



AQUAHACKING ANNUAL REPORT 2019

November 2019



180 YOUNG INNOVATORS

embarked in the 2019 AquaHacking Challenge to tackle freshwater issues in the Great Lakes and St. Lawrence River Basin

6 NEW WATER START-UPS

launched through this year’s Challenge

150 VOLUNTEER HOURS

of professionals in support of freshwater innovation

459,555 FACEBOOK REACH

since January 2019

400,310 IMPRESSIONS

across Twitter, LinkedIn, Instagram since January 2019

AquaHacking

Impact Through Innovation

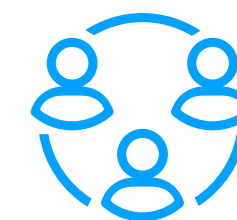
AquaHacking is a tech challenge designed to engage young innovators to tackle critical freshwater issues. With the goal to produce pragmatic and demand-driven solutions, teams are mentored by experts from tech, environment, business, academia and government sectors. This process unites unlikely partners and brings cutting-edge tech capabilities to disrupt the water sector.

Demand-Driven Solutions: The issues tackled by AquaHacking are championed by leaders from across the water sector including eNGOs, municipalities and water organizations. They are our Water Issue Leaders, who act as the participants closest mentors during the AquaHacking Challenge. While the science & technology behind the solutions is essential, the support of experts to champion and ultimately implement the solutions is key.

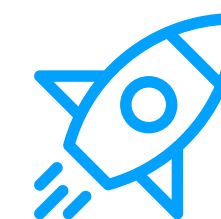
The student participants' success is our mission.
We reach this goal by :



Promoting tech and next-generation talent to solve critical water issues



Leveraging local ecosystems of stakeholders to ensure solutions are embedded and have lasting local impact



Preparing young entrepreneurs to create a start-up and bring solutions to market across North America



AquaHacking

Impact Through
Innovation



The AquaHacking Challenge engages young innovators to develop clean-tech solutions to help solve North America's freshwater issues.



Engineering
Web Platform
Hardware
Mobile App
Software
Data based
Engineering
Web Platform

Hackers' Interests

- Water Science
- Engineering
- Programming
- Sustainable Development
- Data Analysis
- Marketing

Hackers' Qualities

- Persistence
- Creativity
- Passion
- Leadership
- Entrepreneurial
- Communicative



AquaHacking
Enablers
of Success

Our multiple partners enable the success of AquaHacking.
Each plays a key role and brings a particular expertise and perspective to the program.



The 2019 Challenge Formula



CRITICAL WATER ISSUES

- 15 Water Issues submitted
- 5 Water Issues selected
- 7 Water Issue Leaders



RECRUITING

- 16 Hubs
- 10 Quebec, 6 Ontario



10 INFO-SESSIONS



CHALLENGE PHASE 1 — 12 WEEKS

- 3 virtual workshops
- 1 semi-final to select 6 finalists (science fair style & virtual)



CHALLENGE PHASE 2 — 14 WEEKS

- 48h expedition
- 1 final \$50,000
- 6 incubators



37 MENTORS & EXPERTS

JURY MEMBERS

- 13 semi-final
- 5 final



ADVISORY COMMITTEE

- 11 members



AquaHacking Throughout the Great Lakes and St. Lawrence River Basin

Previous editions of the AquaHacking Challenge tackled freshwater issues in these areas:

- 2015: Ottawa River (Ottawa/Gatineau)
- 2016: St. Lawrence River (Montreal)
- 2017: Lake Erie (Waterloo)
- 2018: Lake Ontario & Beyond (Toronto)

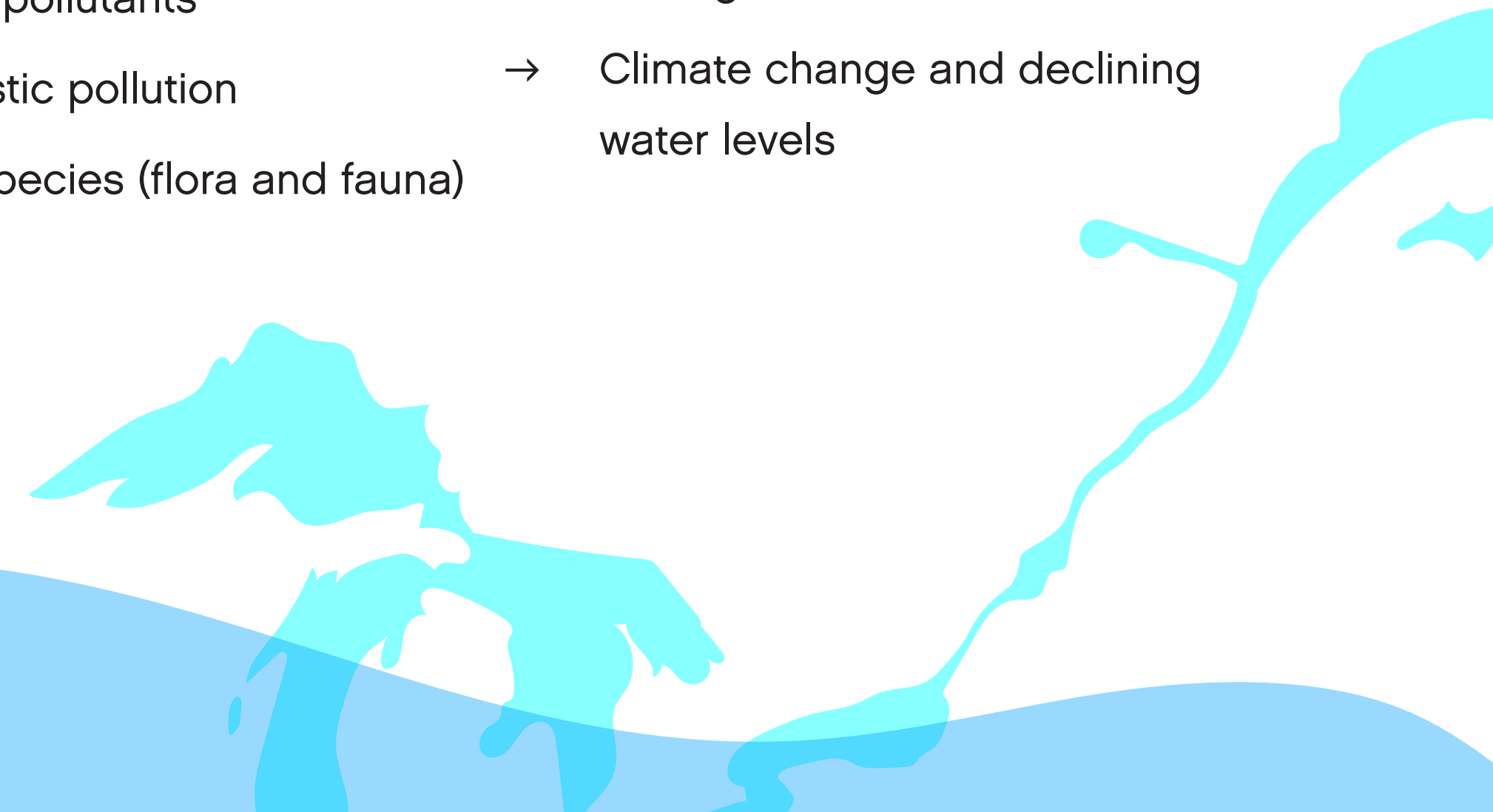
In 2019, the AquaHacking Challenge addressed the Great Lakes and St. Lawrence River Basin as a whole.

