

**THE CITY OF WELLAND
COMMUNITY SERVICES**

**RECREATIONAL
CANAL SAFETY
PLAN**



[This Photo](#) by Unknown Author is licensed under [CC BY-NC](#)



EXECUTIVE SUMMARY	3
WELLAND CANALS	5
History of the Welland Canals	5
Recreational Canal Features	6
Lifesaving Society	8
CANAL MANAGEMENT	8
Water Quality Testing	8
Weather Conditions	9
Recreational Canal Signage	9
Maintenance & Operations	10
Staff Training	12
Event Management Planning	13
PUBLIC SAFETY	15
Recreational Canal Classification	15
Classification	15
Zone 1	15
Zone 2	16
Zone 3	16
Public Awareness Campaigns	17
Lifesaving stations	17
Lifejacket Loaner Program	17
Seasonal Information	18
Press Release	19
Social Media	19
Water Safety School Presentations	20
City of Welland Summer Camp	20
NEXT STEPS	21
Annual Review	21
Completion Date	21
APPENDICES	22
Appendix 1 - LSS Audit	24
Appendix 2 - Welland Waterways	65
Appendix 3 - Zone 1	66
Appendix 4 - Zone 2	67
Appendix 5 - Zone 3	70

The recreational canal safety plan is designed to provide a framework for managing safety risks associated with recreational activities related to the Recreational Canal. The plan aims to promote safety by identifying and assessing potential hazards, establishing safety guidelines and procedures, and implementing a robust safety management system. Prevention of drowning and other aquatic-related incidents remain at the forefront of this plan. The Welland Recreational Canal is the primary focus of this safety plan as the leading destination actively promoted for recreational activities and events. Outside this plan's scope are the Welland Shipping Canal and the Welland River.

The plan's core objective is to ensure the safety of participants and employees involved in recreational activities by providing a safe environment that complies with relevant safety regulations and industry best practices.

The plan outlines the roles and responsibilities of stakeholders involved in recreational activities, including participants, employees, and management. It also identifies potential hazards and risks associated with recreational activities, such as but not limited to sporting events, festivals, swimming, passive use and training.

To mitigate these risks, the plan provides guidelines and procedures for preventing accidents, managing emergencies, and ensuring a timely and effective response to incidents. It includes measures to monitor and evaluate safety performance, including incident reporting and investigation, safety audits, and regular safety reviews.

The plan also emphasizes the importance of training and education for all stakeholders involved in recreational activities, including participants and employees. It provides a comprehensive training program that covers safety guidelines, emergency procedures, and other critical safety information. As new communities emerge through development, the principles and practices of this safety plan will be extended to these new areas, including the classification of use.

Finally, the plan highlights the importance of continuous improvement and ongoing review to ensure that safety measures remain effective and up to date. It provides a framework for monitoring and evaluating safety performance and establishing continuous improvement processes. The safety plan is a companion document to the Waterway Emergency Preparedness Plan completed by the Welland Fire Department.

The recreational safety plan is a comprehensive and proactive approach to managing safety risks associated with recreational activities. It provides a clear framework for ensuring the

safety of all participants and employees involved in recreational activities while promoting a culture of safety and continuous improvement.

History of the Welland Canals

The Welland Recreational Canal, also known as the Welland Canal Parkway Trail, is a 42-kilometre-long recreational trail located in Ontario, Canada. The canal was first built in the 1820s to bypass Niagara Falls and connect Lake Ontario to Lake Erie, enabling ships to transport goods across the Great Lakes region.

The original Welland Canal consisted of a series of locks and a canal channel that allowed ships to navigate around Niagara Falls. Over the years, the canal underwent several expansions and upgrades to accommodate larger ships and increased traffic.

In 1932, the current Welland Canal was completed, a ship canal connecting Lake Ontario to Lake Erie, bypassing the Niagara River and Falls. The construction of the existing canal was a significant engineering feat, as it involved the building of eight locks, with each lock raising or lowering ships by approximately 13 meters.

In 1973 the Welland Recreational Canal was created along the old canal route. The Welland Recreational Canal is a 12-kilometre-long recreational trail located in the heart of Welland. The scenic waterway stretch is more than 1.3 million square metres of calm, clean water surrounded by hundreds of acres of land.



[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)

Recreational Canal Features

1. The Welland Recreational Canal is a popular attraction combining sport and leisure. Some of the features of the recreational canal include:
2. Historical significance: The Welland Recreational Canal has played a significant role in the region's development, and visitors can learn about the canal's history at various sites along the trail.
3. Biking and hiking trail: The recreational canal has a paved trail that runs alongside it, which is ideal for biking, hiking, and walking.
 - The Greater Niagara Circle Route Trails System is over 140 km consisting of roads, parkways, and trails inspired by the recreational canal side trails. The route follows the Welland Canal from St. Catharines to Port Colborne, the old CN Rail Line to Fort Erie, the Niagara Parkway to Niagara-on-the-Lake, and Lakeshore Road back to St. Catharines.
 - Merritt Island is located in the city's downtown core between the Welland Recreational Waterway and the Welland River. It is home to beautiful 4.2 km tree-lined paths.
4. Picnic areas: The recreational canal has several picnic areas where visitors can enjoy a meal while enjoying the beautiful scenery.
5. Fishing: The recreational canal is home to various fish species, including perch, bass, and catfish, making it a popular spot for fishing enthusiasts.
6. Wildlife viewing: The recreational canal is home to various wildlife, including ducks, geese, herons, and turtles, making it an excellent spot for birdwatching and nature observation.
7. Rec Rentals @ the Docks: Visitors can rent self-propelled watercraft to tour the recreational canal, which provides a unique perspective of the surrounding area as they pass under bridges, by the amphitheatre, down to Welland International Flatwater Centre or the 406.
8. Scuba Park @the Docks features several sunken structures serving as artificial reefs for aquatic life. It is open to scuba divers of all levels, from beginners to experienced divers, and offers a unique and exciting diving experience.

9. Swimming @the Docks is a designated safe swimming area next to Rec Rentals. Those who need extra support are encouraged to borrow a lifejacket from Rec Rentals.
10. Merritt Park Amphitheatre is a large, open-air stage that hosts various events throughout the year, including concerts, theatre productions, dance performances, and community gatherings.
11. Welland International Flatwater Centre (WIFC) is a premier sports and recreation facility built to host flatwater racing events for the 2015 Pan American Games. It has become a world-class destination for athletes, coaches, and visitors. The WIFC offers a variety of programs and services for flatwater sports excellence, including canoeing, kayaking, rowing, dragon boating, and stand-up paddleboarding. The WIFC also features a training, education and celebration hall that converts into an indoor paddle tank for winter training. The center hosts national and international competitions, including the provincial and national championships.
12. Sports Excellence: The Recreational Canal is home to three local Flatwater Clubs and the home of Row Ontario.

Lifesaving Society

The Lifesaving Society has been around for over a century and has been instrumental in developing many water safety standards and practices we use today. They are also committed to ongoing research and education, continuously updating their knowledge and practices based on new findings and data. This means their advice is always up-to-date and based on the latest evidence.

In 2022, staff engaged the expertise of the Lifesaving Society to conduct an audit of our Recreational Canal as they are an organization dedicated to promoting water safety and drowning prevention in Canada and worldwide. They must use their advice and adopt recommendations based on recreational canal usage.

Throughout this document, we have adapted strategies found within the Comprehensive Safety Audit to create our operational Recreation Canal Safety Plan.

Please refer to appendix 1, Comprehensive Safety Audit Report-ON

Water Quality Testing

Water testing is essential in recreational waterways to ensure that the water is safe for human contact and to protect the health of individuals using the waterway. Recreational waterways such as beaches, lakes, and recreational canals are commonly used for swimming, fishing, and other activities. These activities may expose individuals to harmful contaminants and bacteria in the water, which can cause illnesses.

Testing the water can also help identify long-term trends in water quality, which can inform management decisions and help prevent future contamination. Additionally, water testing can help identify sources of pollution and guide efforts to reduce pollution from human activities such as agriculture, wastewater treatment, or urban runoff.

As the Recreational Canal is used for various activities, testing the water helps identify potential hazards, such as excessive levels of harmful bacteria, viruses, or other pollutants. If such contaminants are present, measures are taken to warn the public.

Recreational Canal Signage

To ensure the Recreational Canal is safe to access, the water quality is tested in three locations, and results can be found on welland.ca; signage will be located at

designated swimming areas with a link to the website for current information.

- Welland Community Boathouse (Monthly) à June
- @the Docks (Weekly for July and August)
- WIFC North Course (Monthly)à June

Utilizing the News & Alerts feature on the welland.ca redesign, we can use this for emergency notification via welland.ca, like how the Niagara Region posts alerts for Regional beach water testing. The website will list the location, date, results, and advisory level. The advisory levels will be listed as follows:

- Good
- Poor
- Advisory
- No Winter Testing

Weather Conditions

Inclement weather conditions such as storms and high winds can create strong currents and waves, making swimming or navigating in the water complex. It can also be dangerous for canoeing, kayaking, and other water activities. Thunderstorms can bring lightning, which is extremely dangerous when you are in the water. It's essential to avoid water during thunderstorms and seek shelter. Preparation for your day is the best way to stay safe, and knowing the weather conditions is necessary before entering the recreational canal. Inclement weather can also affect the water temperature; the temperature of the water can affect your body temperature and lead to hypothermia. Knowing how to protect your body during cold water entry is critical.

