

A photograph of the Toronto skyline across the water, featuring the CN Tower and Rogers Centre. The image is used as a background for the document.

Peter Street Basin Master Plan

TM

I found a pool hidden under a garbage dump
and decided to create a volunteer cleanup
effort as a teaching and research project.
—S. Mann

..

..

"MoBase_MoQuay_Basin_Lab.txt" 4L, 138C

MoBaseTM
•Clean •Calm •Quiet

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Excerpt from the 27th Annual Mersivity / Water-HCI Symposium, December Edition, 2025

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Peter Street Basin Master Plan

Steve Mann, Alexander Vicol, Daniel Bros, Nagham Sabbour, Patryk Aniolowski, and Shawn Cooper
Friends of Peter Street Basin, <https://PeterStreetBasin.com>



Fig. 1: Peter Street Basin Master Plan: “MoBase”

Abstract—Peter Street Basin is a large (about 60m long) trapezoid-shaped concrete pool connected to Lake Ontario. It was abandoned, and filled with so much garbage that the water was often not even visible under the layers of garbage, with its ownership being as murky as its waters. It is unclear who actually owns it, despite it being part of a marked park that consists almost solely of the Basin itself. Peter Street Basin is surrounded by luxury rental apartments facing what was a garbage dump rife with the terrible stench of dead rats, rotting raccoon corpses, condoms, tampons, etc., and was also a dumping ground for discarded appliances. We undertook a 3-year long project to clean up the Basin, removing thousands of pounds of garbage and cleaning the water to the point where it now meets safe swimming water-quality standards by more than a factor of ten. We propose “MoBase” = Mobility Basin = Base for accessibility, research, and teaching, including paddleboard rentals, and an outdoor teaching and research lab that we call the “TeachBeach”. It is our intent that MoBase will serve as a role-model for freshwater stewardship, advocacy, and outreach to the other Great Lakes and from Atlantic to Pacific coasts

and beyond. We envision MoBase as the latest addition to other water-based entities located within a 150m (500ft) radius (20 seconds on-foot) providing a “campus” of safety and accessibility we name Queens Quay Mobility corridor/campus/cluster/base... (abbrev. “MoQuay”).

Index Terms—Peter Street Basin, Mobility, Accessibility, Freshwater, Garbage, Pollution, Mersivity Ball, ACT (Adaptive Chirplet Transform), Pollution, Noise pollution, Aquatics, Acoustics, Aquatics

I. THE NEED FOR WATER ACCESSIBILITY

We propose MoBase = Mobility Basin = Base of operations for mobility, accessibility, teaching, research, and outreach at Peter Street Basin in downtown Toronto, along with a strategy to make it and keep it clean, calm, and quiet. This strategy is cognizant of the surrounding amenities and services, as shown in the map of Fig 2, which we collectively name Queens Quay Mobility corridor / campus / cluster / base, or the like, abbreviated on the Fig 2 as “MoQuay”. In particular, the Queens

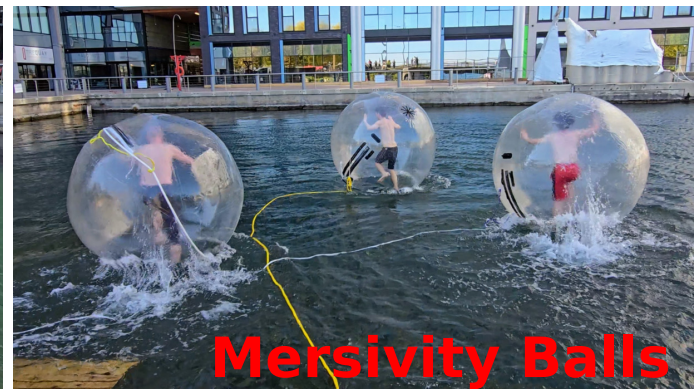


Fig. 2: The Queens Quay Mobility corridor or campus or cluster (denoted “MoQuay”) fits in with six other nearby facilities: HTO Beach, Harbourfront Canoe & Kayak Centre, Disabled Sailing, Loyly Floating Sauna, Marine Fire, and Marine Police. These facilities cover sailing, seated paddling (canoe and kayak), and accessible swimming all benefiting from very close proximity to Marine Fire and Marine Police, making it the safest place along Toronto’s waterfront. However, none of the other facilities are ideal for paddleboarding, hence the need for MoBase. With the addition of MoBase, all four kinds of activities (sailing, swimming, seated paddling, and standing or prone paddling) are covered.

Quay Disabled Sailing Program (QDSP), established by the Disabled Sailing Association of Ontario (DSAO) in 1999, by founder Danny McCoy (paralyzed sailor) is located nearby. Harbourfront Canoe & Kayak Centre is a well-established provider of canoes and kayaks, which can be used by persons unable to stand (e.g. confined to a wheelchair). Recently (as of November 28, 2025) the City of Toronto has finally allowed swimming at HTO Beach, and even recommended it as a place for doing cold-plunges, recognizing that it is Toronto's only accessible beach in which a wheelchair can get right to the water's edge. About a month later (December 2025) a new floating sauna has now also opened at HTO Beach, facilitating cold plunges. It is wheelchair accessible, featuring very well-maintained wheelchair ramps from street level down to the facility.