Why is the Great Lakes and the St. Lawrence Basin so important?

- The Basin is the largest system of fresh surface water on earth, containing 21% of the world's freshwater.
- The Basin is the primary drinking water source for over 40 million people.
- The region would rank as the third largest economy in the world if it were a country.
- The region provides 46 million jobs.

What are the main issues threatening the Great Lakes and St. Lawrence River today?

- | | |
|--------------------------------------|--|
| → Nutrients and algae | → Chemical run-off from industry and agriculture |
| → Emerging pollutants | |
| → Micro-plastic pollution | → Climate change and declining water levels |
| → Invasive species (flora and fauna) | |



Recruitment Hubs

Recruitment hubs are universities that demonstrate leadership in: water conservation, environmental science, entrepreneurship, and/or tech innovation.

10 QUEBEC

- Université de Montréal
- ÉTS Montreal
- Polytechnique Montreal
- Centr'EAU
- EcotoQ
- GRIL
- Institut EDDEC
- INRS
- Université Laval - ÉSAD
- Ville de Montréal

6 ONTARIO

- University of Toronto - New College
- Ryerson University - Ryerson Urban Water
- McMaster University
- Water Institute, Waterloo University
- Queen's University
- Lakehead University

Info-Sessions

- February 18: University of Sherbrooke (Sherbrooke, QC)
- February 26: Queen's University (Kingston, ON)
- February 27: McMaster University (Hamilton, ON)
- February 28: Ryerson University (Toronto, ON)
- March 1: University of Waterloo (Waterloo, ON)
- March 14: McGill University (Montreal, QC)
- April 3: University of Québec (Trois-Rivières, QC)
- April 8: University of Québec (Montreal, QC)
- May 1: Concordia University (Montreal, QC)
- May 2: École de technologie supérieure (Montreal, QC)



Water Issue Statements & Leaders

Water Issue Leaders are topic experts who act as the champions for the Water Issues that teams tackle throughout the AquaHacking Challenge.

Before an AquaHacking Challenge is officially launched at the Kick-Off event, prospective Water Issue Leaders are invited to submit a topic for a Water Issue. Challenge organizers, together with the Advisory Committee, assess and determine which Water Issues have the greatest potential for engaging AquaHacking teams in developing tech solutions.

As the experts on their particular Water Issue, these Leaders are valuable mentors for teams throughout the Challenge.

ROAD SALTS

How might we divert road salt from entering the Great Lakes and St. Lawrence Basin?

Excessive road salt application in the Great Lakes region has led to chloride levels rising in rivers and smaller lakes, surpassing healthy levels year-round in freshwater ecosystems, and having cascading effects on the upper food web. The public sector reports over 5 million tonnes of road salt applied each winter, with the largest applications happening in Ontario. The excessive use of road salt is turning freshwater systems into seasonal seas and is creating lethal conditions for freshwater species. There are also significant economic impacts, with corrosion causing damage to cars, bridges, and other road infrastructure. 1 tonne of salt applied can equal \$5000-6000 in damages.

Water Issue Leader :
WWF Canada



FLOODPROOF COMMUNITIES

How could we reduce climate-related damages and economic losses from flooding for individuals, communities, infrastructure and the environment in the Great Lakes and St. Lawrence River Basin?

It is important to improve climate resilience in shoreline communities. Water damage is the obvious result of flooding, but there is also the risk of contamination as sewers and septic tanks overflow and garages or basements full of chemicals are flooded. The U.S. National Institute of Building Sciences reveals, in a report published in December 2017, that for every dollar invested in prevention, \$6 in damage resulting from disasters is avoided.

Water Issue Leader :
Great Lakes and St. Lawrence Cities Initiative



Water Issue Statements & Leaders

“FLUSHABLE” WIPES



How might we develop a solution to prevent wipes from contaminating wastewater collection and treatment systems?

Worldwide, municipalities (the wastewater industry) have engaged with the wipes manufacturers and their trade associations, Association of the Nonwoven Fabrics Industry (INDA) and European Disposables and Nonwovens Association (EDANA), to develop a technical standard for defining what constitutes toilet flushability of wipes. These popular consumer products are a costly impact and rapidly growing addition to the garbage stream found in municipal wastewater collection and treatment systems. Our Great Lakes and St. Lawrence basin is seeing increased evidence of people flushing wipes down toilets and the wipes have made it into the natural water environment.

Water Issue Leader:
Municipal Enforcement Sewer Use Group



MUNICIPAL WATER AND DRINKING FOUNTAINS



How might we increase public trust and use of public water throughout the City of Montreal?

The municipal tap water available to cities around the Great Lakes and St Lawrence basin is clean and high quality. Nevertheless, there is widespread distrust and lack of use of this publicly available water. Single-use plastic water bottles are bought and disposed of en masse causing significant environmental pollution and financial costs that fall to municipalities. By increasing the public’s trust in municipal tap water, and raising awareness about where to find public water fountains, we can effectively decrease the use of plastic water bottles.

Water Issue Leaders:
City of Montreal, Service de l’eau &
Association pour la protection de l’environnement
du lac Saint-Charles et des Marais du Nord (APEL)



MICROPLASTICS



How might we develop an intervention to prevent plastics and microplastics from entering the waters of the Great Lakes and St. Lawrence Basin?

Research now shows that the Great Lakes contain microplastic pollution, with the highest concentrations in heavily urbanized areas, like Toronto and Detroit. More than half of the waste released each year contains plastic materials. About 10,000 metric tons of plastic enters the Great Lakes every year, and another 8 million goes into the ocean. Sources of plastic debris to the Great Lakes include microplastic beads from consumer products, pellets from the plastic manufacturing industry, and waste from beach-goers, shipping, and fishing activities. Plastics are persistent in the environment and may have long-term adverse ecological and economic impacts, including the dispersal of persistent organic pollutants. As these pollutants enter water supplies and marine environments, they create profound problems for ecological and human health.

Water Issue Leaders:
University of Sherbrooke & McMaster University
& Great Lakes and St. Lawrence Cities Initiative



The 2019 Challenge Timeline

Tech-savvy young innovators were engaged over 7 months in a competitive and structured process as they developed solutions to critical freshwater issues, as defined by experts in the water sector. Winning solutions were then supported through incubation to commercialisation.



The Launch & Kick-Off



Click [HERE](#)
to watch the
Facebook Live
of the event.



Virtual Skills-Building Workshops

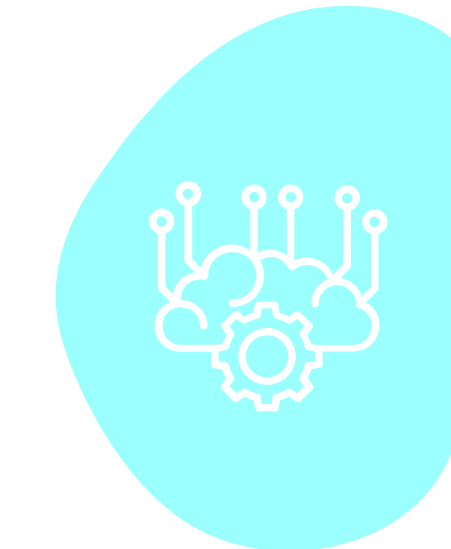


Three virtual workshops were available to participants and teams to help them ideate their solution, power it with advanced technology, and develop their pitch. The workshops were available to all participants and teams via the Hackworks platform (accessible by password and account login).



