for all operating hours;
- Reviewing missing person emergency procedure and updating the orientation checklist terminology from lost child to missing person;
- Moving forward with separating the Queen Elizabeth safety and supervision plan from the Kinsmen plan considering the addition of, lifeguard position schematics to the plan and promoting the plan, as a living document;
- Emphasizing the use of the Lifesaving Society Safety and Supervision Toolkit (provided by the Lifesaving Society in February 2012) which includes legislation, regulation and recommended society standards;
- Reviewing operational checklists and reinforcing documentation, including a documentation process for head counts, the use of "incident" report forms and documentation of first aid treatment at time of response ;
- Revising the POST incident statement format for staff to use to facilitate a clear and detailed account of the incident; and
- Evaluating the Emergency Medical Services CALL protocol.

2. Public Education and Awareness

The City of Edmonton has several measures in place to increase awareness of aquatic safety including providing information about the need to keep children under the age of 8 within arm's reach and the prohibition on the possession, consumption or use of liquor in and around the pool. The City also requires a swim test for those who want to swim in the deep end who are under the age of 13 or who appear to have limited swimming skills. The City, posts information related to aquatic safety, provides safety talks to groups before they enter the pool and offers a variety of swim, lifesaving and lifeguarding programs.

The Lifesaving Society recognizes the need for collaboration to increase the focus on aquatic safety across the industry and is developing additional education and training in

this area.

It is recommended that the City of Edmonton further enhance its public education and awareness messaging for consistency as it applies to customer service and safety, including consideration of the following:

- Enhancing the information already provided to patrons about the no-alcohol policy by establishing a script for use by recreation facility attendants and reinforcing the messaging through methods such as additional signage and recorded announcements;
- Reinforcing with aquatic staff that educating the public is customer service and will build public awareness of the rules and help them experience a safe enjoyable aquatic experience; and
- Introducing a program continuum that would provide consistent education and training opportunities for public and staff, such as water smart messages and swim survival skills and encouraging the public to pursue advanced lifesaving training.

3. Lifeguard Positioning Analysis and Deck Management

It is the opinion of the Lifesaving Society that, at the time of the incident, the following were true:

- An admission policy was in place;
- Lifeguard to bather ratios met or exceeded the recommended guideline in the Lifesaving Society Public Aquatic Facility Safety Standards; and
- Lifeguards were in position and equipment was in place as per the facility's 2011 Safety and Site Supervision Plan and were in compliance with the Lifesaving Society Public Aquatic Facility Safety Standards.

It is recommended that the City of Edmonton engage the Lifesaving Society to review the current lifeguard positioning and evaluate lifeguard surveillance as it applies to unique facility design, equipment, and activities that impact lifeguarding requirements, such as glare and blind spots. The City's assessment should also include the following:

- Reducing the maximum time on deck for a lifeguard to 2 hours from 2.5 hours;
- Evaluating and implementing strategies such as polarized sunglasses and wide brimmed hats to reduce glare factors;
- Introducing the "black dot test" in addition to existing measures to determine water clarity tests and reinforce procedures for response including closure to the public; and
- Evaluating lifeguard to bather ratios, which currently meet standard of 1 lifeguard for 75 bathers.

4. Lifeguard Surveillance and Training

It is the opinion of the Lifesaving Society that, at the time of the incident, the lifeguard staff on duty met the recommended standard for Lifeguards in Canada, including the following:

- Current National Lifeguard certification;
- Current Standard First Aid or Aquatic Emergency Care certification;
- Minimum 16 years of age (The City of Edmonton requires lifeguards to be 18 years of age.); and
- Trained in the facility safety systems and emergency procedures.

In addition to Lifesaving Society qualifications, City of Edmonton lifeguards receive extensive training that includes the following:

- Deck Management In-service Training - annual training that includes scanning, surveillance, rescue techniques, and emergency response;
- Lifeguard Check List - a full checklist of required knowledge and responsibilities is completed at the start of employment and reviewed annually;
- Lifeguard Assessments - conducted 3 times per for year for each lifeguard;
- Lifeguard Fitness Skills - assessment of lifeguard fitness;
- Mock Emergency training - staff participate in mock emergencies annually; and
- Facility Orientation - lifeguards complete an orientation at each facility at which they work that includes a review of safety procedures, blind spots in the pool, amenity specific orientation such as water slide, wave pools, potential glare issues, facility safety equipment.