At city-owned facilities and designated swimming areas, staff will sound a megaphone siren during hours of operations and follow up with a verbal warning. When that happens, getting to shore immediately and taking cover is essential. Wait for 30 minutes after the storm has passed before returning to an open area or the water. Once 30 minutes pass without thunder and lightning, visitors can enter the water safely.

- If locations are closed for inclement weather, social media is utilized to notify the public when inclement weather events last longer than one hour.

Maintenance & Operations

Recreational canal safety signage is essential to ensuring the safety of swimmers, athletes, and other users of recreational canals.

Here are some common types of signage that can be used:

1. No swimming signs inform people that swimming is not allowed in some regions of the recreational canal. This is important because swimming in a recreational canal can be dangerous due to depth and known and unknown hazards.
2. No diving signs - These signs inform people that diving is not allowed in certain recreational canal areas. This is important because diving into shallow water or water with hidden objects can cause severe injury or even death.
3. Keep off the bank's signs - These signs inform people that they should not climb on the recreational canal banks. This is important because the banks can be unstable, and a fall can result in injury.
4. Emergency Rescue Station Signs - These signs are used to inform people what to do in a situation. This is important because, in the event of an emergency, quick access to information is essential.
5. No Lifeguard on Duty – These are posted at the designated recreational swimming area(s), encouraging swimmers to exercise caution and use their best judgment when entering the water. Lifeguards are only used on the recreational canal for events. It is not recommended to include lifeguard supervision at the designated swimming area.



Parks and Forestry crews are dedicated to improving and maintaining the Welland Waterway/canal. The maintenance and operations of a recreational canal involve several vital tasks to ensure that the recreational canal is safe, functional, and enjoyable for all users. Some of these tasks include:

Regular inspection: The recreational canal should be inspected regularly to identify any issues, such as new or existing hazards to bank erosion, that could impact the safety or usability of the recreational canal. Inspections also include checking for debris or other obstructions that could impede athletes.

Cleaning: Over time, debris can accumulate in the recreational canal, impeding the water quality and scuba course navigation. Working with local scuba clubs, seasonal underwater clean-up is conducted.

Vegetation control: Uncontrolled vegetation can obstruct the recreational canal, causing safety hazards. Regular maintenance is necessary to control vegetation growth along the recreational canal banks.

Safety measures: The recreational canal should have appropriate safety measures, such as signage, docks, and buoys, to ensure all users can navigate safely.

1. **Customer service:** good customer service is essential for a recreational canal to be successful. This may include providing information to visitors about the recreational canal, offering amenities such as restrooms and picnic areas, and responding to customer concerns and complaints. Staff duties include cutting grass along the recreational canal, landscaping, installing and removing canal courses and docks, and running recreational and competitive events up and down the recreational canal.

Staff Training

An essential aspect of canal safety is having knowledgeable and trained staff. As staff work on or near open water, training staff on water safety can help prevent accidents and injuries that can occur while working on or near open water. By being aware of potential hazards and knowing how to avoid them, staff can reduce the risk of accidents and injuries.

Staff working on or near open water may be responsible for the public's safety. By being trained in water safety, the team can help ensure that public members are safe when using water facilities or participating in water-based activities.

In the event of an emergency, staff who are trained in water safety can respond quickly and effectively, potentially saving lives. They will know how to recognize signs of distress in the water and can take appropriate action to assist someone in need.

Lifeguards are trained extensively in water safety to ensure the safety of all individuals in and around the water. Lifeguards are trained in various water rescue techniques, such as active and passive rescues, and rescue equipment, such as rescue tubes, buoys, and backboards. Lifeguards are taught to assess the risks associated with different water environments and conditions, such as strong currents and underwater hazards. They are also trained to communicate effectively with other lifeguards, emergency services personnel, and the public to ensure quick and efficient emergency response.



One of the best training aspects is that Lifeguards are also trained in preventative measures, such as enforcing safety rules and regulations, educating the public on water safety, and identifying and addressing potential hazards.

Other trained staff are Recreation and Culture Ambassadors, Recreation Corridor Attendant, and grass-cutting crews are all first aid and CPR certified for the same reasons as the lifeguards, prevention, and safety. In addition, ambassadors are provided with a water safety presentation and watercraft training that will be implemented with other seasonal, casual, and full-time staff that work on or near the water's edge.



As our Recreational Canal Safety plan evolves, so will the staff training program. This evolution ensures that all who access and oversee the water will do so safely and will be able to provide a level of oversight to those using the recreational canal.

While working on the waterway, all staff are required to wear PFDs. Several types of PFDs can be worn to ensure job duties can be completed safely. Pictured below is an Inflatable Belt PFD and a more commonly used PFD.

Event Management Planning

The Special Events Application Review Team (S.E.A.R.T.) is a team comprised of City staff representing various municipal divisions and various stakeholders that facilitate and support outdoor events taking place on City property and, in some cases, events on private property that significantly impact City services.

The S.E.A.R.T. meetings are for the event host to ask questions and clarify the plan to ensure critical components have been met. This team ensures that these events have all the necessary permits, permissions, and insurance to ensure the event is healthy and safe for the organizers, participants, corporations, and other citizens.

In 2023, W.I.F.C. will see over 20 unique sporting events, while a few more recreational events will happen @the Docks. As each event has its requirements by focusing on critical components, an event management plan can help ensure a safe and successful event along a recreational waterway. An event management plan for a recreational waterway would typically involve several key components:

Planning and Preparation: The first step is to establish the goals and objectives of the event, including the type of activities that will be taking place, the number of participants, and the date and location of the event. This information will help to guide the planning and preparation process, which may include obtaining permits and licenses, securing a venue, hiring vendors and contractors, and developing a communication plan to promote the event.

Risk Assessment and Management: A thorough risk assessment should be conducted to identify potential hazards and risks associated with the event. This may include evaluating the waterway's safety, assessing participants' competency, and developing contingency plans for emergencies or unexpected incidents. Risk management strategies may include providing safety equipment, such as life jackets, and ensuring all participants are trained and informed of safety procedures.

Logistics and Operations: This component involves the coordination of logistics and operations necessary to support the event, including transportation, parking, food and beverage service, waste management, and security. Key considerations may include the following:

- Ensuring adequate restroom facilities.
- Providing sufficient lighting for night events.
- Coordinating with local authorities to ensure compliance with regulations and laws.

Participant Services: This component focuses on providing services to participants, including registration, packet pickup, and other amenities such as water stations, rest areas, and medical and lifeguarding services. Volunteers and staff should be trained to provide friendly and efficient service, and participant feedback should be solicited to meet needs.

Communication and Promotion: Effective communication and promotion are essential to the success of an event. This may include developing a website and social media presence, sending newsletters and press releases, and working with local media outlets to generate publicity. Regular updates should be provided to participants, sponsors, and stakeholders to keep them informed of event details and any changes or updates.

Recreational Canal Classification

Classifications

Given the length and size of the Recreational Canal, the audit identified three user area classifications adapted based on recreational canal usage. These classifications are:

- Zone 1: Park-like setting, trail and vehicular access, public parking, amenities such as shelters, changerooms/bathrooms, public access, dock availability and designated swimming area.
- Zone 2: Access to water, grass cut, picnic tables or benches, trails on recreational canal banks and sports training and competition dock available, training and competition swimming occurring.
- Zone 3: Extensive shrubbery, rocky shoreline, steep embankments, no swimming occurring.

Please see appendix 2, a map of the Welland Waterways.

Zone 1

Recreational canal classification, Zone 1 refers to a location along the recreational canal with a designated swim area, marked off by the buys pictured below. On the Welland recreational canal, Zone 1 is located at 129 Lincoln Street at the swimming docks at Rotary Park. This location offers multiple ways to recreate on or in the water, including swimming @ the docks, rec rentals @ the docks and scuba @ the docks. Although Zone 1 is the safest place to swim in the recreational waterway, this area is not lifeguarded. Please see the pictures below for Zone 1. Please see appendix 3, a map of the swimming area.



Zone 2

Recreational canal classification, Zone 2 refers to a location along the recreational canal where water sport training occurs, rowing, canoeing, swimming, etc... Although these zones are very similar to Zone 1, no designated swim area exists. Often these locations are used up for events, practices, and training. Zone 2 sites on the recreational canal can be found at the Welland International Flatwater Center and the Welland boat house. Please see the picture below for Zone 2. Please see appendix 4, a map of the training areas.