DESIGN THINKING

The Design Thinking workshop gave teams the foundational tools for the initial concepts of their solution.



MACHINE LEARNING (AI)

The Machine Learning workshop (**sponsored by IBM**) helped teams understand the technical functionality that was possible with IBM's Watson Machine Learning algorithms. In addition to the virtual workshop, teams had free access to IBM Watson's APIs for the development of their solutions if needed.



PITCH PERFECT 101

Finally, the Pitch Perfect workshop provided best practices and advice for teams to develop their pitch for the Semi-Final.

AquaHacking's implementation partnership with **Hackworks** is at the heart of the hacker's journey through the AquaHacking Challenge. **Hackworks** facilitates the participants' journey starting with registration, onboarding, team formation, engagement with water issues and leaders, virtual workshops, pitch preparation, and logistics for the Semi-Final event.

The 2019 Challenge Semi-Final & Final

JUNE 15

SEMI-FINAL AND JOB FAIR

Artscape Daniels Launchpad
Toronto, ON

Attendance : 193

14 teams

presented their solutions
in a Science Fair style

Demo + 5 min pitch
+ 5 min questions

13 jury members

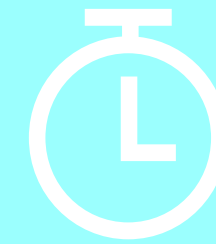
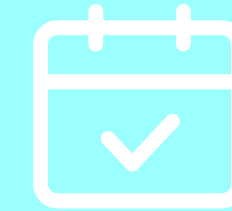
Speakers:

Isabelle Bourduas (AquaHacking Team)

Tom Casher (GHD)

Jason Deglint (Blue Lion Labs)

Brian Prokopowich (Startup Unleashed)



SEPTEMBER 27

FINAL AND AQUAHACKING FEST

Port of Montreal's Grand Quay
Montreal, QC

Attendance : 200

Dragon's Den style,

6 teams

presented their solutions

7 min pitch
+ 3 min questions

5 jury members

Speakers:

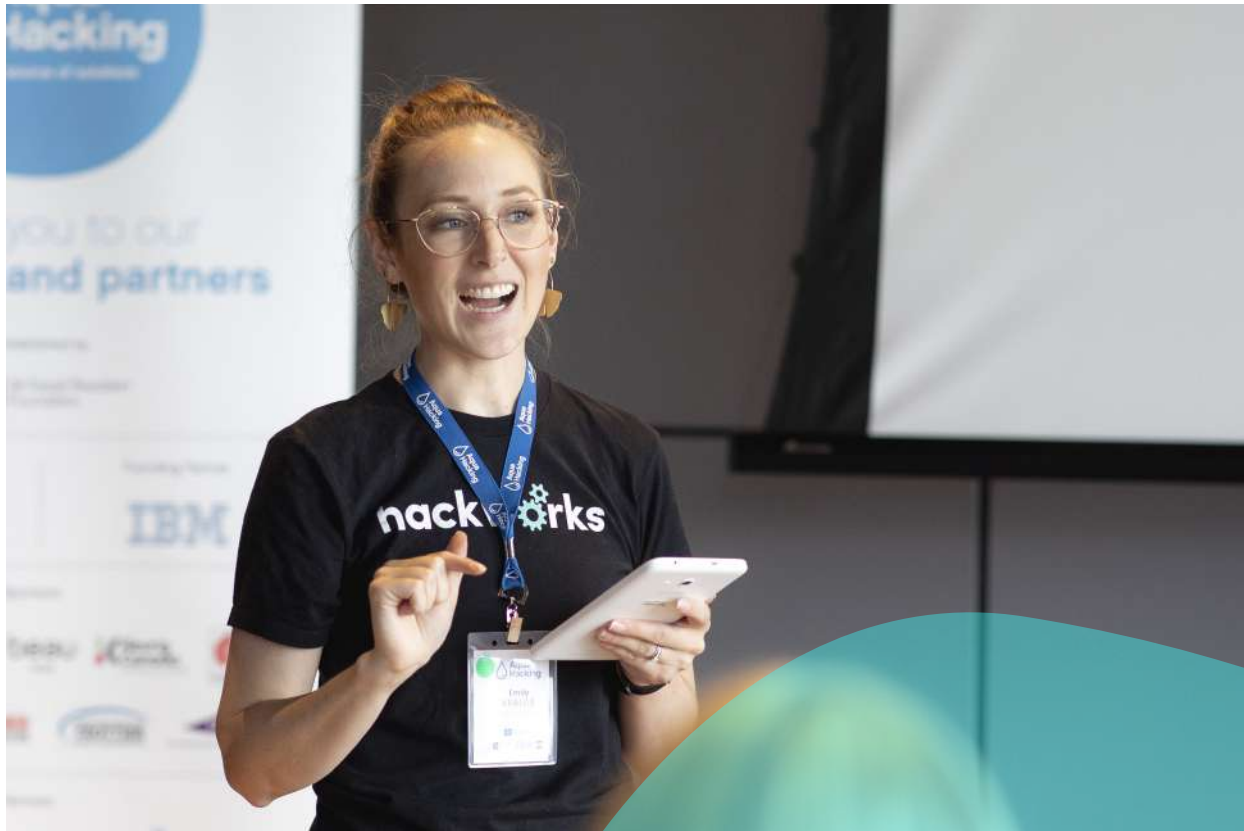
Nan-b de Gaspé Beaubien and David Ullrich
(Aqua Forum Board Members)

Mario DiBernardo
(Regional Vice-President, North East Montreal, RBC)