This is remarkable that Toronto has so many accessible water access options including marine emergency services all within a 150m radius (about 20 seconds on-foot). Kudos to the City for making this happen, whether intentional or accidental!

This all does a great job of accommodating anyone in a wheelchair who can't stand or walk. However there is nothing available for persons with the reverse kind of disability, i.e. persons who are unable to sit properly. Such persons are unable to partake in Disabled Sailing and are unable to use a kayak or canoe.

Paddleboarding accommodates such persons doing either prone paddling (laying on the board and paddling) or stand-up paddleboarding, perhaps with the assistance of a Water-Walker or Walkboat™. The Walkboat™, invented by author Prof. S. Mann, is like a rollator walker but works on water rather than land. It uses a treadmill to propel the paddleboard, as shown in the upper left of Fig 2. Alternatively Mersivity Balls can be used for water-walking with spinal support as one can grab onto the inside surface of the Ball. These two photos, taken in Peter Street Basin, show example activities now that the basin has been cleaned up. These activities support persons with disabilities that render them unable to sit properly. Moreover, paddleboarding is the fastest-growing paddle sport, enjoyed by many people of all abilities.

The open water at Harbourfront is too rough and choppy for paddleboarding or Bailing, and therefore the Centre can not rent paddleboards or Mersivity Balls at this location.

We therefore require a clean, calm, and quiet location for paddleboarding.

A very recent (November 28th, 2025) development is that the City of Toronto has decided to allow swimming at HTO Beach. In fact the City has recommended HTO Beach, in particular, for persons with disabilities to swim, because it is the only beach in Toronto that is wheelchair accessible all the way to the water's edge. We are presently working with the City to improve the water access for swimming at this location, as well as to install safety buoys there for a motorboat exclusion zone, and to implement regular water quality testing there to create safe downtown swimming like they have in Kingston Ontario, as well as many other cities like Paris, France, San Francisco where swimming is allowed and

even encouraged in the busy shipping harbour. Kudos to the City for embracing this healthy global trend that all great cities are joining ("Swimmable Cities"). Swimming can and should be made safe and accessible downtown. The City is finally fulfilling its legal obligations under the Human Rights Ontario laws. See Breaking Blue, in this 2025 December Mersivity Symposium Proceedings.

The fact that we now have a swimmable beach across the street from Peter Street Basin means that we don't really require it is a swimming location anymore. Therefore we propose that the Basin's best use is as a paddleboarding location, rather than for swimming that is best accommodated at HTO Beach.

Thus we now have these four activities all covered within about 150m (about 500 feet, i.e. less than 1 minute on foot, and about 20 seconds on foot to someone in good health such as an emergency responder) of each other:

- Sailing;
- Seated paddling (canoe or kayak);
- Swimming with wheelchair access all the way to the water;
- MoBase: Non-seated (prone or standup) paddling.

A. Accessibility to Toronto's safest water

We argue that this Queens Quay water Mobility campus all within close proximity to HTO Park, is Toronto's safest waterfront location as it is conveniently located right between the Marine Fire rescue boats on the West side, and the Marine Police station on the East side. This means that rescue is less than 20 seconds away. It also means that if rescue is needed, valuable emergency services are not used up for very long, i.e. rescue can be effected quickly and the emergency services can quickly be re-stationed at base in minimal time (substantially less than 1 minute).

Accordingly, we identify, with reference to Fig. 2, seven elements of this Mobility Queens Quay corridor/campus/cluster ("MoQuay"), listed left-to-right (West to East):

- MoBase;
- Marine Fire;
- HTO Beach;
- Floating Sauna and cold plunge;
- Disabled Sailing;
- Harbourfront Canoe & Kayak rental;
- Marine Police.

Notably, our proposed MoBase is located right beside where the Marine Fire boats are docked and constantly at the ready for rescue. Together with its Clean, Calm, Quiet condition, this makes it Toronto's safest place to paddleboard, especially significant for those with disabilities, the elderly, children, or beginners trying to learn how to paddleboard for the first time.

B. Why the sudden need?

The very recent closing and privatization of Ontario Place in downtown Toronto means that persons with disabilities no longer have water access (See, for example, "Professor walks on water for justice",



Fig. 3: Our nonprofit organization Friends of Peter Street Basin uses the (approximately) right-trapezoid shape as our logo.