Zone 3

Recreational canal classification, Zone 3 refers to the rest of the recreational canal. These locations are unsafe for swimming due to the low maintenance of the shoreline and embankments. Zone 3 has limited road access, if any, in the case of an emergency; responding would be very difficult. Please see the picture below for Zone 3. Please see appendix 5, an example of an unsafe swimming area



Public Awareness Campaigns

Educating the public about the risks associated with recreational canal and activities on the water or on land near the water is essential. This can be done through various methods, including media releases, social media campaigns, and educational materials distributed to schools and welland.ca.

Lifesaving stations

Lifesaving stations are installed along the pathway in areas with easy access to the water, docks, open access along banks, etc. These stations are located every 200 meters in high-use areas and every 1000 meters in less-used areas. These lifesaving stations include a buoyant throwing aid and appropriate signage. These stations are checked weekly, and any missing equipment will be replaced; if you see any equipment missing, please reach out to 905-735-1700 ext. 4000.



Lifejacket Loaner Program

A lifejacket loaner program is a program that provides free loaner lifejackets to individuals or groups who may need them for water activities. The program is designed to promote water safety by ensuring everyone has access to a properly fitting lifejacket when participating in water-based activities.

Lifejacket loaner programs are a great way to promote water safety and help prevent drownings. By making lifejackets available to everyone, regardless of their ability to purchase their own, these programs ensure that more people can enjoy water activities while staying safe.

Seasonal Information

Frozen waterways have an allure to them. However, they should be avoided as the ice thickness can change daily. Cold water can be dangerous, especially when proper safety procedures are not followed.

There are some safety procedures to follow when dealing with cold water.

1. Always wear appropriate clothing: If you are planning to spend time in cold water, wear proper clothing such as a wetsuit, dry suit or thermal layers to keep yourself warm.
2. Never be alone: If someone in the group experiences hypothermia or other cold-related conditions, someone will be there to help.
3. Know your limits: Be aware of your physical limitations when swimming or participating in water activities in cold water. Know when to stop and seek warmth and shelter.
4. Monitor weather conditions: Keep track of weather conditions before entering cold water, as cold-water temperatures can be exacerbated by wind, rain, and snow.
5. Stay hydrated: Dehydration can contribute to hypothermia, so drink plenty of fluids before and after cold water activities.
6. Stay aware of changing conditions: Weather and temperature changes can significantly impact the safety of frozen waterways. Stay mindful of the weather and ice conditions, and adjust your plans accordingly.
7. Learn cold water safety techniques: Take a class or consult a professional to learn proper techniques for hard water safety, such as the appropriate way to enter and exit cold water and how to recognize the symptoms of hypothermia.
8. Ice thickness for various activities (ice-safety zones) and always identify at least three items for safety around the ice (e.g., rope, warm clothes, whistle)

- 15 cm for partners
- 20 cm for small groups
- 25 cm for snowmobiles

Summer waterway use differs from Winter usage; however, it still has its dangers. Ways to protect oneself can be found by:

1. Wear a life jacket: Always wear a properly fitting life jacket when on or near water. Even if you are a strong swimmer, a life jacket can save your life in an accident.
2. Check the weather: Before going out on the water, check the weather forecast. If there are high winds, lightning, or other dangerous conditions, it is best to stay on land.
3. Learn to swim: If you are spending time on the water, it is essential to know how to swim. Take swimming lessons if necessary.
4. Avoid alcohol and drugs: Never go swimming or operate a watercraft under the influence of drugs or alcohol.
5. Be aware of your surroundings: Always be mindful of other swimmers and obstacles in the water.
6. Follow the rules of the waterway: Follow the posted signs and the laws of the waterway. These rules are in place to keep everyone safe.

Press Release

A press release, also known as a media release, can be a successful tool for several reasons:

1. **Publicity:** A media release can help generate publicity and increase awareness of a company, brand, product, or service. By distributing the release to media outlets, the information can reach a wider audience, potentially leading to increased exposure.
2. **Credibility:** When a media outlet publishes a story based on a press release, it adds credibility to the shared information. This is because journalists and editors are often seen as independent and objective sources of information, so their endorsement can help lend credibility to a company or organization.
3. **Cost-effective:** Compared to other forms of marketing and advertising, a media release can be a cost-effective tool. While costs may be associated with writing and distributing the release, it is often much cheaper than other forms of advertising or marketing, such as paid or sponsored content.
4. **Top of Form**
Using the above reasons, a press release schedule has been created. A press release will be sent to all subscribers and news outlets each season. Each press release will cover water safety topics concentrating on the recreational canal. Such issues will

include cold water, ice safety, and general warm weather water safety. Each release will consist of safety tips, basic first aid and facts about the season in the subject.

Social Media

Using social media effectively to promote public education and developing a solid content strategy that is relevant, engaging, and informative is essential. This can include sharing news and updates about recreational canal educational initiatives, providing resources and tips, and promoting events and activities.

Social media platforms have a large user base, which means that the reach of the content shared on social media can be significant. This makes social media an effective tool for spreading information about public education to a broad audience.

This also means that these media platforms allow for direct engagement with users, fostering a sense of community and encouraging discussion and collaboration around water safety topics. This engagement can build interest and enthusiasm for water safety.

Social media is easily accessible and helps to remove barriers for people across different demographics, including those who may not have access to traditional educational resources. Specialized social media posts will be completed and scheduled 16 times over a year, approximately once per month; the other posts will be during the summer months as more visitors to the area. Topics will include but are not limited to personal flotation devices (PFD), swimming lessons, hypothermia, and cold-water submersion.

Water Safety School Presentations

Engaging our youth will instill safe practices for life. Lifeguards will visit elementary schools during May and June and engage students in a 15–20-minute interactive presentation on Water Safety. The presentations are age appropriate and encourage participation by talking about how to stay safe around water, what to do in case someone falls into the water and how to be water smart. If there are any additional topics an individual school would like the Lifeguards to cover, we can incorporate that into the presentation.

City of Welland Summer Camp

In addition to school presentations, Lifeguards participate in Welland Summer Camp Day one activity by presenting the interactive water safety exchange. These conversations cover pool safety and all open water safety. We have these discussions as the Niagara Region is surrounded by water, and the recreational canal runs through our city. These short but interactive presentations help the young generations of Welland understand the importance of being water smart.

Annual Review

As stated in the executive summary, this plan highlights the importance of continuous improvement and ongoing review to ensure that safety measures remain practical and current. It provides a framework for monitoring and evaluating safety performance and establishing continuous improvement processes.

An annual review will be conducted of the implementation of the Recreation Canal Safety Plan.

Completion Date

Recreational Canal Safety Plan completed 2023-06-20, Annual review to be completed Q1 2024 by the Supervisor of Aquatics and Recreation Programming.

Appendix 1 - Appendix 1 - LSS Audit

Appendix 2 - Welland Waterways

Appendix 3 - Zone 1

Appendix 4 - Zone 2

Appendix 5 - Zone 3



LIFESAVING SOCIETY

The Lifeguarding Experts

COMPREHENSIVE AQUATIC SAFETY AUDIT REPORT

CLIENT

City of Welland
Canal Recreational Waterway

LIFESAVING SOCIETY

400 Consumers Road
Toronto, Ontario M2J 1P8
(416) 490-8844

October 5, 2022

TABLE OF CONTENTS

Summary Findings.....	3
Welland Waterway Characteristics.....	5
General Recommendations.....	6
Specific Location Recommendations.....	23
South Course.....	23
Boat House.....	28
Lincoln Street Docks.....	33
WIFC - North Waterway.....	38

Summary Findings

Aquatic Safety Audit

On February 10, 2022, Mr. Rob Axiak retained the Lifesaving Society to undertake a comprehensive aquatic safety audit of their Welland Waterway aquatic operations. An initial meeting was held with Mr. Axiak and with Mr. Michael Shane, Safety Management Director - Lifesaving Society. It was agreed that the purpose of the aquatic audit was to maximize the safety of participants on the Welland Waterway. The safety audit would identify what steps might be taken to minimize the risk of drowning or serious water-related injuries. It was agreed that the scope of the safety audit would include discussions with management in addition to an evaluation of the waterfront operation. This evaluation would report only on those items that require attention. It would not address aspects that were satisfactory or exceptional.

Aquatic Safety Audit Process

Personnel

The Lifesaving Society appointed Mr. Patrick D'Almada as Aquatic Safety Management Services - Chief Auditor. The Lifesaving Society also appointed the following Aquatic Safety Auditors: Ms. Shanna Reid and Mr. Michael Shane. All auditors have extensive experience in aquatics, facility evaluation and waterfront operations.

The Lifesaving Society appointed Michael Shane, Safety Management Director, as the primary contact for the safety audit team.

Audit Components

The audit team followed a process that included:

- On-site safety inspection of the waterway and facilities.
- Interviews with management staff at various levels within the organization.
- A review of existing documentation provided by City staff.
- Completion of a final report.