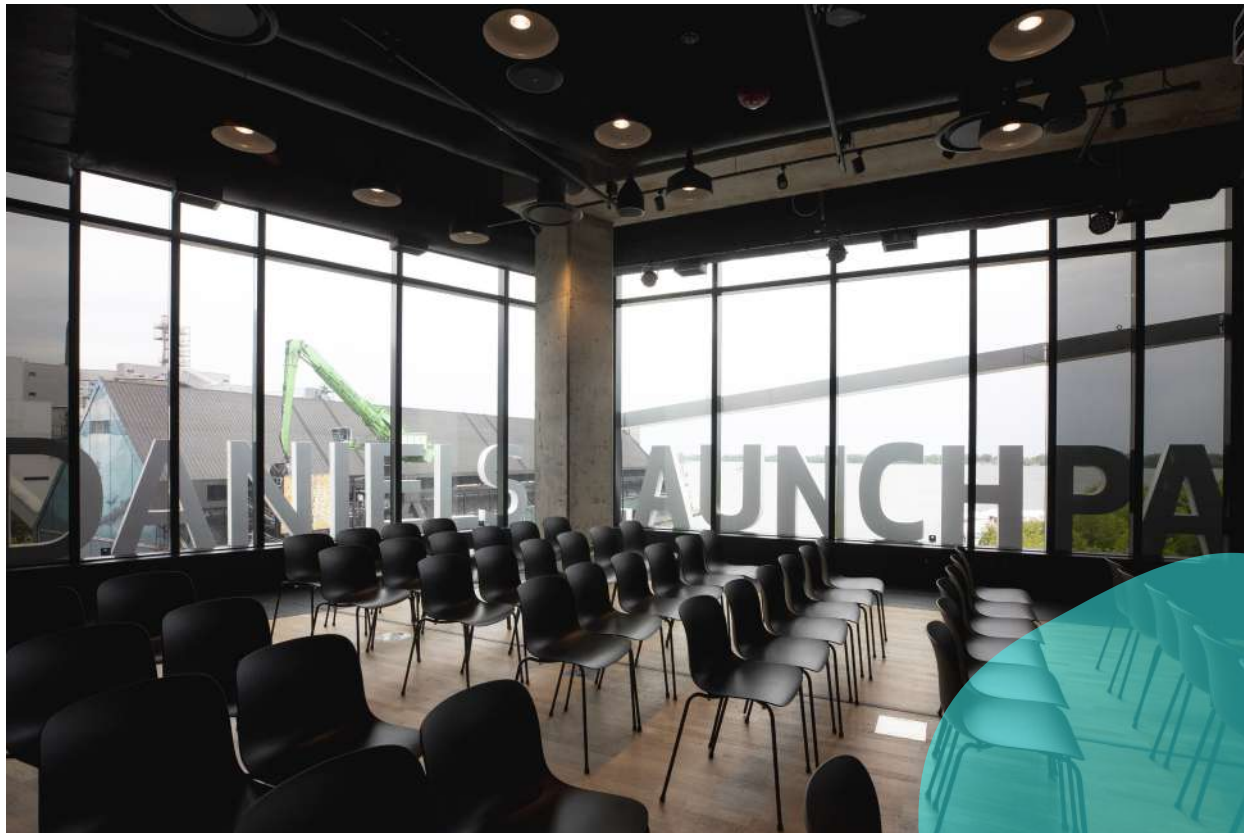
Kat Kavanagh and Naysan Saran
(AquaHacking Alumni)

MC: Claudine Prévost
Local political candidates

Semi-Final



Semi-Final



181 participants
28 teams
14 semi-finalist teams

Semi-Finalist Teams by City

→	MONTREAL, QC	2
→	KINGSTON, ON	2
→	SHERBROOKE, QC	2
→	QUEBEC CITY, QC	1
→	TORONTO, ON	1
→	WATERLOO, ON	1

Mixed City Teams

→	MONTREAL/TORONTO	2
→	MONTREAL/QUEBEC CITY	1
→	KINGSTON/TORONTO/MONTREAL	1
→	TORONTO/WATERLOO	1



Road Salt
2 teams



Floodproof Communities
6 teams



Municipal Water
and Drinking Fountains
4 teams



Microplastics
2 teams



“Flushable” Wipes
0 teams

Jury Members for the Semi-Final



TECHNICAL EXPERTS

Mark Williams
Biosolids Engineering Manager,
FilterBoxx (Ovivo)

Tom Casher
Deputy Managing Director, GHD

Sarmad Ibrahim
Technology Evangelist I Watson /
Bluemix Architect National Innovation
Team, IBM

Deepali Jadhav
Director, Process Automation Innovation &
Delivery / Principal Technologist, RBC

WATER EXPERTS

Kevin Boehmer
Managing Director, Water Institute

Joanna Gogovita
Applications Engineer, FliterBoxx (Ovivo)

Ted Yuzyk
Senior Science Adviser

Emma Wattie
Program Manager, Atlantic Water Network

Natalija Vojno
Youth Project Manager,
International Secretariat for Water (ISW)

BUSINESS EXPERTS

Cynthia Shanks,
Communications and Sustainable Development,
Keurig Dr Pepper Canada

Kerry Freek
Director (Volunteer),
Water for People Canada

David Oswald
CEO, DE Design + Environment

Rahim Kanji
Industry Partnership Manager,
Southern Ontario Water Consortium



Semi-Final



“It was a pleasure to be at the AquaHacking 2019 Semi-Final! I loved the experience and it was unfortunate that I wasn’t able to have discussions with all the teams! The team from the University of Sherbrooke [CLIN] also really enjoyed the experience and I am already witnessing in them an evolution in how they are thinking and organizing their project. There is no doubt that AquaHacking is a wonderful opportunity to expose students to real issues and to encourage them to find innovative solutions.”