<https://www.youtube.com/watch?v=7iGiyHTnm98>). Although there are wheelchair ramps at some of Toronto's beaches, they only come within about 300 feet (100m) of the water's edge, so that persons using wheelchairs, rollator walkers, strollers, or other mobility devices are often able to only get close enough to look at the water but not to access it. Imagine, by way of analogy, an ice cream parlour where persons with disabilities could only look at the ice cream but not taste or eat it. (We constructed such an ice-cream parlour as an art installation to help raise awareness of this problem. See Page 9 of the PROCEEDINGS OF THE 27th ANNUAL MERSIVITY/WATERHCI SUMMER SYMPOSIUM, Jun20-Aug25, <https://zenodo.org/records/16973160>)

We therefore have an access crisis that came suddenly and unexpectedly. For this reason, MoBase is a proposal that answers an urgent and immediate accessibility need.

II. A RIGHT-TRAPEZOID-SHAPED POOL

Peter Street Basin is a concrete pool in the shape of a right-trapezoid, i.e. a trapezoid in which the parallel edges each form a right-angle with another side. The shape, traced from our photogrammetry point-cloud overlay in Fig. 1, forms the basis of our logo, for our non-profit Friends of Peter Street Basin, as shown in Fig 3.

Mathematically (polygonally), the parallel edges of a trapezoid are called "bases" and the other two edges are called the "legs". Thus we name the bases "West Base" and "East Base" since the trapezoid is aligned with the Bases each running approximately North-to-South. The entire Basin was surrounded by a rusty, ugly, galvanized steel railing. The thing about galvanization is that it initially slows down rust, but when the rust finally punches through, the galvanization actually functions as an inverse cathodic protection and speeds up rusting, resulting in an ugly, unsafe mess.

Since the City did not want to repair the railing, our good friends did some of what we call "Safetymaking" and replaced the rusty mess with a beautiful brand-new stainless steel railing

at no cost to the City. They also made two watercraft launch areas, each approximately 21 feet (about 6.4m) wide. One launch, which we call the West Launch or WestLaunch, or West Gap or WestGap, is located about halfway along the West Base. The other launch is located near the Southernmost end of the East Base. The reason for this difference is the asymmetry of the Basin's shape. If you study Fig 1 carefully you can understand the reasoning. Safetymakers are sometimes a thousand times smarter than committees.

Looking again at Fig 1, there are two existing access ramps along the South wall of the Basin. However, these must be accessed via narrow helical (circular spiral) stairs which may be problematic for persons with limited mobility.

Two new accessibility ramps have been installed that connect street level with the upper walkway around the Basin. What we call the West Ramp leads to what we call the West Walkway that tops the West Base. What we call the East Ramp leads to what we call the East Walkway that tops the East Base.

These Bases are now fully accessible by very wide ramps. The ramps are even wide enough to accommodate an oversize standing or prone wheelchair or a Palsy walker.

We therefore propose adding two additional ramps, at no cost to the City, one at the East launch and one at the West launch. We propose that these ramps would snake around the perimeter of the Basin so as not to eat too much valuable space up in the Basin. In particular, the lake level rises and falls and we have measured this for many years, taking accurate measurements over time. At its lowest level, the water is a 73 inch drop from either West launch or East launch height. To comply with disability standards, a ramp should have a slope of 12:1. Therefore the ramp needs to be (worst case when water is at its lowest) 73 feet (approximately 22.25m) long. If these ramps went straight perpendicular to each Base, they would eat up valuable Basin space. In particular, the length of East and West ramps would total 44.5m which is about 75% of (3/4 of) the total length of the Basin. Therefore the ramps really need to snake around the perimeter of the Basin to save valuable water space.

Referring back to Fig 1, the orthogonal leg of the right-quadrilateral shape is on the South side of the Basin and has an approximately 12.38m wide channel, centered along its length, that connects it to Lake Ontario. The channel runs under a bridge on Queens Quay, upon which streetcars run. The bridge is low enough that only small vessels like canoes and kayaks and paddleboards can enter the Basin from the rest of Lake Ontario. For our purposes, this tight constraint is a feature rather than a bug. This access limitation tends to keep out motorboats, which helps make Peter Street Basin calm and quiet, which aligns with our overall goal: Clean, Calm, Quiet.

The non-orthogonal leg is on the North side of the Basin and is approximately 60.56m long. We call this North leg the "hypotenuse" to borrow a term usually used for right triangles, since we could describe the shape of the pool as being a right triangle on top of a rectangle.

III. CLEANUP EFFORTS

Since Thursday, Apr 14, 2022, we have been running the volunteer CleanupCrew in Peter Street Basin.

At the time, the abandoned Basin was filled with so much garbage that the water was covered almost completely up at times. It was surrounded by rusty galvanized railings, and the stench from the garbage was unbearable, such that people didn't want to even come near it. Four years ago, Local Guide Meriel Gunness gave it a 1-star (the lowest possible) Google review with just one word to describe it: "Stank". Another reviewer said "Stinks and full of garbage in the water".

Its ownership is as murky as its waters were. It is unclear who actually owns it, despite it being part of a park that consists almost entirely of the Basin itself, but for the walkway around it. It is surrounded by apartments facing what was essentially a garbage dump rife with the terrible stench of dead rats, rotting raccoon carcasses, dead fish, dead birds, including some dead Canada geese, and lots of garbage, including major appliances abandoned there. Numerous complaints were filed with numerous organizations, and there was nobody to take responsibility as there is no clear owner of the Basin.