Specifically, the audit identified four user area classifications:

- club building area
- swimming areas with docks
- no swimming areas with public access
- no swimming areas no access or remote

For each area the report listed their characteristics for identification and recommendations regarding safety of individuals in, on and around the water in these areas. Sample areas were identified for each classification along with specific recommendations for these areas.

In addition, the report will include recommendations regarding operating practices for the canal and specified events. The report identified recommendations and did not draft operation safety manuals.

Facility Safety Inspections

The safety audit team completed its inspection of the waterfront facilities on May 24th and 25th, 2022. In their detailed inspection, the auditors examined the facilities applying criteria developed by the Lifesaving Society from sources that included:

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

Photographs were also taken of the waterway areas.

Staff Interviews

Following the facility inspection, the safety audit team conducted interviews with a selected cross-section of management staff. The interviews were designed to gather further information on policies and procedures and observations during the audit.

The members of the audit team asked questions of each interviewee, after which staff were invited to share additional thoughts with assurances that specific comments would be unattributed.

Documentation Review

The safety audit team reviewed a number of documents identified in the audit report.

Recommendations

The Lifesaving Society's aquatic safety audit reports Primary and Secondary Recommendations. We direct your attention to the following concerns and recommendations:

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

Secondary Recommendations – Secondary Recommendations are designed to enhance the safe use of the aquatic facility. Action on Secondary Recommendations can proceed within the facilities ongoing operations.

Welland Waterway Characteristics

During the safety audit, the inspectors identified three classifications of the Welland Waterway in addition to auditing four specific sites.

General Recommendations – Welland Waterway Characteristics

The Lifesaving Society has identified a hierarchy of potential swimming areas in the Welland Waterway. The most likely location would be a Level 1 while the least likely would be a Level 3. The Society has also identified the characteristics of each of these Levels so Welland staff can classify each potential location and thereby take steps to ensure bather safety first in Level 1 locations followed by Level 2 and then Level 3.

Classification of waterway areas:

Classification of waterway areas:

1. Level One - park like setting, trail and vehicular access, public parking, amenities such as shelters, changerooms/bathrooms, public access, docks, Swimming frequently occurring.
2. Level Two - access to water, grass cut, picnic tables or benches, trails on canal banks and perhaps docks available, swimming occasionally occurring.
3. Level Three - extensive shrubbery, rocky shoreline, steep embankments, no swimming occurring.

In addition, the Lifesaving Society has provided a Checklist and included this in the report. This Checklist will allow staff to evaluate all areas of the waterway using this classification system. See Appendix X

General Recommendations

Primary Recommendations

The Safety Audit Team inspected four (4) locations: South Course, North Waterway WIFC, Boat House, Lincoln Steet Launch. The following recommendations relate to all sites. Individual site recommendations are also included later in the report on page 27.

1. Recreational swimming should be permitted in designated zones along the canal with safety measures in place to educate users of the risks associated with swimming in the canal.

The Welland Recreational Waterway is a water channel in the city of Welland. It is an old alignment of the Welland Ship Canal that was abandoned after the construction of the Welland By-Pass in the 1970s. The waterway has a steep drop off along its entire route through the City. The canal has vertical walls which drop off quickly to a depth of between 4.3 m (14 ft) and 7.6 m (25 ft)¹. This sudden drop off, along with the cold-water temperatures could present a significant hazard for individuals with limited swimming ability or knowledge of self rescue in this environment. The various sections of the canal have various features and amenities to support recreational activities. Recreational swimming is permitted in the waterway in designated areas where safety measures are in place to prevent accidental drowning and provide for near shore rescue. These designated locations and safety measures are outlined in this report.

2. Supervised swimming/training/events should be permitted in designated zones if safety supervision, emergency personnel and procedures are in place.

The recreation canal is an excellent venue for open water swimming for sports such as distance swimming, triathlons, etc. These events attract individuals with competent swimming and self rescue skills, as well as some knowledge of the risks associated with open water swimming. Based on a review of event organizers on the canal, there are safety supervision steps included in their emergency procedures. Where organized swimming is permitted the following should be in place:

a. Lifeguards

- i. City lifeguards should be required for all open water swims whether hosted by the City or an event provider. The number of lifeguards will depend on the number of bathers, size of area under supervision, activity, etc. as indicated in the Lifesaving Society Waterfront Safety Standards. Non-City lifeguards recruited for events must have the same certifications, training and experience as City lifeguards. Lifeguards should be trained and certified to the Society's National Lifeguard Waterfront certification. The National Lifeguard Pool certification does not provide lifeguards with the skills required for open water rescue.
- ii. Lifeguards should be provided with an orientation and involved in pre-season emergency procedures training in and on the canal water.
- iii. Lifeguards should be involved in coordinated training in emergency procedures along with event personnel prior to each event.
- iv. Lifeguards should be equipped with wetsuits, masks, snorkels and fins, rescue tubes with a shoulder strap, 2-way radios, and paddleboards. One lifeguard should be designated a senior lifeguard/supervisor at each event and have access to a Personal Watercraft with a rescue basket attached for quick response in an emergency. The senior lifeguard/supervisor should be trained in the society's Patrol Rider certification.

¹ https://en.wikipedia.org/wiki/Welland_Canal

-
- v. Recruit and train lifeguards – a recurring comment during the staff interviews was that there are not enough qualified lifeguards to supervise events, and it would be even more challenging to recruit lifeguards for designated swimming areas. The City should develop a strategy for the recruitment and retention of qualified and trained lifeguards to support the canal's activities.
 - vi. Provide Lifeguard Supervision – lifeguards should be certified by the Lifesaving Society's National Lifeguard Waterfront certification, be provided with an orientation to the specific site where the event is taking place, have the necessary rescue equipment available - whistle, rescue tubes, appropriate clothing for weather and water conditions (wetsuit in colder temperatures), fins for additional propulsion in water and backup lifeguard(s) to assist in the rescue.
 - vii. Provide an Emergency Response Plan. This plan must be written, posted, and practiced by all rescue/emergency personnel involved in the event.
 - viii. Provide non-motorized watercraft – one paddleboard per lifeguard is recommended. Paddleboards enable a lifeguard to safely supervise the activity, move with the swimmers participating in the event without risk of colliding with other swimmers, and maneuver quickly to the location of a swimmer in distress.
 - ix. Provide at least one Motorized rescue boat – a senior lifeguard should be present on a rescue boat and/or Personal Watercraft equipped with rescue and first aid equipment. Rescue boat must comply with Ministry of Transport Small vessel regulations.
 - x. Identify a designated emergency focal point – a location along the shoreline should be designated for lifeguards to transport casualties to meet with emergency response personnel. This location should have additional equipment and facilities for treating the casualty, as well as easy access for emergency vehicles.

b. Coordination of Emergency Procedures

- i. City personnel should meet with Emergency Services personnel (Fire Rescue, Paramedics, Marine police) prior to the start of the season to discuss upcoming events and activities, emergency plans and response, each's role in these activities and events, as well as a safety plan to proactively plan for unfortunate incidents in, on and around the waterway. A de-brief should be conducted following each event involving EMS personnel to discuss the role that the City and user group could improve on for future similar incidents. A follow up post season meeting should be held to review areas of success and improvements for the following season, as well as winter safety in, on and around the canal.
- ii. Ensure the coordination of emergency procedures – a meeting should be held each spring and fall including City staff and emergency response personnel to conduct a tabletop rescue response exercise, as well as an on/in water search, rescue, and recovery exercise.
- iii. Emergency Procedures – must be written, posted and practiced by all rescue/emergency personnel involved in the event.
- iv. Ensure Search and Recovery capabilities – based on the depth and quick drop off of the waterway, EMS personnel should be trained in search and rescue including the use of SCUBA equipment. Recovery operations should be practiced by EMS personnel in order to be prepared for quick response, search and rescue.

c. Public Education

Data provided by the Drowning Research Centre from the Ontario Coroner's files indicate that between 2006-2017 there were 11 deaths. Of those deaths 4 were aquatic, 3 were non-aquatic (person fell in), 1 was boating, 2 were land/ice and 1 was unknown. This adds up to approximately one drowning per year in the canal. The following messages should be included in annual public education campaigns (examples can be found on the Lifesaving Society website, Canadian Red Cross Society, etc.):

- Swimmers should wear a high visibility bright coloured cap, vest or float.

-
- Swim in safe designated areas.
 - Parents – you are your child’s lifeguard
 - Danger – steep drop off
 - Danger – thin ice
 - Wear a PFD in, on and around water.
 - Always swim with a Buddy.
 - Individuals with medical conditions should be accompanied by an individual who is knowledgeable about the individual’s condition.