– Pedro A. Segura, Professor from the University of Sherbrooke



The Finalists' Expedition



**JULY
12-14**

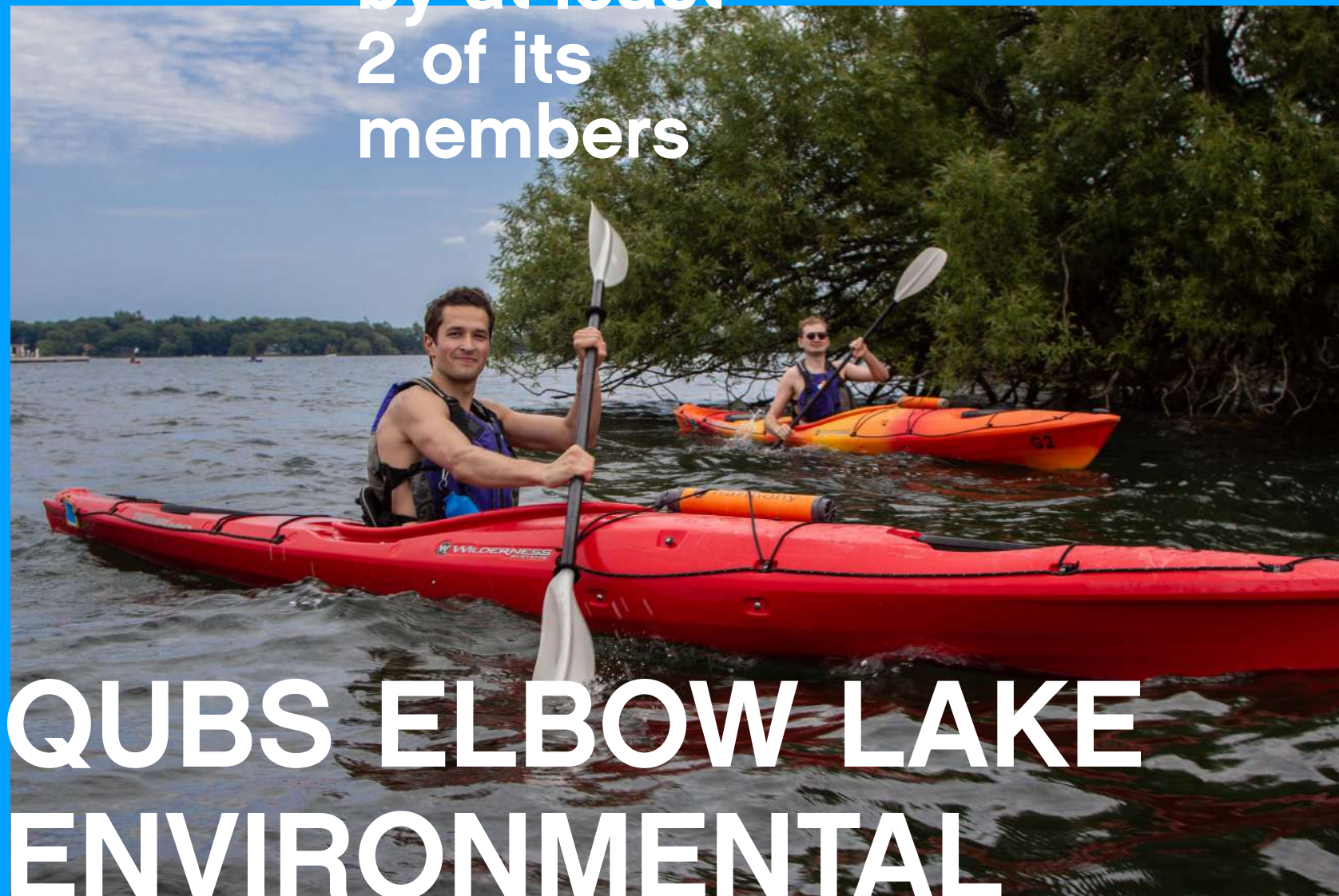
**COORDINATED BY
WATERLUTION**



**10 resource guests
with support from
2 AquaHacking
staff members**

16 PARTICIPANTS

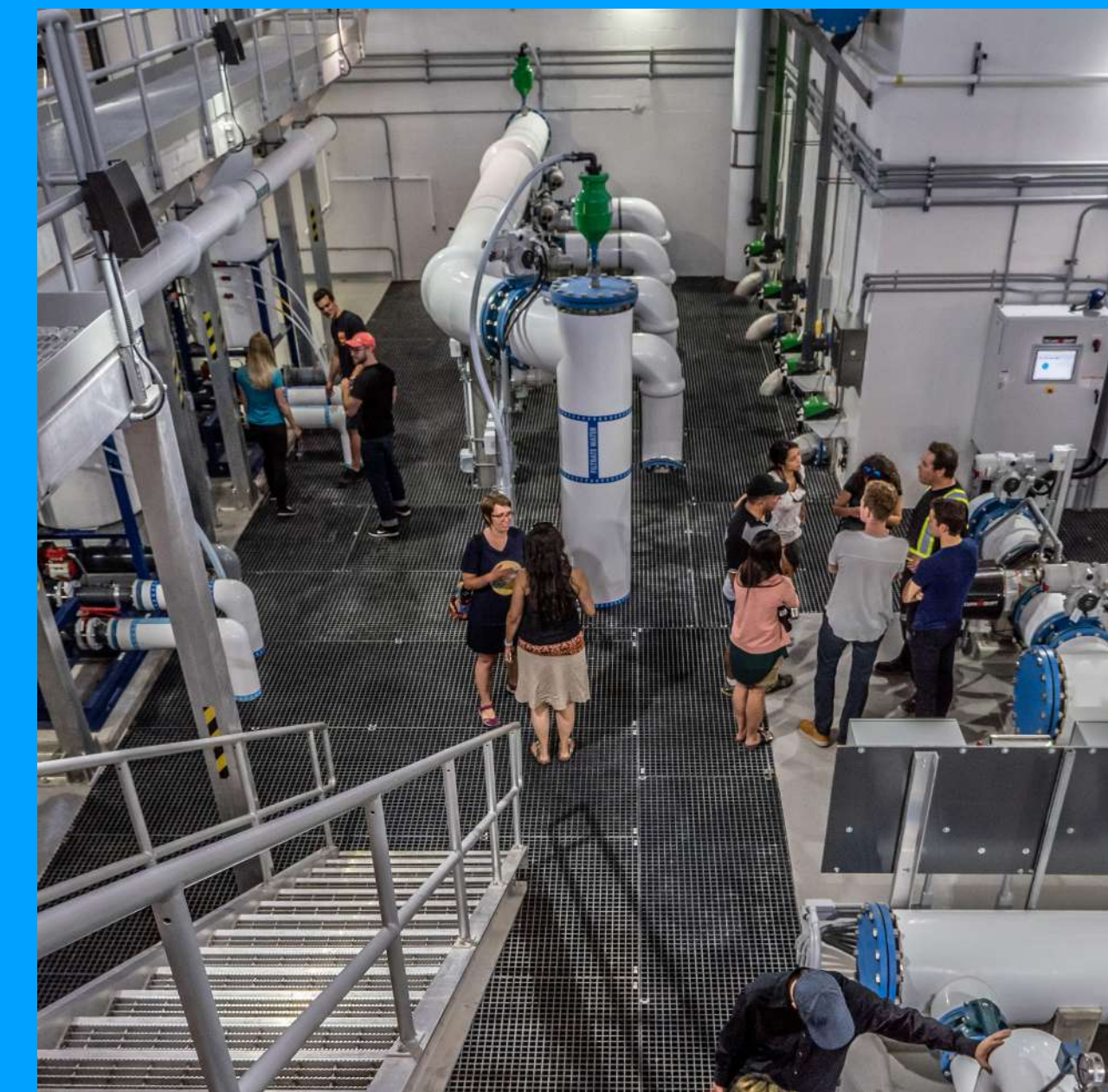
**Each team
represented
by at least
2 of its
members**



**QUBS ELBOW LAKE
ENVIRONMENTAL
EDUCATION CENTER**



**With a visit to Kingston
wastewater treatment
plant, learning from First
Nations communities
from the Tyendinaga
Mohawks Territory, and
a site visit to a water
treatment plant**



The Finalists' Expedition

The goals of the Expedition are to allow participants to connect with watershed stakeholders, better understand the challenges of the watershed and the solutions that are already in place, connect with the water itself, develop skills to help advance projects, and to grow as a team as well as individual water leaders.



ACTIVITIES

- The teams visited the Ravensview wastewater treatment plant, which services Kingston, Ontario. There, the finalists were able to see the scale required to treat the wastewater produced by a city before that water can be released back into a natural waterway.
- Teams participated in a World Café exercise which gave them all an opportunity to explore different ideas about water sustainability and environmental protection, as well as hear from experts and Canadians with first-hand experience with water issues.

ACTIVITIES

- The teams were given the opportunity to tour water treatment plants, as well as get out on the water for kayaking around the Thousand Islands of eastern Canada's St. Lawrence River.
- They spent time on Tyendinaga Mohawk Territory, where a treatment plant was built in 2016. Teams also participated in a traditional Tyendinaga water teaching on the First Nation reserve at the landing by Lake Ontario.



The Finalists' Expedition



IMPACT & OUTCOMES

→ Key performance indicators (survey response from Finalists about the Expedition experience):

- Networking:
92%
from extremely to a great extent valuable.
- Relationship with other finalists:
83%
from extremely to a great extent valuable.
- Resource Guests:
92%
from extremely to a great extent valuable.
- New skills:
92%
from extremely to a great extent valuable
- Project:
67%
helped improve existing or create new project
- AquaHacking Competition:
75%
helped with final pitch



- **100%**
of participants indicated their knowledge of water issues faced by Indigenous communities around the Great Lakes and St Lawrence River Basin increased after the Expedition.
- When participants were asked to rank their connection to the Great Lakes and St Lawrence River Basin, before attending the AquaHacking Finalists Expedition, 50% indicated a moderate to strong connection, while 50% indicated no connection to some connection. After the AquaHacking Finalists' Expedition, when asked to rank how valuable their experience was for connecting with water, 92% indicated it was from extremely to a great extent valuable.
 - Kayaking in Lake Ontario allowed for positive connections to the water as well as with interactions with people other than their teammates.