We undertook a multi-year project to clean up the Basin, removing thousands of pounds of garbage and cleaning the water to the point where it now meets safe swimming water-quality standards by more than a factor of ten. This effort took just over 3 years, with consistent large-scale weekly meetups of our volunteer CleanupCrew. We also held additional smaller-scale cleanings during the week, often meeting 3 or 4 times a week, at various times as our schedules allowed.

We experimented with a number of approaches ranging from building autonomous robots to clean the Basin to other kinds of experimental watercraft. This became a research project with University of Toronto's Faculty of Applied Science and Engineering, and our Department of Electrical and Computer Engineering, involving a large number of students spanning many disciplines, as well as members of the community outside of University of Toronto.

In the end, many of the technologies that would normally clean up the lake, were ineffective in Peter Street Basin because of the total amount of garbage and the nature of the garbage, e.g. dead animals, and other soft garbage not easily handled by AI (Artificial Intelligence) based mechanical floating or submarine robots.

Therefore we began with simple things like nets. Since the Basin is inaccessible to sizeable vessels, we used a BodyGlove Crusader 7-person paddleboard that we stored at a space we rented at Harbourfront Canoe & Kakak Centre. This space is located next door to HTO Beach which is across the street from Peter Street Basin, making it a convenient launch point for access to the Basin. We have an excellent working relationship with Harbourfront Canoe & Kakak Centre, and the close proximity adds value to our MoBase proposal.

The BodyGlove Crusader is big enough to transport cleaning equipment yet small enough to get through the tunnel under the bridge. We adapted this paddleboard to use as a water-walker,

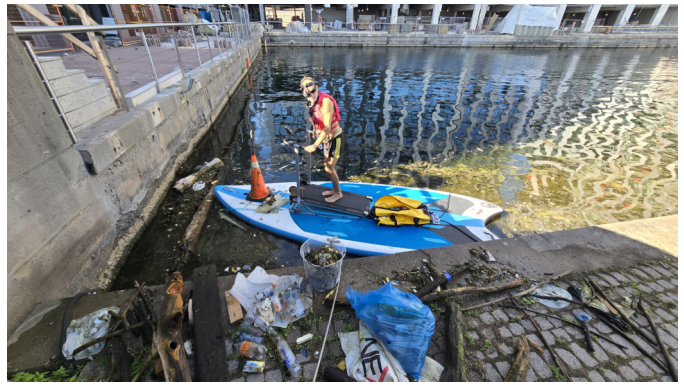


Fig. 4: Walk-on-water paddleboard allowing persons with disabilities to participate in the CleanupCrew. The treadmill-powered paddleboard has hand-grips similar to a rollator walker, providing a similar function but on water rather than on land.

so that persons with disabilities could use it to assist cleaning the Basin. Our objectives from the beginning included accessibility in our cleanup efforts. The walk-on-water paddleboard, named "Jesus" (as vessels often have a name), and generically, a "Walkboat™", functioned much like a rollator walker but for use on water rather than on land. See Fig 4.

A. Superhuman underwater vision

It took us some years to clean out the Basin on the surface. Once we cleaned the surface of the water, we turned our attention to cleaning the lake bottom. We required a way to see down into the water, so author S. Mann invented a new kind of seeing aid comprised of a dome camera feeding into a HUD (head up display) providing XR (eXtended Reality) vision underwater. See Fig 5. This enabled "plunging with purpose" to dive down into the water and collect garbage from the bottom. The Headome is a computer vision system that supports XR games, so we also did some gamification of the cleanup efforts, with games like Pickupleunge™ and Garball™.

We also wanted a technology that would allow people to have this same perfect vision underwater without getting wet, so we explored the use of Mersivity Balls as observation domes. A Mersivity Ball is often used for spinal rehab, walking on water (balance exercises) and keeps the occupant completely dry as it is impossible to fall out of the ball. For notes on Mersivity Ball safety (e.g. monitoring oxygen and carbon dioxide, brainwaves, and blood-oxygen levels in the brain, etc.), see the publication entitled "State-of-Float: EEG Signatures of Floating in a Water-Walking Ball" which also appears in this Symposium Proceedings.

We also used a Mersivity Ball as a spherical observation dome while another person on a paddleboard pulled out garbage from the lake bottom. See Fig 6.

In order to communicate we used XR (eXtended Reality) to created shared XR-spaces together with photogrammetry, to map the Basin. Because the Mersivity Ball keeps the occupant



Fig. 5: Prof. Steve Mann with his Headome™ invention. The Headome provides underwater eyesight that perfectly matches the refractive index above and below the water, without requiring any special contact lenses as were required with previous similar technologies invented by others.