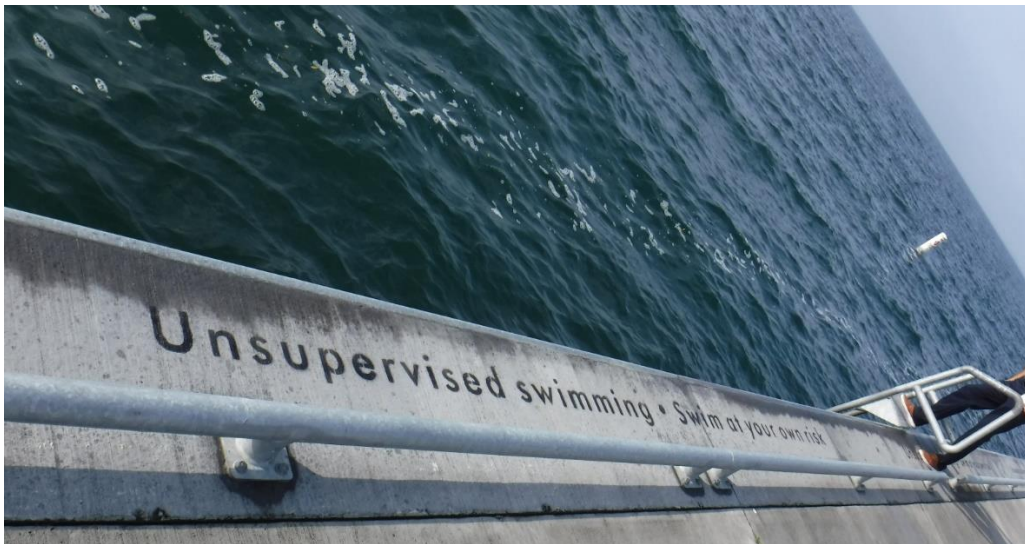


3. Signage

Throughout the Canal there was little signage prevalent, poorly placed or faded when available. Developing a signage plan for implementation over 1-3 years based on priority locations, and installing signage at specific intervals along the length of the canal, would provide public education safety information. The Lifesaving Society’s Waterfront Standards recommend that signage be located in prominent areas along the canal, focusing on areas based on the following priority classifications:

- a. Level 1 - park like setting, trail and vehicular access, public parking, amenities such as shelters, changerooms/bathrooms, public access, docks, etc.
- b. Level 2 - access to water, grass cut, picnic tables or benches, trails on canal banks and perhaps docks available.
- c. Level 3 - extensive shrubbery, rocky shoreline, steep embankments.





Signage should be seasonally specific focusing on swimming, bathing, and accidental falls into water during warmer months, and ice safety during the winter months. The signage plan will detail the content and location of the signage required and in some cases one sign for all season may be possible. Alternatively, the use of multiple seasonal signs would provide relevant seasonal information. Designate specific unsupervised or supervised areas within specific safe areas for activities for supervised programs and training purposes. All other areas should be signed no swimming, with summer and winter signage focused on the following Public Education messages and ideograms.

i. Inaccessible/Non-designated Swimming Areas (Level 2-3)

- Implement some the messages and signage included in the City of Welland's 2020 Waterway Safety document" Waterway Education", and add:
- Access to water and swimming is not recommended as there are unstable banks, quick drop off, deep water, cold water and hazards may be present.
- Conditions are not suitable for young or inexperienced swimmers. Use an alternate designated swimming area along the recreational canal.
- Lifesaving Stations equipped with a Reaching Pole and Ring Buoy is provided for use in an emergency.
- No lifeguard on duty.

- Wear a lifejacket/PFD when participating in, on or around the water. Use of inflatable toys and rafts as lifesaving devices are not recommended.
- Children/non-swimmers should be directly supervised within arm's reach when within 2 meters of the canal banks.



Swimming Permitted?

Wear a PFD

Waterway is not supervised

ii. Accessible/Designated Swimming Areas (Medium – High Risk)

- Caution when accessing water for swimming – unstable banks, quick drop off, deep water, cold water and hazards may be present.
- Conditions are not suitable for young or inexperienced swimmers.
- Wear a lifejacket/Personal Floatation Device when participating in, on or around the water.
- Never swim alone - always swim with a buddy who is capable of assisting you in an emergency.
- Use of inflatable toys and rafts as lifesaving devices are not recommended.
- No lifeguard on duty.
- Children/non-swimmers should be directly supervised within arm's reach when within 2 meters of the canal banks and in water.
- Persons with known medical conditions or physical limitations should always be accompanied by an individual who is familiar with the condition and can render assistance in an emergency.



iii. Winter Signage

- The signage plan will detail the location and content of all signs. In most cases one sign may be used for year-round activities, or multiple seasonal signs would provide relevant seasonal information in the form of pictograms or words.
- Motorized recreational vehicles such as snowmobiles and dirt bikes are not permitted on the ice.
- Ice unsafe – use at your own risk.

4. Non-motorized boating should be permitted in designated sections of the canal.

The recreational canal is a perfect setting for non-motorized boats such as kayaks, canoes and stand-up paddleboards. In areas where these activities are permitted, Public Education signage should be installed to inform user so of the risk and dangers associated with the topography of the surrounding land and canal, as well as the temperature of the water. During unsupervised boating activities all persons in these craft should be required to wear at all times a properly fitted lifejacket.

5. Training and Certification of Boat Operators

All motorized boat operators must be Ministry of Transport's Pleasure Craft Operator certified and follow the requirements outlined in Transport Canada's Safe Boating Guide.

6. Organizer Event Personnel

Trained personnel with Pleasure Craft Operator cards should operate rescue power boats and be trained to respond to coordinated emergencies in the water. All personnel should be involved in pre-season and in-season practice training in emergency procedures prior to each event.

7. Event Permits

Event permits should clearly state the roles and responsibilities related to safety operations prior to, during and following an event. The organizer must provide a copy of their safety plan, personnel who will fill each role, a pre-event training agenda and a record of what was covered during the pre-event safety training as well as the personnel involved. This safety Plan must be aligned with the requirements from the organizer's insurance provider as well as the local, provincial or national sport governing body/organization (if available).

8. Safe swim zones should be permitted in designated sections of the canal.

The Lincoln Street location along the canal provided the best example of a designated swim zone and included many of the recommendations below. In order to ensure safety in and around additional designated swim zones, the following should be provided:

a. Water Quality

Review prior water testing results and use areas with positive seasonal test results prior to designating a swim zone. This will provide for a full season in water which is safe.

b. Designated swim and non-motorized craft zones.

During peak times, the canal is used by both swimmers and non - motorized craft (rowers, paddles) which may present conflict and a potential collision. In sections of the canal including dock areas, where swimming is permitted, swim zone buoys and roped off areas should be installed to designate a separation of the swim zone from watercraft to avoid collisions.



c. Install Swim Docks in Designated Swim Zones.

In order to permit easy entry and egress when using the canal for swimming, swim docks which extend into the water should be installed. Swim docks should have ladders attached to provide for egress from the water.

d. Motorized craft should not be permitted in swim zones.

In order to reduce the risk of collision and water pollution, motorized craft should not be permitted in swim zones.

e. Permit a range of activities within Designated Swim Zones.

Designated swim zones should be designed to accommodate a range of activities safely. Amenities may include lanes for lap swimming; long course distance and triathlon swimming; SCUBA diving; wind craft subject to available space (windsurfing, hobby sail craft, etc.).

f. Amenities in Designated Swim Zones.

Where possible, designated swim zones should include amenities such as trail access, vehicular access, parking lot, changerooms and washrooms, open space for gathering/socializing.

g. Designated Swim Zones should provide lifeguard supervision.

Certified lifeguards provide a range of services including public education, public relations, safety in on and around water and work to prevent accidents and catastrophic injuries. In addition, lifeguards are trained to respond to water incidents where there may be a risk of injury or drowning. Lifeguard supervision is recommended in designated swim zones especially in zones frequented by families, children, older adults and weak/non-swimmer.

Should the use of lifeguards in designated swim zones not be considered, follow the standards outlined in the Waterfront Safety Standards document published by the Lifesaving Society for supervised, unsupervised and patrolled waterfronts.

h. Signage

Include public education and awareness signage at entrances and locations where swimmers enter the water to access designated swim zones.

i. Emergency Telephone Access

Emergency access to telephones should be located at intervals throughout the canal. The location of these telephones should be clearly signed and include emergency phone numbers and specific location of the phone for quick access by the caller.



j. Swimming Patterns

Swimming along the canal should be permitted but swimming across the canal should not be permitted due the risk of collision or swimmers becoming tired and unable to return to shore safely.



k. Take steps to ensure that collisions among users are avoided.

The canal is used by a number of non-motorized watercraft especially rowers who are facing backwards and not always aware of swimmers in the canal. Swim and craft sections of the canal should be designated, and signage installed to educate swimmers on the danger of swimming across the canal.



9. Events Definitions and Procedures

Document the policies and processes for operating events on the canal and implement, monitor and enforce them.

Events are a large part of the activities that take place on the canal especially around the north section at the WIRC.

Based on interviews with staff, there appears to be 3 levels of events:

1. Sanctioned Events
2. Private events
3. City Run Events.

The requirements for the various events have slight variations in how they are managed by City staff. One event which requires additional review is the Floating event which an event provider delivers. This event should be used as the standard by which the organization and delivery of all events by private groups and the City operate

on the waterway, and policies, procedures and standard practices should be included in an operational manual along with a staff orientation and training program.