The Lifesaving Society recognizes the need for collaboration to increase the focus on aquatic safety across the industry and is developing additional education and training in this area, including education and proficiency modules for lifeguard surveillance and lifeguard response to complement the current lifeguard fitness skills module that the City currently uses.

To enhance safety in the future it is recommended that the City of Edmonton review the frequency and topics of staff training based on facility specific needs and provide enhanced lifeguard surveillance training for supervisors and lifeguards. The training review should also consider the following:

- Incorporating recreation facility attendants into facility specific training for emergency procedures that identifies their role and response;
- Providing more opportunities for staff to practice and demonstrate their skills as individuals and as a team, in the following areas:
 - Emergency pool clears;
 - CPR/AED protocols;

- Mock emergencies specific to roles of each staff person and lifeguards in a 1, 2 and 3 lifeguard on duty scenario;
- Continuing to provide pre – season training for all staff;
- Providing training specific to the outdoor pool environment for all staff including those who have only worked in indoor environments; and
- Continuing to encourage staff to participate in enhanced lifesaving and leadership training and promoting self-training and development (Appendix A).

Code of Conduct for National Lifeguards

The Lifesaving Society's Code of Conduct for National Lifeguards:

Affirms National Lifeguards are valued members of the Lifesaving Society

Provides National Lifeguards with guidelines for professional behaviour related to their roles, rights, responsibilities, and privileges within the Lifesaving Society

Provides terms of reference when seeking solutions to complaints and disputes

National Lifeguards commit themselves to the Lifesaving Society mission and to ethical, businesslike, and lawful conduct, including proper use of authority and appropriate decorum when in a vocational setting.

1. Maintain a work environment consistent with the expectations of the employer, government regulation, industry standard, the National Lifeguard Standard, the Public Aquatic Facility Safety Standards, and the Lifesaving Society.

2. Act in a manner that protects the public, fellow staff members and themselves from undue risk or harm.

3. Treat people with respect:

Communicate with empathy, diplomacy, discretion, and justice

Maintaining confidentiality of personal information

Without discrimination based on age, gender, religion, ethnicity, physical, mental, or emotional ability, sexual orientation, financial ability, or any other grounds

Without insult, assault, harassment, foul language, or gesture

4. Strive to improve professionally, maintaining current skills, fitness, knowledge, and judgement within the parameters of the National Lifeguard Standard. National Lifeguards are encouraged to exchange ideas and information with each other and the Society. Recognize that techniques included in the program are based on research, but other approaches can also achieve outcomes.

5. Maintain the integrity of the Lifesaving Society by:

Clearly representing the position of the Lifesaving Society

Maintain skills, knowledge, fitness, and judgement according to program standards

Adhering to the Lifesaving Society National Lifeguard program guidelines, rules, policies, and procedures

Reporting issues directly to the Lifesaving Society, avoiding public criticism

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

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LIFESAVING SOCIETY®

The Lifeguarding Experts

O'LEARY LEISURE CENTRE INCIDENT ANALYSIS REVIEW REPORT

OCTOBER 2012

Final Report: October 16, 2012



LIFESAVING SOCIETY
The Lifeguarding Experts



LIFESAVING SOCIETY®

The Lifeguarding Experts

O'LEARY LEISURE CENTRE, CITY OF EDMONTON INCIDENT ANALYSIS REVIEW REPORT

Published by the Lifesaving Society. October 2012.

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

Annually, well over 800,000 Canadians participate in the Society's swimming, lifesaving, lifeguard, and leadership training programs. The Society sets the standard for aquatic safety in Canada and certifies Canada's National Lifeguards.

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

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

® Water Smart, Swim for Life, Swim to Survive, and Lifesaving Society are registered trademarks 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.

INCIDENT ANALYSIS REVIEW REPORT

O'LEARY LEISURE CENTRE,
CITY OF EDMONTON



LIFESAVING SOCIETY®

The Lifeguarding Experts

About the Lifesaving Society

- Saving lives for over 100 years



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

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

Teaching Canadians to save themselves and rescue others

Annually 800,000 Canadians participate in the Lifesaving Society's swimming, lifesaving, lifeguard, first aid, and leadership programs. Each year, the Society certifies thousands of instructors who provide the leadership for its training programs. Over 30,000 Canadians earn the Society's Bronze Medallion each year. As Canada's lifeguarding experts, the Lifesaving Society sets the standard for lifeguard training and certifies Canada's National Lifeguards.