The Finalists' Expedition

"The experience motivated me to dedicate more time and energy to our project thanks to all of the encouragement we received from participants, guests, and organizers."



"AquaHacking gave me a renewed understanding of water issues and the importance of identifying innovative methods to solve those problems."

"The discussion with all the teams about their solutions and how they want to bring them into reality was a real confidence boost."

"This Expedition inspired us to strengthen the social aspects of our project by giving us a better understanding of how we should communicate with stakeholders."

"This was an exceptional opportunity to take a step back from the everyday life, and to be able to fully connect with environmental issues around the water. The activities, the meetings and the discussions allowed us to grow out of this experience and when we return to our life after the Expedition, we know that something changed in us, whether it was our vision, our skills, our habits or even our relationship with water."

"We had the chance to visit the drinking water treatment plant operated by First Nations. For me, it was really, really interesting, because I work in the drinking water sector."



Jury Members
for the Final



MANDY
WOLFE

Co-Founder
and Owner
of Mandy's
Restaurants



NAOMI
GOLDAPPLE

Head of AlayaLabs at
Alayacare, Entrepreneur
and Mentor in the Emerging
Technologies industry



ANIE
ROULEAU

Founding President
of Unscented Co.,
Ambassador BCorp

PHILIPPE III
DE GASPE
BEAUBIEN

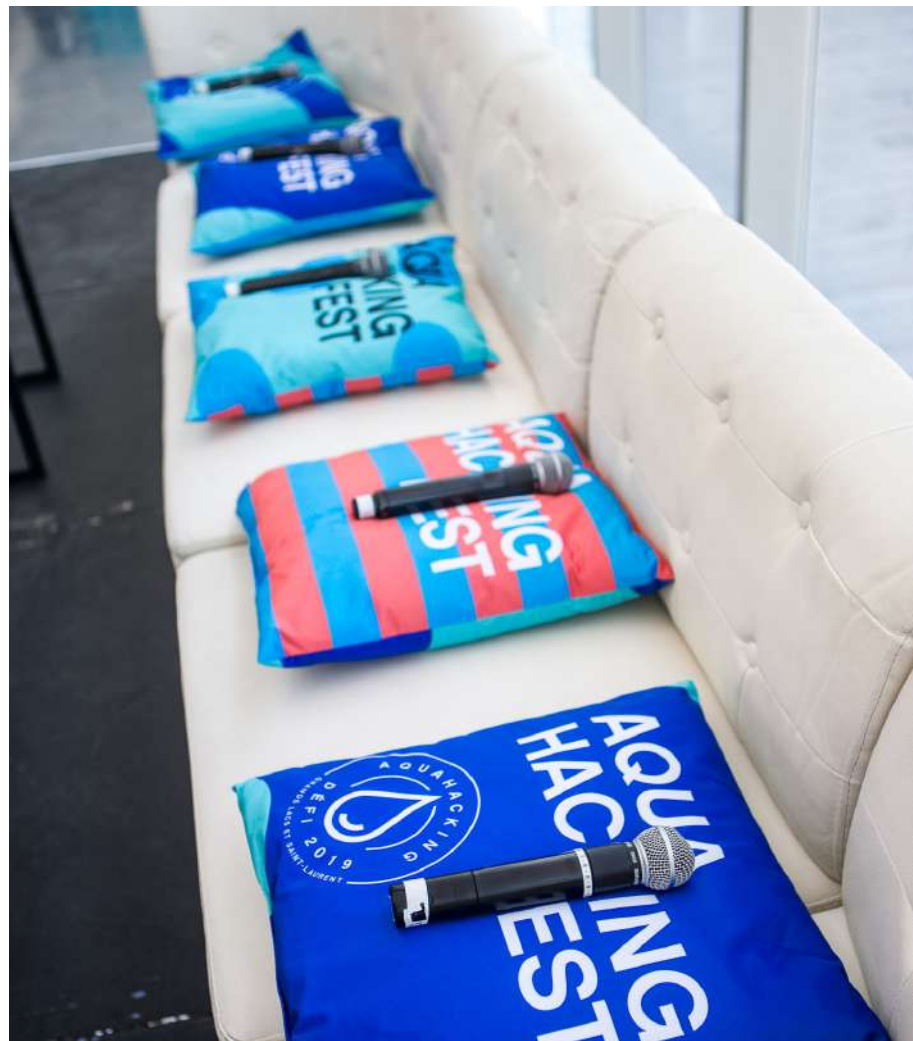


The President and CEO
the de Gaspé Beaubien
Foundation and a Founder
of Adopt Inc.



Lawyer and
Television
Personality

ME ANNE-FRANCE
GOLDWATER





Winning Teams & Solutions

1

THE GREEN STOP

Montreal, QC and Toronto, ON



Going to a festival in the summer can be challenging for those who want to drink water in an environmentally responsible way. The heat of the daytime sun and lack of refillable water bottle stations can make it tough to stay hydrated. The Green Stop has a solution for that, one that doesn't involve single-use plastic bottles. The team's solution is to make using municipal water systems easier than buying bottles for festivalgoers. Their prototype simply requires a hook-up to the municipal water system. The fountains are designed to minimize queuing, allowing multiple people to fill their bottles at once, and to fill those bottles quickly. Their first prototypes went into use at the prestigious Osheaga music festival in Montreal in summer 2019.

\$20,000 + spot in an incubator

2

CLEAN NATURE

Quebec City, QC – INRS



A slippery road or sidewalk is a dangerous thing. To keep our walkways and roadways safe during Canada's frigid, unforgiving winters, cities throughout the country have had to turn to road salt to increase tire traction. The trouble is, that salt doesn't stay confined to the roads where it's applied. Eventually, the salt turns the ice and snow into a briny slush that will find its way from the asphalt to nearby waterways, where it affects the freshwater streams it enters. Team Clean Nature are developing a solution that reduces excess road salt. Their computer model uses real-time data to determine the amount of salt that needs to be applied to properly de-ice the roads, without compromising driver or pedestrian safety.

\$15,000 + spot in an incubator

Winning Teams & Solutions

CLIN

Sherbrooke, QC – University of Sherbrooke



The team CLIN is looking to reduce microplastics in the water supply by going after them in a novel place: your dryer. About 35 percent of the microplastics released into the world come from clothes, making them the largest single source of microplastic pollution. The breakdown of synthetic fibres like polyester in the drying cycle get released into the air where, once they settle, they are carried away by rain and into our water systems. CLIN is developing a filter that will catch microplastics to keep them from ever escaping the dryer. They foresee having to proceed in two steps. First, they want to produce a filter system that can be used by industrial washing operations, places like laundromats and hotels where laundry is done on a large scale. They then hope to be able to create a product that can first be installed in the next generation of consumer dryers, and later develop a universal or adaptable filter system that can be installed on dryers already on the market.

\$10,000 + spot in an incubator

SALT-ED

Montreal, QC



Canadian winters require a lot of salt to make roads and sidewalks safe. The trouble is, getting the right amount of salt requires a delicate balance; it's too difficult for city crews to adjust on the fly. And so, most municipalities find their infrastructure over-salted. Salt-Ed proposes to retrofit road plows and salt spreaders with sensors and add a second bed for sand. Using a thermometer and a humidity sensor, while at the same time monitoring the vehicle's speed, the Salt-Ed system will apply the right mixture of sand and salt to suit the conditions. Their solution is mainly targeted towards small to medium public and private contractors who stand to benefit the most by adopting their simple solution.