Implement the Lifesaving Society Canada's Guideline for Canadian Waterfronts, Lifeguard Supervision of Open Water Swimming Events.

Consider a topical audit of the Events Policies and Processes as well as the Events Operational Manual when it is completed.

10. Partnership Safety Plans

The waterway brings many residents and non-residents to the site annually to enjoy being around the water, participating in non-sanctioned and sanctioned events, as well as personal fitness. The City relies on these groups to fulfill the role of ambassadors and safety officers on behalf of the City.

The City should be proactive and meet with each permit user group prior at the start of the season to discuss upcoming events and activities, each partners' role in these activities and events, as well as a safety plan to proactively plan for unfortunate incidents in, on and around the waterway. The Safety Plan should dovetail with Emergency Services and the City's emergency response plans. The City should provide a template of a Table of Contents for consistency in the preparation of Safety Plans, and the safety plans should be reviewed and signed off by the Director of Parks and Recreation or designate, as well as the City's Risk Manager.

The City should also meet with each permit user group at the end of the season to discuss how the season went, areas for improvement for the following year.

These meetings should be minuted with action plans for follow up with priority safety related items. The timing of these meetings would also provide the City with budget related items required for the following year.

11. Swim zones should be encouraged in the northern portion of the canal but not in the southern portion.

The water in the south portion of the canal appears to be stagnant, have a lower quality of water conditions and subject to contact with marine life. The north portion provides many amenities, and cleaner water to promote swimming.

12. Install lifesaving stations.

At the time of the audit, no lifesaving stations were provided along the waterway. These stations should be installed to ensure the public has access to rescue equipment to assist in a water emergency, without having to enter the water or to provide safety separation from the victim if they do enter the water.

Installation of these stations would begin in high-risk areas. These would be gradually phased in Level 1 and 2 areas. The stations should be located every 150 meters and in areas where they will be readily accessible and visible to the public. Equipment located at each rescue station should include:

- A reaching pole of at least 3m in length.
- A buoyant throwing aid attached to a buoyant 6mm line at least 8m in length.
- Appropriate signage as dictated by the Lifesaving Society Waterfront Safety Standards. Signage that indicates the purpose of the equipment and warns of misuse and consequences should also be installed on each station (see below). Examples of storage units that deter tampering are shown below.



13. Designate swim markers along the waterway where swimming is permitted.

Swim buoys should be located along the length of the waterway to designate swimming areas and separate swimming from watercraft. This will ensure bather are not injured by boats when they are in the water.





14. Publish a Town of Welland Waterway Operation Safety Manual.

To provide guidance to staff on the safe operating standards for the Welland Waterway, priority needs to be placed in the development of a Town of Welland Safe Operation Manual and Event Safety Manual. This will ensure staff are aware of the safe practices that should be followed on the waterway during the season, special events, programmed activities or when providing staff for permitted events. At a minimum the City should include a content list (modified for waterfront) as listed in the Lifesaving Society Operations Manual Table of Contents.

15. Provide training and certification of staff.

Proper training should be provided for lifeguards, parks and event staff working along the waterway. This will ensure the safe operation of these events and activities. Waterfront National Lifeguard is recommended along with rescue craft training and emergency communication protocols.

16. Post Water Quality Information.

The water in the waterway should be tested on a regular basis to ensure it is in compliance with local health department requirements. These results should be posted so that the public and staff are aware the water is suitable for swimming. Posting on the Town website, on display boards at swimming sites, and in news releases are examples of posting methods.

17. Provide Lifejacket/Personal Floatation Devices

The provision of Lifejacket/Personal Floatation Devices at unsupervised waterfronts is becoming a best practice in Ontario. The equipment is stored in a lockable shed overnight and unlocked and made available for the community during daylight hours. This approach has been successful in Municipal and Provincial Parks where waterfronts are heavily used by families with young children and non/weak swimmers, but there is no lifeguard supervision.



18. Safety Equipment

At the time of the audit, no lifesaving stations were provided. These stations should be installed to ensure the public has access to rescue equipment to assist in a water emergency, without having to enter the water or to provide safety separation from the victim if they do enter the water.

The recommended installation would start in prominent locations of usage and easy access points to the water – consider usage and amenities for priority. The Stations should be located every 150m until the end of the prominent usage and easy access points.

Equipment located at each rescue station should include:

- A reaching pole of at least 3m in length.
- A buoyant throwing aid attached to a buoyant 6mm line at least 8m in length.
- Appropriate signage as dictated by the Lifesaving Society Waterfront Safety Standards.

Signage that indicates the purpose of the equipment and warns of misuse and consequences should also be installed on each station (see below). Examples of storage units that deter tampering are shown below.

Designate swim markers along the canal where swimming is permitted. Swim buoys should be located at specified intervals along the length of the canal to designate swimming areas, and separate swimming from non-motorized boats and watercraft.



Sample lifesaving stations with protective covers

19. Lifesaving Station Equipment Replacement

Conduct weekly inspections of lifesaving stations and replace equipment immediately if missing.

Secondary Recommendations

1. Develop a beach along the northern section of the canal.

The opportunity to design and construct a beach/swimming area at the northern end of the canal was discussed with staff as this section of the canal is proposed for significant development in the future. There are many examples where quarries with steep drop offs have added a beach along the banks to create a shallow area for swimming. The designated swim area is roped off to prevent young swimmers and non-swimmers from entering the deeper sections. The Lifesaving Society would be pleased to assist the Town in reviewing a safety site plan during the design of the site, and the development of a safety plan for such an area.



City of Brampton's Professor's Lake – former quarry.

2. Risk Management

Conduct an annual pre-season Lifesaving Society Safety Inspection for Unsupervised Waterfronts (spring and fall), document the findings, and develop a plan for addressing safety related items identified during the inspection.

3. Documentation

Review annually and update all documents related to activities in and on the canal prior to the start of each summer and winter season.

The City has provided a number of documents to the audit team. The team has reviewed the documents and concluded that many of the documents are a good starting point for documenting policies and processes. Extra effort should be put into reviewing and updating the documents annually, with input from all agencies, to ensure consistency, safety and compliance based on actual incidents/experiences from the past season.

- By-law Number 2005-92 – 'Go Quiet' Policy and 'Urban Fishing Initiative' respecting the use of the Welland Recreational Canal waterway; and to repeal By-Law 2003-77.
- WIFC Event Emergency Management Plan (Draft), August 2020 – Okay – requires additional content and peer review before final publication.
- Welland Boat Rental Program Operations Manual 2021 - Good
- City of Welland's 2020 Waterway Safety document" Waterway Education" – Good but some updates/modifications required.

-
- WIRC Affiliation Policy - Good
 - Schedule A: Notre DAME Rowing Club – Good – no Safety nor Emergency Procedures Plan provided
 - Schedule A: South Niagara Canoe Club – Good – no Safety nor Emergency Procedures Plan provided
 - Canoe Kayak Canada Code of Safety Sprint Racing Discipline – 2019 – partial safety awareness provided. Consider developing and implementing an Emergency Procedures Plan.
 - Dragon Boat Canada Safety Guidelines - Good – no Safety nor Emergency Procedures Plan provided; refer to Lifesaving Society Standards document.
 - Rowing Canada, Rowing Safely RCA Safety requirements & Safety Guidelines – limited content - no Safety nor Emergency Procedures Plan provided.
 - Open Water Swimming Event Director’s Handbook – good resource

The Audit Team were not provided nor reviewed and commented on

- City or Agency Safety Plans
- Individual Safety Plans

4. Boat Maintenance and Daily Inspections.

All motorized boats used by the City should be inspected and documented annually. A daily check and checklist should be completed prior to the use of motorized boats and watercraft which may be used in control or rescue situations.

5. Install parental supervision signage at designated waterway access points.

Parental supervision on the waterway is very important in reducing accidental drownings and injuries. Children are a high-risk group and so any method including signage should reinforce the need for parents to maintain close supervision of their children while near the waterway. “Within arm’s reach” supervision by parents should be encouraged for all children.

6. Designate lead staff

Designate lead staff who are responsible for the various sections of the canal.

Based on our interviews and discussions with staff, there appears to be a cooperative and supportive relationship among events, parks and aquatic staff.

- Parks – operations of lands adjacent to the canal as well as on water equipment
- Events - organizing and interacting with event hosts
- Aquatics – providing lifeguards for events

There appears to be a gap in who is ultimately responsible for events and activities taking place on the canal. Parks staff are always present during events and are considered the City’s representative while the event is taking place. It is recommended that in addition to parks staff who oversee the physical aspects of events, a designated events “supervisor” should be present at every event to ensure that the City’s requirements are protected and that policies, procedures and compliance with safety plans are enforced during the event. Additional staff will be required as this is not possible within the current number of event staff available. Perhaps this Supervisor should be the primary contact to reinforce the structure of responsibility with the Town. The supervisor should also be the point of contact for the permit holder prior to, during and post event.