Making Canadians Water Smart

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

Drowning Research

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



Setting the Standard

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



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Incident Analysis Review

Section 1

Agreement

The Royal Lifesaving Society Canada, Alberta and Northwest Territories Branch (the Society) was engaged by the City of Edmonton (the City) to do a incident analysis review (the review) at the O'Leary Leisure Centre (the site).

The Society and the City have had a long standing relationship and affiliation for many years in respect to Society services and programs.

When an incident occurs such as a drowning it is tragic and may affect many individuals and organizations. A drowning does not usually occur due to a single reason but most often it is a series of events that leads to the tragedy.

Purpose

The purpose of an incident analysis is to have an independent objective review and opinion that is based on facts and data that can lead to learning for all involved. The investigation of the incident is with an "eye" to prevention, to adjusting policies and procedures if needed to close any gaps discovered to enhancing safety in the future.

"If it is foreseeable it is preventable." It is not "if" an incident will occur but "when" and we must all be ready.

Incidents can and do occur in aquatic facilities. Planning and training to prepare for a variety of emergency occurrences is a necessary part of responsible/reasonable facility management. A major incident can be described as an occurrence or event that requires an emergency response. In this case it was a submersion that lead to loss of life.

The Society has a standardized process for a review of this nature and the intent is to have a collaborative and supportive process that results in recommendations for consideration that may enhance safety, systems, procedures and training for the public and staff.

Major Incident Management

A major incident is an event or situation that may cause serious damage to a facility, its patrons, guests or staff. Successful management of a major incident requires an inclusive ongoing process of risk analysis, a thoughtful planned response, integration of existing decision making structures and establishing clear roles, responsibilities, and reporting.

Phases of incident management

Recognition phase

Intervention = Prevention - The emergency begins, deciding on the course of action required communication (ongoing)

Reaction Phase

Initial response to the incident taking action linking with others and outside assistance (EMS, etc.)

Recovery Phase

Incident resolution and debriefing of staff

Restoration Phase

Return to normal operations providing support to staff involved and preparing for the aftermath

Ongoing Support

The Lifesaving Society is a national charity working to prevent drowning and water-related injury. The Society saves lives and prevents injuries through its training programs, water smart, public education, water incident research, aquatic safety management services, and lifesaving sport.

The Lifesaving Society enhances the quality of life of Albertans and Northerners by setting health and safety standards and collaborating with partners for injury prevention, sport, recreation, and active living initiatives, making Alberta and the Northwest Territories the safest place to live, work, and play.

The Society is committed to working together for optimal safety for the public and staff with the City of Edmonton.

Acknowledgment

The Lifesaving Society would like to thank the City of Edmonton for its support and cooperation with the review. The time and effort the City has put into obtaining relevant documentation, assisting in providing information about the incident and working diligently with the Society during the review indicates the City's priority to optimal safety for the public and willingness to identify gaps and enhance its current systems.

Incident Analysis Review Process

Section 2

Personnel

The Lifesaving Society appointed Ms. Barbara Kusyanto, Chief Administrative Officer as the analysis and review coordinator; Dr. Edward Montgomery and Mr. Ron Lowe were appointed as part of the analysis review team. The team is all Lifesaving Society certified Aquatic Safety Auditors. The Lifesaving Society has extensive experience in aquatic safety management, audits, and inspections.

Incident Analysis Components

The incident analysis team followed a process that included the following:

- On-site safety inspection of the aquatic facility;
- Interviews with select staff involved in the incident;
- A review of relevant literature provided to facilities and staff concerning the operation of aquatics in the centre; and
- Preparation and completion of a draft and final report.

Facility Safety Tour

The tour of the aquatic facility was completed on August 20, 2012. During the tour, the team examined the facility applying criteria developed by the Lifesaving Society using sources that include the following:

- Government of Alberta statutes and regulations governing public swimming pools;
- Recommendations from fatality inquiries, coroners' inquests;
- Lifesaving Society standards concerning the operation of public swimming pools;
- Lifesaving Society research into drowning in swimming pools; and
- Lifesaving Society safety management services, education and training program materials.