Fig. 6: “BallDome”: using a Mersivity Ball as a sperical observation dome for perfect underwater vision while staying completely dry.

completely dry, and provides perfect optical vision, the XR headset can easily facilitate a shared vision. See Fig 7.

Photogrammetry and holomargologrammetry are important parts of our research effort, as we build multidimensional datasets for being visualized in a VR (Virtual Reality) or XR (eXtended Reality) headset as well as social XR shared spaces. See Fig 8.

Finally, we developed structured lighting technologies to scan the Basin using Lightspace™, which is the tensor outer-product of a lightfield with a time-reversed lightfield (see



Fig. 7: XR-Ball: Perfect shared-vision using XR headsets together with photogrammetry of the Basin.

“Intelligent Image Processing”, by S. Mann, published by John Wiley and Sons, in the Interscience Series). Lightspace can be combined with Mersivity Balls, as shown in Fig 9. This method tends to work best in dark conditions, when we have more control over the light sources of our scanning system.

B. Underwater acoustic phase-coherent pollution sensing

Finally, we developed hydraulophonic pollution sensing which uses underwater sound-wave propagation in the water combined with an advanced transform-based machine learning called ACT (Adaptive Chirplet Transform) to characterize water quality.

A nice feature of underwater acoustics is that it is almost completely silent in the air.

It is our goal to be able to establish real-time pollution monitoring in the Basin by way of phase-coherent detection of sound wave propagation (infrasonic, sonic, and ultrasonic) combined with optical sensing in the infrared, visible, and ultraviolet spectra. When combined with HDR (High Dynamic Range) sensing, we achive XR (eXtended Reality) providing superhumachine intelligence in the form of XI (eXtended Intelligence) to characterize water quality. See Fig 10

C. Noise pollution reduction

Friends of Peter Street Basin is committed to eliminating noise pollution. Prof. Steve Mann is an acoustics professor teaching ECE446 = Audio, Acoustics, and Sensing at the University of Toronto. In keeping with the giving spirit, his acoustics textbook, <http://wearcam.org/ece446textbook/ece446textbook.pdf> is free and open. It is free for download, and anyone can even look at the source code and contribute using the free open-source LaTeX typesetting language; see <http://wearcam.org/ece446textbook/>

Paddleboarding in the Basin is wonderful because of the calm water, but there is quite a bit of noise from the street-car and traffic on Queens Quay that runs right beside the Basin. Therefore, we propose putting vegetation in the derelict abandoned garden areas, to help reduce traffic noise. Ideally we would plant trees there to block sound from the traffic

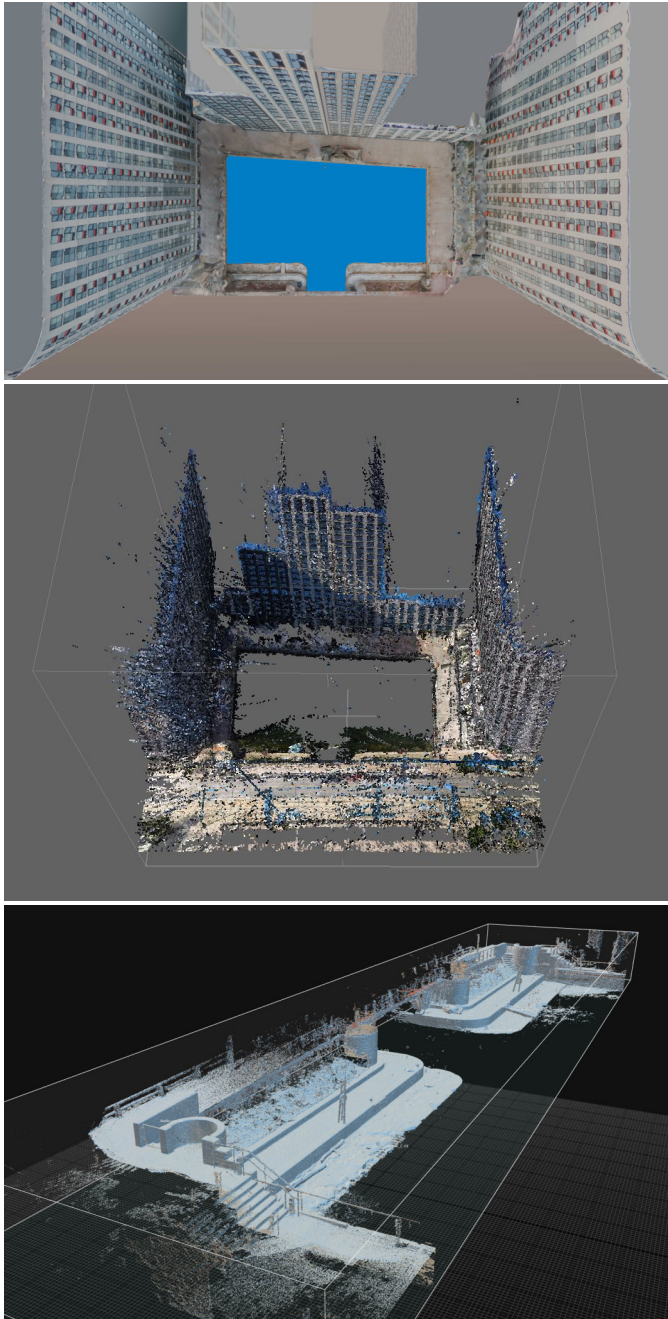


Fig. 8: Photogrammetry and holomargologrammetry of Peter Street Basin. (Top) topview; (Middle) Perspective; (Bottom) South entrance to Peter Street Basin.