7. Dock Locations Safety Equipment

Include egress ladders.

Docks installed for swimming and boat launch lacked egress options for high use areas where individuals who may have accidentally fallen into the water or rescuers of these individuals. Egress ladders should be installed on all docks at regular intervals and painted a bright quickly identifiable colour for easy egress and rescue.



Specific Location Recommendations – Four Areas identified

During the comprehensive safety audit four specific locations were evaluated by the Lifesaving Society and the following recommendations provided. Note that all four locations were identified as a Level 1 characteristic location. The four (4) locations were: South Course, North Waterway WIFC, Boat House, Lincoln Steet Launch.

1. South Course

This area is not suitable for swimming as there is no water testing being done in this area. This is identified as an event location for on water activities. The following are specific recommendations that were observed for this area.



a. Lifesaving Stations

Where there is access to the docks at least one centrally located lifesaving safety is required: one ring buoy, one reaching pole, and one egress ladder. This would include the area around the South Course within easy walking access and with access to the water. The Stations should be located every 150m up to and including the prominent usage and easy access points. Safety equipment should also be added at the entrance to the docks for rescue during accidental falls into water and capsized water craft.

Equipment located at each rescue station should include:

- A reaching pole of at least 3m in length.
- A buoyant throwing aid attached to a buoyant 6mm line at least 8m in length.
- Appropriate signage as dictated by the Lifesaving Society Waterfront Safety Standards.

b. Egress Ladders

Install ladders at end of the docks for egress for individuals who have fallen into the water or capsized watercraft.

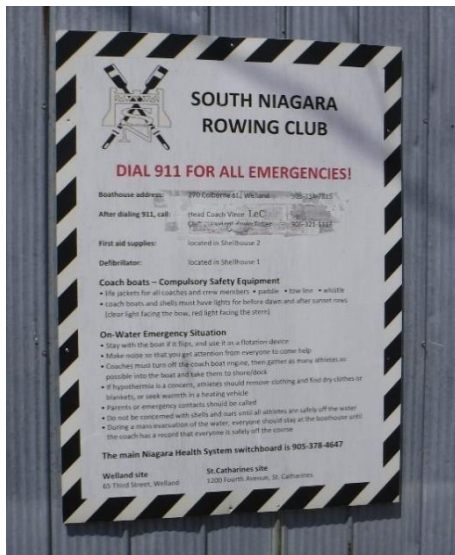


c. Signage

At the time of the audit, it was noted that signage was included for safe activities regarding the Rowing Club. The city should include similar signage for emergency access and place in a prominent location. Signage should be installed in the area around the South Course within easy walking access, and with access to the water. Signage would include words and pictograms indicating:

- No swimming permitted.
- No lifeguard on duty. Parents/caregivers – you are your child’s lifeguard.
- Danger – risk of accidental falls into water.
- Danger – steep drop off.
- Danger – thin ice (winter).
- Use rescue equipment in cases of accidental falls into water.
- Wear a PFD in, on and around water.

This would include easy walking access to the water.



d. Install lifesaving stations.

Install Lifesaving Stations located every 150 meters and in areas where they will be readily accessible and visible to the public. Equipment located at each rescue station should include:

- A reaching pole of at least 3m in length.
- A buoyant throwing aid attached to a buoyant 6mm line at least 8m in length.
- Appropriate signage as dictated by the Lifesaving Society Waterfront Safety Standards. Signage that indicates the purpose of the equipment and warns of misuse and consequences should also be installed on each station (see below). Examples of storage units that deter tampering are shown below.



e. Parking Area – East Side of Canal Bank

At the time of the inspection, it was noted that there is an area for vehicle parking on east side of the canal which may allow for potential swimming and activities in, on and around the water where there is no restricted access. Additional public education signage and rescue equipment should be installed in these areas due to the higher risk of activity.



f. Floating docks

At the time of the inspection, there were a number of floating docks stored on land. Depending on where the docks will be located in the water, additional signage and rescue equipment should be considered to ensure that there is public education signage and rescue equipment available when in use.



g. Roles and Responsibilities

The City should review the lease/permit agreement with the rowing club to ensure that roles and responsibilities related to safety in the southern section of the canal is clearly laid out and practiced. This includes sections of the canal where spectators gather to watch events, athletes congregate, and the area to the south where the Finish Tower is located.



2. Welland Community Boathouse

Zone Designation: Accessible/Designated Swimming Areas (Level 1-2)

This area is known for training in both craft activities and swimming activities. Based on signage identified by the Audit Team, as well as verbal interaction with users in the area, swimming and open water training is taking place in this zone. In addition, this is a popular zone for rowing activities which could create conflicts and potential collisions. This is a possible location for a safe swim zone if the following safety recommendations are implemented.



Signage

Add More Prominent Signage Locations with Updated Wording.

There was existing signage in the area. The existing signage should be updated and expanded to a number of visible locations.

- Caution when accessing water for swimming – unstable banks, quick drop off, deep water, cold water and hazards may be present.
- Conditions are not suitable for young or inexperienced swimmers.
- Wear a lifejacket/Personal Floatation Device when participating in, on or around the water.
- Never swim alone - always swim with a buddy who is capable of assisting you in an emergency.
- Use of inflatable toys and rafts as lifesaving devices are not recommended.
- No lifeguard on duty.
- Children/non-swimmers should be directly supervised within arm's reach when within 2 meters of the canal banks and in water.
- Persons with known medical conditions or physical limitations should always be accompanied by an individual who is familiar with the condition and can render assistance in an emergency.





Lifesaving Stations

Where there is access to the docks at least one centrally located lifesaving safety is required: one ring buoy, one reaching pole, and one egress ladder. This would include the area around the Boat House within easy walking access and with access to the water. The Stations with equipment should be located every 150 metres up to and including the prominent usage and easy access points. Safety equipment should also be added at the entrance to the docks for rescue during accidental falls into water and capsized watercraft.

Equipment located at each rescue station should include:

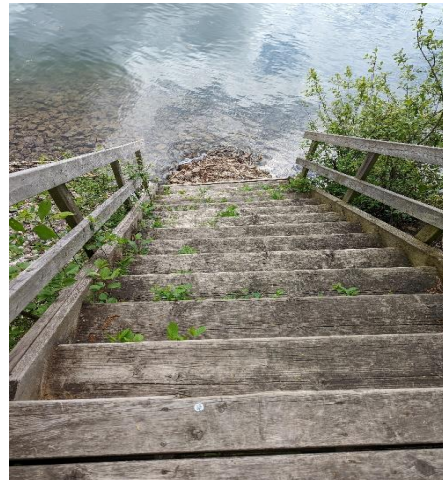
- A reaching pole (non-conductive optional) of at least 3m in length.
- A buoyant throwing aid attached to a buoyant 6mm line at least 8m in length.
- Appropriate signage as dictated by the Lifesaving Society Waterfront Safety Standards.





Decommission/Repair/Replace Stairs Leading to the Water

At the time of the audit, there were stairs leading to the water which had a safety cone at the top indicating the stairs were unsafe. The last step was higher than the water resulting in the swimmer having to slightly jump onto the rocks. These steps should be replaced (if swimming is permitted in this area and the steps provide water access), or de-commissioned. Additional steps should be taken to restrict/repair/remove these steps depending on the future plans for entry and egress to the water.



Emergency Telephone and First Aid Access

Emergency access to telephones (or other communications device) should be located at intervals throughout the canal. The location of these telephones (or other communications device) should be clearly signed and include emergency phone numbers for emergency services, and specific location of the phone for quick access

by the caller and emergency services. The signage should also include the location of the nearest first aid station.



Existing script in emergency phone box



Egress Ladders

3. Lincoln Street Docks

Zone Designation: Accessible/Designated Swimming Areas (Medium – High Risk)

This area is known for training in both craft activities and swimming activities, as well as SCUBA Diving and recreational swimming. It also provides watercraft rentals, free lifejacket loans, and change and washrooms. Based on signage identified by the Audit Team, as well as conversations with users in the area, swimming and open water training is taking place in this zone. In addition, this is a popular zone for rowing activities which could create conflicts and potential collisions. This is a possible location for a safe swim zone through a series of buoys, if the following safety recommendations are implemented.



Signage

Add More Prominent Signage Locations with Updated Wording.

There was existing signage in the area. The existing signage should be updated and expanded to a number of visible locations.

- Caution when accessing water for swimming – unstable banks, quick drop off, deep water, cold water and hazards may be present.
- Conditions are not suitable for young or inexperienced swimmers.
- Wear a lifejacket/Personal Floatation Device when participating in, on or around the water.
- Never swim alone - always swim with a buddy who is capable of assisting you in an emergency.
- Use of inflatable toys and rafts as lifesaving devices are not recommended.
- No lifeguard on duty.
- Children/non-swimmers should be directly supervised within arm's reach when within 2 meters of the canal banks and in water.
- Persons with known medical conditions or physical limitations should always be accompanied by an individual who is familiar with the condition and can render assistance in an emergency.