The source documents used to formulate recommendations to enhance safety in the incident analysis review will be retained by the Lifesaving Society.

During the tour staff were accessed for additional information and clarification regarding specific facility operations, staff training and certifications, and other general topics.

Staff Interviews

The review team conducted interviews with selected City of Edmonton employees, including lifeguards and recreation facility attendants.

The review team had a standard interview agenda and asked questions of each interviewee as to his or her staff position, recollection and experience of the incident pre, during and post.

Interviewees were given the opportunity for input and additional thoughts with assurances that specific comments would be unattributed and were also informed of the Lifesaving Society FOIP policy.

Documentation Review

The relevant documentation and aquatic related literature supplied by the facility was examined, with more focus on policies and procedures and incident reports, which appeared to be the main sources of incident information. The documentation reviewed included the following:

- Review of policies and procedures, including checklists;
- Review of safety and supervision plan;
- Review of select areas in aquatic staff manual;
- Examination of Lifeguard positions;
- Incident documentation and reports from July 31, 2012;

- Review of CCTV video from July 31, 2012; and
- Review of staff qualifications.

The Society also reviewed its own literature and resources in respect of standards and training, such as Public Aquatic Facility Safety Standards and National Lifeguard materials and literature governing aquatic operations in Alberta.

Reporting Process

Drawing on all the source documents supplied by the facility, notes, assessments and observations, the Lifesaving Society prepared a report for the City of Edmonton.

This final report is for consideration of implementation.

Activity taking place at time of incident:

On July 31, 2012 a 7 year old boy was taken to the pool for a public swim by an adult caregiver along with a girl over 8 and another boy under 8. The two under 8 year old males were issued wrist bands by the Recreation Facility Attendant. There were 2 lifeguards on deck and approximately 82 patrons in the pool. The 7 year old boy entered the deck unattended from the male change room. The over 8 year old girl entered the deck and walked around the pool towards the teach pool. The caregiver and other under 8 male child entered the deck from the family change room hallway, then entered the main pool and moved across the main pool towards the teach pool. At this time the 7 year old boy entered the main pool where he could not touch the bottom. A patron subsequently approached a lifeguard and indicated there was a boy who was in the water and had not been moving. The lifeguard observed the 7 year boy floating just under the surface of the water in a vertical position and asked a patron nearby to tap him. When there was no response, the lifeguard entered the water, retrieved the boy and brought him to the edge of the pool where a second lifeguard removed the boy from the pool. The lifeguards immediately started resuscitation efforts. Emergency Medical Services was also immediately contacted and responded.

Findings:

It is the opinion of the Lifesaving Society that, at the time of the incident, the City of Edmonton was operating within safe practices and was in compliance with applicable legislation and regulation, including the following:

- Swimming Pool, Wading Pool and Water Spray Park Regulation; and
- Lifesaving Society Public Aquatic Facility Safety Standards

In addition City of Edmonton operates within the following legislation:

- Alberta Building Code;
- Alberta Occupational Health and Safety Code and First Aid Regulation; and
- Occupiers' Liability Act.

The City also had documented policies and procedures in place that were followed by the staff, including the following:

- Emergency management plan and facility emergency procedures;
- Safety and Supervision plan using a 2009 template developed in collaboration with the Lifesaving Society (updated by the City in 2011);
- Admission Policy; and
- Operational Checklists.

The City of Edmonton's admission policy is that all children under 8 years of age wear a wrist band to indicate that they must be actively supervised in the water by a responsible person 13 years of age or older.

It is the opinion of the Lifesaving Society that, at the time of the incident, the lifeguard staff on duty met the recommended standard for Lifeguards in Canada, including the following:

- Current National Lifeguard certification;
- Current Standard First Aid or Aquatic Emergency Care certification;
- Minimum 16 years of age; and
- Trained in facility safety systems and emergency procedures.

It is the opinion of the Lifesaving Society that, at the time of the incident, the following were true:

- An admission policy was in place;
- Lifeguard to bather ratios met or exceeded the recommended standard in the Lifesaving Society Public Aquatic Facility Safety Standards; and
- Lifeguards were in position and equipment was in place as per the facility's 2011 Safety and Site Supervision Plan and in compliance with the Lifesaving Society Public Aquatic Facility Safety Standards.