Fig. 9: Mersivity Balls combined with Lightspace™ provide perfect optical vision under structured lighting conditions, giving us new technologies to scan not just the shape of the Basin, but how it responds to light underwater. This can provide valuable insight into water pollution.

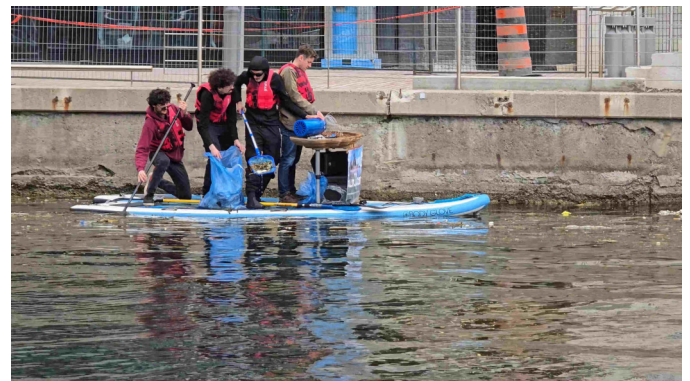


Fig. 10: Hydraulophone (underwater musical instrument at the front of the vessel) can be used for realtime pollution sensing while cleaning up the Basin. Ryan Janzen, the world's leading hydraulist, operates the hydraulophone while three other volunteers collect garbage from areas of the Basin where pollution is the highest.

on Queens Quay. This would dampen sound to mitigate the acoustic resonance affect of the Basin. We are presently studying what trees would best block traffic noise from reaching the Basin, as well as from reaching the adjacent apartment buildings above the Basin. In order to benefit paddlers in the Basin, as well as apartment building dwellers, we are considering tall sound-absorbing trees with fractal leaf patterns that are highly anechoic to dampen resonances that occur at natural frequencies set forth by the parallel edges of the buildings combined with the sound-reflective nature of the

water in the Basin.

Interestingly, the main artistic feature of the Basin was once a sound sculpture, now abandoned.

Paddleboarding, in particular, is a quiet, contemplative, and peaceful activity best done in meditative silence. Thus it will help paddleboarders if there is silence in the Basin.

The sound-muffling features we propose will benefit not only our paddleboarding community, but also the thousands of residents of the three apartment buildings that overlook Peter Street Basin.

This will be a great opportunity for research and teaching on acoustic baffling and generation of a cone-of-silence effect to mitigate streetcar traffic sounds from street-level, at no cost to the City or the region, as it would be research-funded as a research and teaching example for University of Toronto's ECE446 (Audio, Acoustics, and Sensing).

IV. RESULTS

After 1,347 days of our CleanupCrew operations, we were all surprised to find that we'd achieved an astounding level of cleanliness. Whereas our goal was simply to mitigate the stench and visual detritus, we actually got the water quality to the level that meets swimmable water standards. Toronto has among the world's most strict standard which requires *E. coli* counts below 100 counts per 100mL, whereas outside Toronto the standard is merely 200 counts per 100mL. We were able to get the Basin *E. coli* counts below 10 counts per 100mL, and typically ranging from 7 to 10. This is about 12 times cleaner than it needs to be for safe swimming.

Prior to our cleanup efforts, the *E. coli* counts were around 30,000 or too high to measure. Thus we made the Basin more than 3,500 times cleaner than it was, in terms of *E. coli* counts. In other regards such as turbidity, and other indicators, our cleanup efforts netted similar improvements.

In order to get highly accurate *E. coli* counts, Prof. S. Mann worked together with Prof. R. Hoffmann (like Mann, also at the University of Toronto, in the Faculty of Applied Science and Engineering). They took a sample of 500mL and sucked it through a fine filter using an Erlenmeyer flask having a side-discharge. The side-discharge was connected to a vacuum pump to pull all the water through, and then growth medium was applied to the filter. It was then placed in an incubator for 24 hours, after which the count was determined and divided by 5. This resulted in a sub-count precision (an extra decimal place). Moreover the sampling was done at multiple locations in the Basin.

To see our testing process in action, here is a video link: <https://www.youtube.com/watch?v=vAPSFwjE2Pw>

See also Fig 11 for a closeup shot of the actual test filter on the top of the flask. We also confirmed our results using various other test methods.

As a result, the Basin can now enable safe standup paddleboarding, since, especially for beginners, it is common to fall into the water from a paddleboard.