\$5,000 + spot in an incubator

Winning Teams & Solutions

BELLO SOLUTIONS

Montreal, QC — ÉTS Montréal



Bello Solutions wants to revolutionize the way people consume and how cities manage drinking water using two steps. The first step consists of implementing IoT Sensors into existing drinking water fountains. The sensors will control the quality of the water and be connected with a smart mobile application accessible to city service providers and consumers. This step is the foundation leading to the second step, a custom-designed drinking fountain that adapts to the current and future needs of customers. These tools will help people trust their tap water more, in order to reduce consumption of bottled water.

\$2,500 + spot in an incubator

DROPLETS

Montreal, QC & Toronto, ON



Team Droplets are out to improve the public's trust in drinking water. Scattered throughout the City of Montreal are plenty of public fountains, hooked directly into the municipal water supply. But there's a public perception that bottled water is cleaner and safer. Team Droplets wants to increase the public's trust in tap water, by informing them of the good quality of tap water. To do this, the Droplets team is using the power of data to make information about public fountains more more transparent and accessible, and give the City new tools to monitor their water infrastructure. Using machine learning, Droplets will also be able to use the City's data to model where new water infrastructure should be installed.

\$2,500 + spot in an incubator



What's Being Said About AquaHacking

“On behalf of the Bello Water team, we want to thank the entire team of Hackworks and AquaHacking. It was really well organized from the start of the competition to the Semi-Final. And we want to thank you for your support and your help all along the Challenge. Thank you for this amazing experience. We really appreciate it! It was very motivating and interesting.”

– Clément & Marc, Team Bello Water, following the 2019 Finalists' Expedition

“[The Semi-Final] was a very interesting event this year. I found it was a stronger field of teams than last year and all the teams were at the same level in terms of development of their concept. The fact that you added a 6th team to the final group further reflects this. The logistics also were better than last year: easier to find the teams than before and the electronic inputting was a good addition.”

– Ted Yuzyk, 2019 Semi-Final Judge

“By combining the strengths and resources of the University and the Water Institute with AquaHacking, we were able to provide unique and tailored mentoring to student teams, from water science, to technology development, to business accelerators.”

– Kevin Boehmer, Managing Director, the Water Institute at the University of Waterloo, referring to partnership with AquaHacking from 2017-2019

“I enjoyed interacting with the AquaHacking Finalists. They enthusiastically participated in discussions and had a keen drive to delve deep into solving some of the most serious issues facing aquatic resources. These bright, motivated students give me hope for a brighter future.”

– Shelley Arnott, AquaHacking Expedition Resource Guest

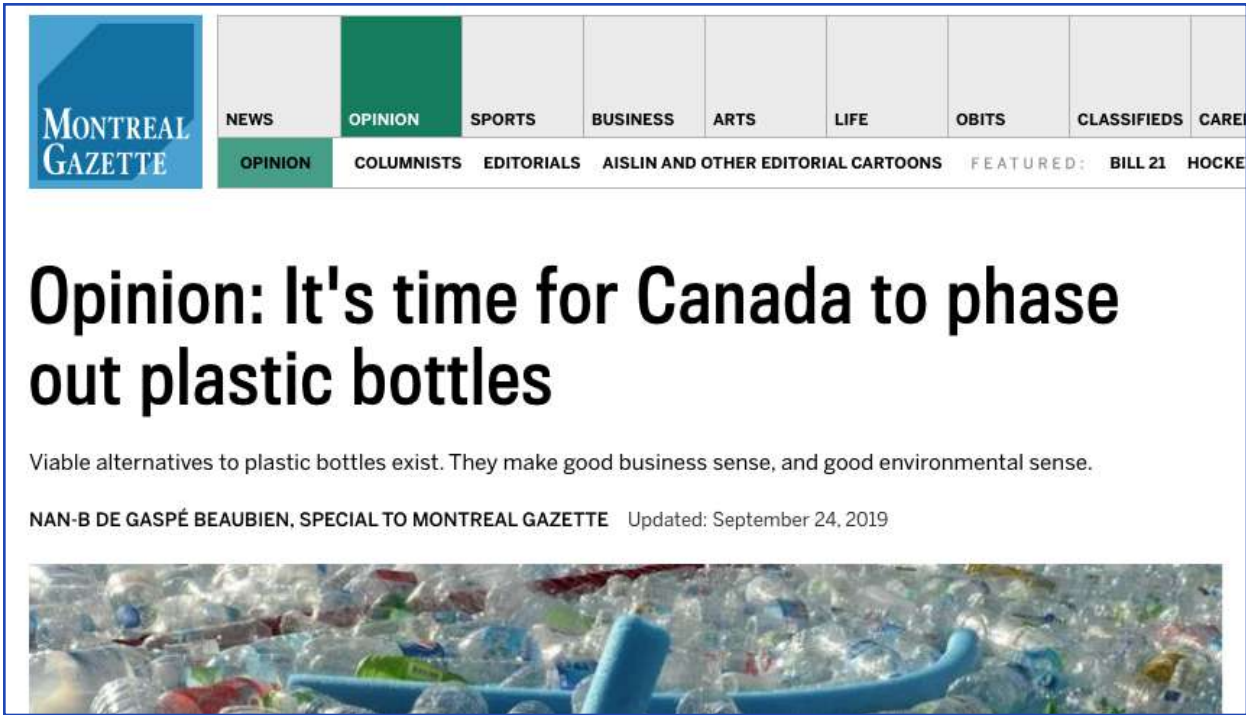
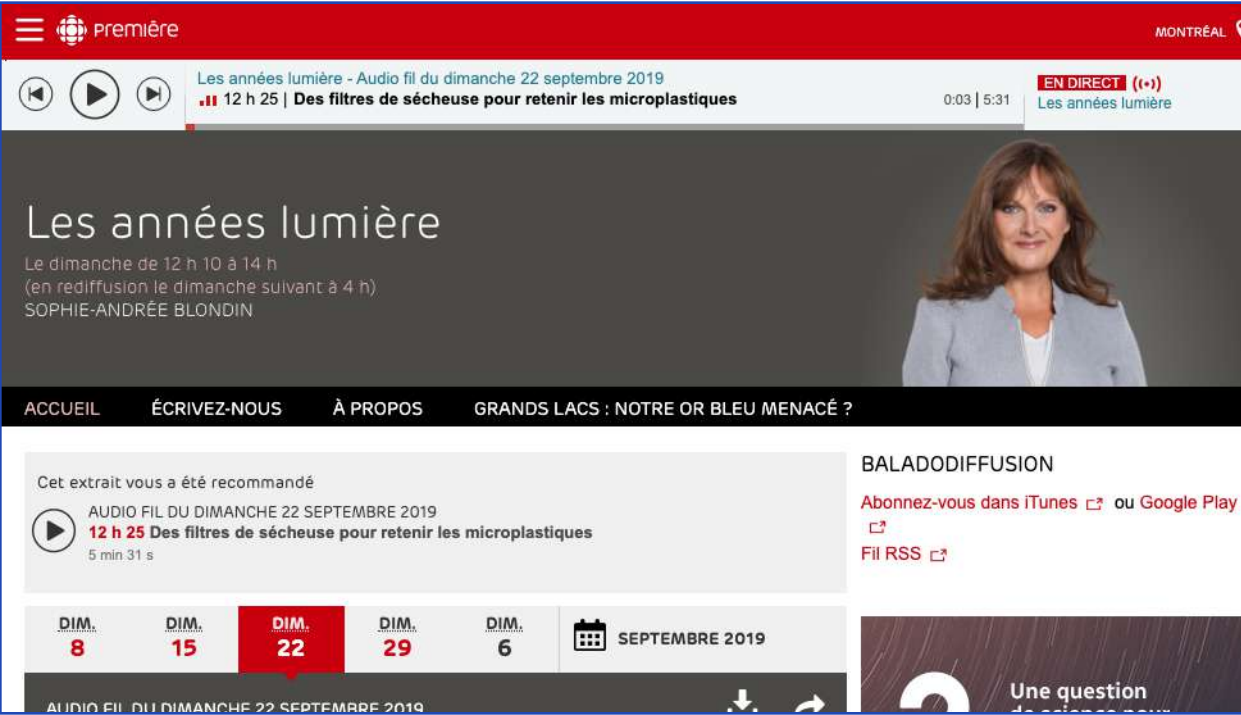
“[The AquaHacking Expedition] was a life changing experience! The experience motivated me to dedicate more time and energy to our project thanks to all of the encouragement we received from participants, guests, and organizers.”