In summary it is the opinion of the Lifesaving Society that at the time of the incident the City of Edmonton's major incident management documentation was in place and followed. Specifically the Recovery and Restoration phases were managed well. The Recognition and Reaction phases should be reviewed for enhancement and adjustments to policies and procedures considered.

Recommendations

Section 4

Lifesaving Society recommendations are to be considered to enhance safety in the future.

1. Emergency Response Plan

At the time of the incident, the City had documented policies and procedures in place that were followed by the staff, including an emergency management plan and facility emergency procedures, Admission Policy, Operational Checklists and a Safety and Supervision Plan (updated in 2011).

To enhance safety in the future, it is recommended that the City of Edmonton evaluate and revise its existing emergency management plan as it applies to the aquatic environment. The evaluation should consider the following:

- Enhancing existing facility emergency procedures to ensure specific roles for all staff are identified, including the role of the Incident Commander;
- Designating a shift lead on the schedule for all operating hours;
- Continuing to provide ongoing reference/access to the Safety and Supervision plan and Emergency Procedures for staff;
- Emphasizing the use of the Lifesaving Society Safety and Supervision Toolkit (provided by the Lifesaving Society in February 2012) which includes legislation, regulation and recommended society standards;
- Reviewing the emergency pool clear procedure, evacuation routes and muster points;
- Reinforcing the use of "incident" report forms and documentation of first aid treatment at time of response; and
- Revising the POST incident statement format for staff to use to facilitate a clear and detailed account of the incident.

2. Public Education and Awareness

The City of Edmonton has several measures in place to increase awareness of aquatic safety, including providing information about the need to keep children under the age of 8 within arm's reach. The City also requires a swim test for those who want to swim in the deep end who are under the age of 13 or who appear to have limited swimming skills. The City, posts information related to aquatic safety, provides safety talks to groups before they enter the pool and offers a variety of swim, lifesaving and lifeguarding programs.

The Lifesaving Society recognizes the need for collaboration to increase the focus on aquatic safety across the industry and is developing additional education and training in this area.

It is recommended that the City of Edmonton further enhance its public education and awareness messaging for consistency as it applies to customer service and safety, including consideration of the following:

- Enhancing the information already provided to patrons about the need to keep children under the age of 8 within arm's reach by establishing a script for use by the recreation facility attendants and reinforcing the messaging through methods such as additional

signage and recorded announcements;

- Reinforcing with aquatic staff that educating the public is customer service and will build public awareness of the rules and help them experience a safe enjoyable aquatic experience; and
- Introducing a program continuum that would provide consistent education and training opportunities for public and staff, such as water smart messages and swim survival skills and encouraging the public to pursue advanced lifesaving training.

3. Lifeguard Positioning Analysis and Deck Management

It is the opinion of the Lifesaving Society that, at the time of the incident, the following were true:

- An admission policy was in place;
- Lifeguard to bather ratios met or exceeded the recommended guideline in the Lifesaving Society Public Aquatic Facility Safety Standards; and
- Lifeguards were in position and equipment was in place as per the facility's 2011 Safety and Site Supervision Plan and were in compliance with the Lifesaving Society Public Aquatic Facility Safety Standards.

It is recommended that the City of Edmonton engage the Lifesaving Society to review the current lifeguard positioning and evaluate lifeguard surveillance as it applies to unique facility design, equipment, and activities that impact lifeguarding requirements, such as any glare or blind spots. The City's assessment should also include the following:

- Reviewing the responsible person ratio for children under the age of 8: which is currently 1 responsible person for every 5 children;
- Considering a minimum of 2 lifeguards on deck to open for a public swim and designating an off deck lifeguard or staff to conduct swim tests (Appendix A); and
- Considering additional markings, such as a rope, and signage for main pool water depth changes.

4. Lifeguard Surveillance and Training

It is the opinion of the Lifesaving Society that, at the time of the incident, the lifeguard staff on duty met the recommended standard for Lifeguards in Canada, including the following:

- Current National Lifeguard certification;
- Current Standard First Aid or Aquatic Emergency Care certification;
- Minimum 16 years of age (City of Edmonton requires lifeguards to be 18 years of age); and
- Trained in the facility safety systems and emergency procedures.