We posted our results on the SwimOP (Swim at Ontario Place) Facebook page which is still active despite the clo-

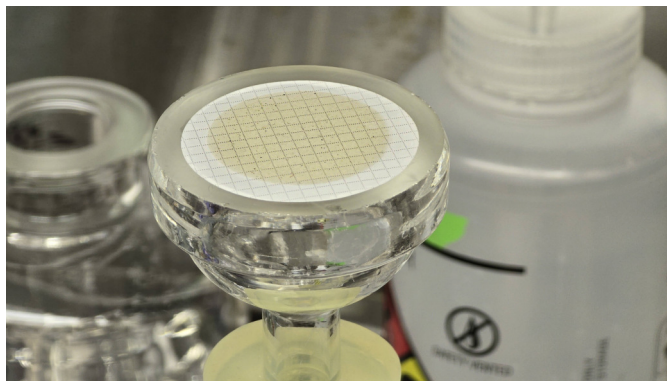


Fig. 11: Closeup of *E. coli* test setup for Peter Street Basin.

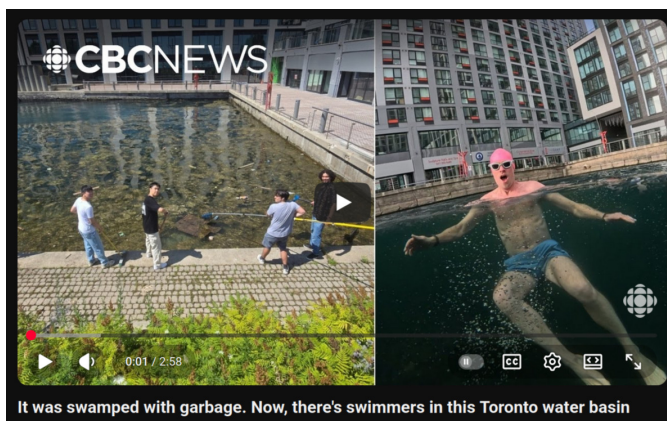


Fig. 12: CBC coverage of our cleanup efforts.

sure of Ontario Place. Shortly afterwards, a reporter from CBC (Canadian Broadcasting Corporation), Haydn Watters, contacted us to request an interview. This resulted in a radio piece, a television piece, and a written piece (Fig 12). Shortly after that, we were contacted by BBC who also did a piece (Fig 13), and then by Cottage Life who wrote an article on this work (Fig 14).

V. HIGHEST AND BEST USE

Whereas the Basin is perhaps not the ideal place for swimming, we believe the highest and best use for Peter Street Basin is as a paddleboarding location for everyone, including those with disabilities. What is unique about the Basin is that the water is calm, with almost no wave action, and almost no currents. Moreover, it is sheltered from the wind.

Paddleboarding requires the ability to balance on a board, and this skill can best be learned in a calm protected space like Peter Street Basin.

There is no other place like MoBase! Whereas there used to be a pond at Harbourfront (the Natrel Pond) where paddleboats could be rented, it has now been filled in. Love Park (the hart-shaped fountain) is another possible location, but the water quality is poor, and it is too shallow for safe paddling (e.g. risk of falling into shallow water). Much to the City of Toronto's dismay, Love Park has become a frequent location

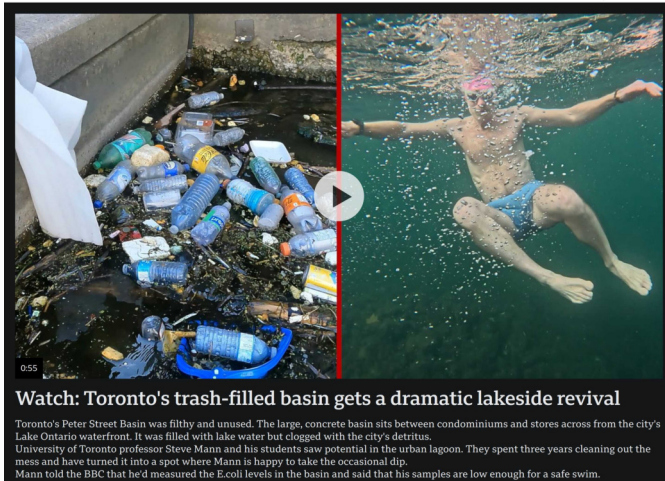


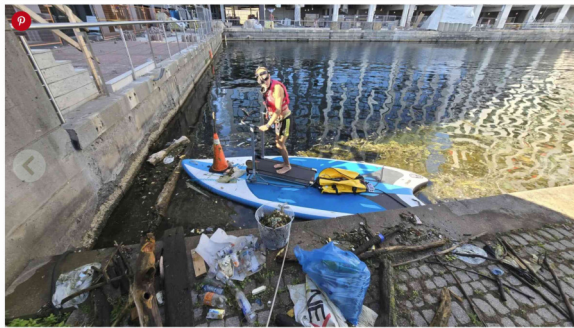
Fig. 13: BBC coverage

GENERAL

This Toronto professor took an E. coli-infested lake basin from unswimmable to crystal clear

BY SARA ROMANO PUBLISHED: DECEMBER 10, 2023

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Walking on water

This stand-up paddleboard-esque contraption is a water walker invented by Mann. "I call it Jesus," he says. It works like a roller walker—a four-wheel mobility aid—and is designed as an accessible water vessel.