Lifesaving Stations

Where there is access to the docks at least one centrally located lifesaving safety is required: one ring buoy, one reaching pole, and one egress ladder. This would include the area around the dock entrances within easy walking access, and with access, to the water. The Stations should be located every 150 meters apart up to and including the prominent usage and easy access points. Safety equipment should also be added at the end of the docks for rescue during accidental falls into water or capsized watercraft.

Equipment located at each rescue station should include:

- A reaching pole of at least 3m in length.
- A buoyant throwing aid attached to a buoyant 6mm line at least 8m in length.
- Appropriate signage as dictated by the Lifesaving Society Waterfront Safety Standards.





Emergency Procedures

Emergency procedures should be documented, posted and staff trained in how to respond to first aid and water emergencies. Scenarios should be practiced as a part of pre-season training and provided periodically throughout the summer during in-service trainings.

Lifejackets and Personal Floatation Devices (PFD's)

Based on discussions with staff, PFD's are available at the boat rental location but users have to ask for a PFD. It is recommended that PFD's be provided on a rack, in a prominent location, for easy access by the public and make the public aware that PFD's are available and should be work when in, on or around the water.

Operation Manual & Safety Manual

- Provide an operation manual for the Lincoln Streets location including generic information for all sites, as well as specific requirements for the Lincoln Street operations.
- Provide a copy of the list from LS (Adjust for WF).
- Provide a Safety Manual for staff that would include their role and responsibility in an emergency and in providing support in the in events that they would be lifeguarding. This would include a safety plan template for each event.

Designate safe swimming/SCUBA zones

The Lincoln Street location is popular for use by several aquatic activities concurrently. This creates a risk of conflict or collisions among the activities taking place. Designated zones should be identified and float lines or anchored buoys should be installed for paddling/rowing channels, SCUBA activities and safe swimming.

Emergency Telephone Access

Emergency access to telephones should be located at the Lincoln Street location. The location of these telephones should be clearly signed and include emergency phone numbers and specific location of the phone for quick access by the caller.

Egress Ladders



4. Welland International Flatwater Centre – North Course

Zone Designation: Accessible/Designated Swimming Areas (Level 1-2)



This area is known for swimming events such as triathlons, distance swimming and rowing events. This is a heavily used area for competition at the local, provincial and national level, and for training. Many non-residents visit this site and participate in activities in, on and around the water. The City, in partnership with the WIFC, should ensure that all users are familiar with the waterway, especially the associated dangers and risks associated with each activity.

Safety Equipment

Lifesaving stations should be installed along the pathway in areas where there is easy access to the water. Where there is access to the docks or open access to the water along the banks, Safety Equipment is required. The recommended installation would start in prominent locations of usage and easy access points to the water – consider usage and amenities for priority. The Stations should be located every 150 meters until the end of the prominent usage and easy access points.

Equipment located at each rescue station should include:

- A reaching pole of at least 3 m in length.
- A buoyant throwing aid attached to a buoyant 6 mm line at least 8 m in length.
- Appropriate signage as dictated by the Lifesaving Society Waterfront Safety Standards.



Signage

Signage should be installed in the area around the North Course at entrances from parking lots, along trail with easy walking access to the water. Signage would include words and pictograms indicating:

- Swimming is permitted.
- No lifeguard on duty. Parents/caregivers – you are your child’s lifeguard.
- Not recommended for young or inexperienced swimmers.
- Danger – risk of accidental falls into water
- Danger – steep drop off; deep water
- Danger – thin ice (winter)
- Be aware of potential collisions between boats and swimmers in the water.
- Use rescue equipment in cases of accidental falls into water.
- Always swim with a buddy.
- Wear a PFD in, on and around water.



This would include easy walking access to the water. This picture denotes the opposite shore requiring signage and safety equipment.



Egress Ladders



At the Pier Location

At the 1000 m mark signage should be installed that restricts jumping, and diving, and swimming. Two additional egress ladders at each end and replace wooden ladder in the middle: paint yellow for higher visibility on both the water side and land side. Consider putting a barrier in this location to deter any access to the water or under the pier.

Pier Location – At the 1000 m mark

At the 1000 m mark signage should be installed that restricts jumping, and diving, and swimming. Two additional egress ladders at each end and replace wooden ladder in the middle: paint yellow for higher visibility on both the water side and land side. Consider putting a barrier in this location to deter any access to the water or under the pier.

Equipment

Lifesaving stations should be installed along the pathway in areas where there is easy access to the water.

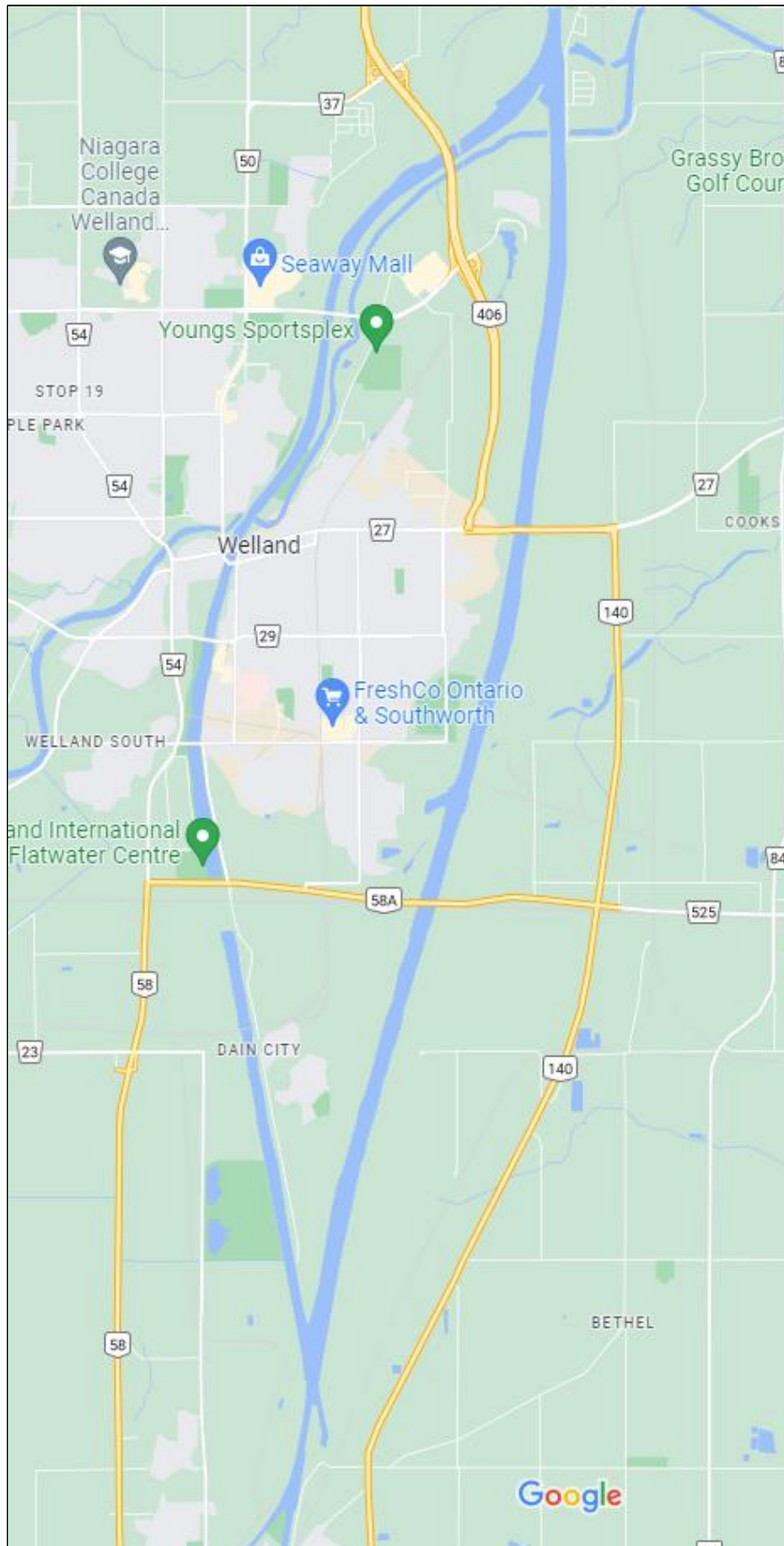


Pier access

Consider putting a barrier in this location to deter any access to the water or under the pier.



Appendix 2 Welland Waterways



Legend:

- Welland Recreational Canal
- Welland River and Shipping Canal
- Zone 1
- Zone 2
- Zone 3

Appendix 3
Zone 1

◆ Swimming @the docks



Appendix 4
Zone 2

Welland Community Boat House



Appendix 4
Zone 2

Welland International Flatwater Centre



Appendix 4
Zone 2

Welland Recreation Canal South Course



Appendix 5
Zone 3

◆ Example of locations are not safe for swimming.