In addition to Lifesaving Society qualifications, City of Edmonton lifeguards receive extensive training that includes the following:

- Deck Management In-service Training - annual training that includes scanning, surveillance, rescue techniques, and emergency response;
- Lifeguard Check List - a full checklist of required knowledge and responsibilities is completed at start of employment and reviewed annually;
- Lifeguard Assessments - conducted 3 times per year for each lifeguard;
- Lifeguard Fitness Skills - annual assessment of lifeguard fitness;
- Mock Emergency training - staff participate in mock emergencies annually; and
- Facility Orientation - lifeguards complete an orientation at each facility which includes a review of safety procedures, blind spots in the pool, amenity specific orientation such as water slide, wave pools, potential glare issues, facility safety equipment.

The Lifesaving Society recognizes the need for collaboration to increase the focus on aquatic safety across the industry and is developing additional education and training in this areas, including education and proficiency modules for lifeguard surveillance and lifeguard response to complement the current lifeguard fitness skills module that the City currently uses.

To enhance safety in the future it is recommended that the City of Edmonton review the frequency and topics of staff training based on facility specific needs and provide enhanced lifeguard surveillance training for aquatic facility supervisors and lifeguards. The training review should also consider the following:

- Reinforcing no tandem lifeguarding and clarifying the parameters for on deck communication between lifeguards;
- Providing enhanced opportunities to practice and demonstrate skills in the following areas:
 - Emergency pool clears;
 - CPR/AED protocols;
 - Surveillance techniques;
 - Recognizing and managing bather types;
 - Mock emergencies specific to the roles of each staff person and lifeguards in a 1, 2 and 3 lifeguard on duty scenario; and
 - Continuing to encourage staff to participate in enhanced lifesaving and leadership training and promote self-training and development (Appendix B).

Appendix A

Position Statement

Lifesaving Society Swim Test

- Safe Entry into shallow water;
- Swim 25 meters without stopping or resting, any style;
- Exit the pool from deeper water;
- Jump (foot first entry) into deep water; and
- Recover and tread water for 30 seconds, maintaining mouth and nose above the water at all times.

The Lifesaving Society's recommended Swim Test can be used as a screening tool to determine who can use certain amenities or equipment and participate in specific programs. The Swim Test can also be used as a screening tool for school or rental groups, or as a part of the facilities admission criteria.

Background

Since 2001, the Lifesaving Society has asserted that all public swimming pools should have established admission policies through its Public Aquatic Facility Safety Standards publication.

National Lifeguards and Swim & Lifesaving Instructors use Swim Tests to evaluate skill, comfort, confidence and competency. This practice increases safety and allows for effective supervision.

Currently facilities use a wide variety of means to establish swimming skill competency. Research indicates that Lifesaving Society affiliates are seeking very clear guidance on admission policies and/or Swim Tests.

In the past, the Lifesaving Society has recommended the Swim to Survive® standard. It is clear that this is most applicable in "unsupervised or minimally supervised" situations. Affiliates have requested a Swim Test suitable for lifeguard supervised environments.

Rationale

The Lifesaving Society recommends that all aquatic facilities in Alberta and the Northwest Territories implement the Society's Swim Test as a means to establish a common industry practice in regards to swimming skill competency and admission criteria.

The Lifesaving Society's recommended Swim Test may be implemented according to each facility's unique needs. While testing the swimming ability of specific age groups is common practice, it is not the only determining factor for effective incident prevention. Before implementing a Swim Test, it is recommended that the risk factors for each individual facility be analyzed along with current risk management processes. Clear guidelines must be provided to staff if there is to be any flexibility permitted when following the facility's policies.

Appendix B

Code of Conduct for National Lifeguards

The Lifesaving Society's Code of Conduct for National Lifeguards:

Affirms National Lifeguards are valued members of the Lifesaving Society

Provides National Lifeguards with guidelines for professional behaviour related to their roles, rights, responsibilities, and privileges within the Lifesaving Society

Provides terms of reference when seeking solutions to complaints and disputes

National Lifeguards commit themselves to the Lifesaving Society mission and to ethical, businesslike, and lawful conduct, including proper use of authority and appropriate decorum when in a vocational setting.

1. Maintain a work environment consistent with the expectations of the employer, government regulation, industry standard, the National Lifeguard Standard, the Public Aquatic Facility Safety Standards, and the Lifesaving Society.