If you take a stroll along Toronto's Queen's Quay waterfront on a Sunday afternoon, you may notice a unique array of vessels and what appear to be toys on the water. Tucked away in a small nook between a condo and HTO park, people race by in giant inflatable balls, a paddleboard-meets-walker glides across the surface, and brave souls plunge in the chilly waters.

What looks like a fun weekend activity—and really, it *is*—is the result of months of clean-up and lab-focused testing efforts. Just months ago, HTO beach and the Peter Street Basin were hotbeds for E. coli, swimming restrictions, and foul-smelling

Fig. 14: Cottage Life

for recreational watercraft, especially among persons with disabilities, simply because there is no way for them to access the lake. In this way, the City is in violation of Human Rights Code, R.S.O. 1990, c. H.19.

See "Someone brought an actual raft to Toronto's new Love Park pond" by Jack Landau, in blogTO, 2023jul31. Here are some relevant excerpts:

Jaclyn Carlisle, Media Relations and Issues Management Advisor for the City of Toronto, confirmed to blogTO that such activity is a no-no, saying that "While we welcome Torontonians showing Love Park some love, pleasure and paddle craft are not permitted within the pond."

Carlisle reminds hopeful boaters of the painfully obvious fact that a freakin' Great Lake exists just metres south of the park, saying that, "With more than 45km of Lake Ontario shoreline and a nearby archipelago making up Toronto Island Park, we ask that the public make use of the ample opportunities the City has to offer for urban paddling."

The truth is that there is no other place for persons with disabilities to access the water, other than the City's fountains. Some of these uses of the City's fountains are forms of protest or civil disobedience, whereas some of the uses are merely practical acts of desperation because there are no other options.

One way that the City could bring itself into compliance with Human Rights laws would be to embrace MoBase, so as to provide a place for persons with disabilities to access Lake Ontario.

Peter Street Basin is ideal for paddling, especially paddleboarding.

VI. BUSINESS CASE FOR "MOBASE" = MOBILITY BASIN

We have already been actively engaged in the cleanup of Peter street basin with the help of local volunteers.

As a Professor at UofT, prof. Mann and his students have been actively studying the basin, including water quality etc., with help from Richard McCracken at the City of Toronto who has been a long-time supporter of this project.

To further these efforts to clean the basin and provide a long term strategy to keep it clean, we are preparing to form a non-profit and wish to generate funding for that non-profit by renting out accessible paddleboards in the safety of the basin, which is a place where there are no motorboats or waves, and there is shelter from strong currents or winds.

We have the support of the local residents, the private buildings adjacent to the basin, local businesses, and Oliver Hierlihy of the Waterfront BIA (Business Improvement Area), which we will show in documentation as a part of our coming application.

We are equally preparing an operations and safety plan, including associated insurance requirements.

It is our hope that this initiative will both enable/fund the cleaning of the basin, including steps to eliminate the bad smell, and keep the water clean and healthy, but will also help support all the ground level businesses we hope move

into the surrounding vacant commercial space. People buying drinks at the convenience store or food at small family owned restaurants etc. will all benefit from a Basin that is and smells fresh and clean.

VII. RESTORATION ACTIVITIES

We have been studying the history of the Basin and are in the process of writing a book about it. Additionally, Friends of Peter Street Basin is in touch with Molson regarding restoration of the Molson Aqua Sculpture.

Moreover we wish to restore the aeration system/fountain in order to maintain good water quality in the Basin, and install a variety of sensors and sensing systems for research, teaching, and service to the community. We envision a multi-sensory intelligent fountain that maintains the water quality, along with a prosperous research agenda that puts Toronto first in the world at freshwater research.

VIII. TEACHBEACH AND OUTREACH

Additionally, we wish to use the Basin as a base of operations for other related non-profit activities such as research

on water quality, as well as other related research efforts. For example, we wish to conduct large-scale research on something we call “State-of-Float”, the mind state while floating. We observe that floating induces a measurable neural and experiential state. Studying State-of-Float will help us understand the human condition while paddleboarding.

IX. CONCLUSION

We described our proposal, MoBase, for an accessible place for paddleboarding, while keeping the Basin clean with a strategy to mitigate or eliminate pollution (water pollution, noise pollution, etc.) to make and keep it calm, quiet, and clean. The highest and best use of Peter Street Basin is accessible paddleboarding, combined with research, teaching, and outreach, setting an example of freshwater stewardship that the rest of Ontario, Canada, and the world will hopefully follow.