2. Act in a manner that protects the public, fellow staff members and themselves from undue risk or harm.

3. Treat people with respect:

Communicate with empathy, diplomacy, discretion, and justice

Maintaining confidentiality of personal information

Without discrimination based on age, gender, religion, ethnicity, physical, mental, or emotional ability, sexual orientation, financial ability, or any other grounds

Without insult, assault, harassment, foul language, or gesture

4. Strive to improve professionally, maintaining current skills, fitness, knowledge, and judgement within the parameters of the National Lifeguard Standard. National Lifeguards are encouraged to exchange ideas and information with each other and the Society. Recognize that techniques included in the program are based on research, but other approaches can also achieve outcomes.

5. Maintain the integrity of the Lifesaving Society by:

Clearly representing the position of the Lifesaving Society

Maintain skills, knowledge, fitness, and judgement according to program standards

Adhering to the Lifesaving Society National Lifeguard program guidelines, rules, policies, and procedures

Reporting issues directly to the Lifesaving Society, avoiding public criticism

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

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LIFESAVING SOCIETY®

The Lifeguarding Experts

Appendix C

Aquatic Facilities 2012		
	Maximum Occupancies	
Kinsmen Sports Centre	Competitive	700
	Warm-Up	425
	Diving	225
	Teach	65
ACT	Main	188
Bonnie Doon	Main	300
Confederation	Main	200
	Dive	100
Peter Hemingway	Main	583
Eastglen	Main	225
Grand Trunk	Main	236
Hardisty	Main	216
Jasper Place	Main	230
Londonderry	Main	271
Mill Woods	Leisure (Wave)	375
O'Leary	Main	213
	Dive	104
	Teach	60
Terwillegar Community RC	Leisure (Wave)	200
	Tot	60
	Main	290
Commonwealth Community RC	Main (Fitness)	169
	Leisure	274
	Whirl	70
Borden Outdoor Pool	Main	206
Oliver Outdoor Pool	Main	217
Mill Creek Outdoor Pool	Main	375
Fred Broadstock Outdoor Pool	Lanesplash	256
		126
Queen Elizabeth Outdoor Pool	Main with attached shallow side pool	261

Appendix D:

City of Edmonton Continuous Improvement

City of Edmonton staff know that safety standards must evolve to meet changing circumstances and knowledge, as the industry continues to study water safety and introduce new safety concepts. And while this report is forward looking to determine new safety measures that can be introduced, it's important to record that the City continuously researches, pilots and implements best practices in water safety.

Below is a summary of some of the continuous improvements implemented in the past year at City aquatic facilities:

Introduced Alcohol Awareness Program for Outdoor Pools

An alcohol awareness campaign was developed and implemented in May 2012. The campaign included an "Intoxicating Substances Strategy" that established guidelines for staff regarding what is allowed in the facility and what is not; how to identify someone who may be under the influence or trying to bring banned substances into the facility; and what to do if this occurs. Signs were posted at all of our outdoor pools at the start of the season and a training session was held.

Over the summer of 2012, operations staff examined the contents of coolers and bags with the intent to stop patrons from bringing alcoholic beverages into our facilities. Meanwhile, security was increased at outdoor pools using special duty constables.

City of Edmonton Lifeguard Competition

A City of Edmonton Lifeguard Competition was held in February 2012. The event saw 69 City Lifeguards compete on one of 16 teams. 52 other aquatic staff volunteered at the event. Each of the 16 teams spent hours training and preparing for the rigorous event where they competed in the four key areas of fitness, deep water extraction, a water rescue situation and a first aid response.

Lifeguard Training School

The City introduced Lifeguard School in 2007 as group training for the new lifeguards. The School has grown in recent years and in 2012 new and advanced content was added. Of particular note, in the past year a leadership component was added to Lifeguard School with a focus on mentorship. Also added was Advanced Mechanical training and a Customer Service component.

Lifeguard Fitness Skills

The Lifeguard Fitness Skills Program is a Lifesaving Society physical skill assessment tool designed specifically for individuals performing lifeguarding duties. This tool allows lifeguards to clearly understand if they are maintaining the physical skills required to succeed in the face of a major lifesaving incident. The City of Edmonton is completing a two-year pilot of the new Lifeguard Fitness Skills Program.

Facility Manager Mentorship Program

This mentorship program was introduced in 2012 to give facility managers a broader support system and improve communication among employees and the various aquatic facilities. Managers share knowledge and learnings with each other and apply the learnings at their own facilities.