– Monica Mazur, Team Droplets, following the 2019 Finalists' Expedition

PR Campaign

Select News Pieces

from 2019



Click on the thumbnails to read, listen or watch.

Social Media
Coverage

2019 CAMPAIGN

(January to November 2019)

Facebook reach

459,555 (+84% from 2018)

Linkedin

416 total followers (+54% from 2018)

Impressions (TOTAL)

400,310

 337,900

 40,030

 22,380

AQUAHACKING FEST CAMPAIGN

(August 15 to September 27, 2019)

Facebook

Increased from 3250 to 3914 subscribers

Instagram

Increased from 183 to 293 subscribers

Facebook reach during this period

373,584 (81% of total 2019 Campaign)

Contests

with Pop spirit + Wise man's care

Video and Additional Reports



AquaHacking Challenge: The unexpected journey - the finalists followed through the 2019 AquaHacking Challenge



Facebook Live Stream Launch Event

What are microplastics?

- Microplastics are particles made of synthetic polymers such as polyethylene, polystyrene, etc., that are less than 5 mm in diameter.



2019 Water issues [5 videos]



Overlooking the choppy waters of Lake Ontario, the 2019 AquaHacking Semi-Final event proved to be one of the most impressive yet. Judges, teams, and sponsors from across Eastern Canada arrived by car, bus, and plane to help resolve the five

Semi-Final recap Newsletter



AquaHacking Fest recap video

Crunch time for AquaHacking's six final teams!

The 2019 AquaHacking Challenge finale is only seven weeks away! The competitive spirit is still alive in former Challenge winners who are making national news this summer. Check out [Water Rangers on CBC Radio](#) and [CANN Forecast on CTV News](#)!

It's been a busy summer for members of the six finalist teams in the lead up to next month's finale! The groups are hard at work refining their projects and pitches, but recently benefited from some downtime as the hackers gathered for an excursion near Kingston, Ont., to see first hand some Canadian water systems in action.

Expedition Newsletter



Political debate summary



Click on the thumbnails to read, listen or watch.

AquaHacking Sponsors and Partners

Established by



Powered by



Founding partner



Challenge Implementation Partners



AquaHacking Alumni



AH '16

- Signed contract with the Ville de Montreal and with Ville de Levi for their artificial intelligence-driven solutions InteliPipes and InteliSwim
- April 2019, secured 3rd place in pitch contest “À la conquête des marchés” with TD
- June 2019, Founder Naysan Saran won grant from Fondation J. Armand Bombardier “Releve entrepreneuriale féminine en technologie”
- Since the business was launched, has hired 8 employees



AH '17

- Improved microplastic capture rates up to 99%
- Secured a spot in the JumpStart Accelerator Program and joined Communitech, an accelerator in Kitchener
- Founder Lauren Smith was awarded the GreenHouse Big Ideas Challenge Fellowship for their specliased multi-layer material to capture micro-fibres released in the washing process
- Currently filing international patent for microplastic identification method



AH '15

- Secured a spot at Impact Hub Ottawa
- 2018 Water's Next Early Adopter Award
- Over 1,100 registered users, but have also trained over 2,100 students in-person
- Over 25,000 data points in 2,287 locations and 92 groups
- Since NGO was launched, has hired 8 people to work full-time or part-time on the platform and test kits



AquaHacking Alumni



AH '17

- Improved their prototype and doubled the number of detectable algae species with 96% accuracy
- Published ground-breaking research on AI and water monitoring in the journal Nature;
- A member of their team has relocated to China for prototype development while others continue to expand their client base in Canada
- Nov 2018 - Jason won the Second Place Prize of Future Engineers for Water and Environmental Safety (FEWES) International Student Competition which took place in Tianjin, China



AH '17

- Completed the Intrapreneurial Program as part of the Intrapreneurial Initiative
- Prototype 2.0 has been redesigned and finalised
- Concluded a \$20K partnership with Environment Canada to analyse their samples
- PolyMer citizen science program on microplastics integrated into the water quality consultation plan for the Table de concertation régionale Haut-Saint-Laurent - Grand Montréal



AH '17

- Won the “Best Market Strategy” award at the BlueTech Forum conference, in Vancouver, BC
- Has secured a Framework Agreement with United Utilities to deploy its AI technology across the North West of the United Kingdom (UK), serving over 7 million residents



AH '18

- Developed E-Nundation, software that simulates floods and assesses their impacts on communities, buildings, and critical infrastructure
- Designed for municipalities and residents
- In November 2019, named among the top 10 innovations of the year by Québec Science



2019
AquaHacking
Advisory
Committee



Jean-Francois Barsoum
Canadian Leader, Smarter Cities,
Water and Transportation at IBM



Kevin Boehmer
Managing Director at The Water
Institute, University of Waterloo



Bernadette Conant
CEO at Canadian Water Network



Jacques Durocher
President, Board of Directors,
Stratégies Saint-Laurent



Melanie Deslongchamps
Executive Director, Association pour la
protection de l'environnement du lac Saint-
Charles et des Marais du Nord (APEL)



Kerry Freek
Vice President and Senior Manager
of Communications, WaterTap



Nancy Stadler-Salt
Great Lakes Program Coordinator,
Environment and Climate



Madhu Malhotra
Manager, Strategic Analysis Section,
Land and Water Policy Branch,
Ontario Ministry of Environment



Scott McKay
Quebec Program Manager
& Policy, Great Lakes and St.
Lawrence Cities Initiative



Sébastien Sauvé
Vice-Dean Research and Creation
at the Faculty of Arts and Sciences
at the Université de Montréal



Brenda Lucas
Executive Director of the Southern
Ontario Water Consortium

Aqua Forum Board of Directors



Nan-b de Gaspé Beaubien
Founder and Co-Chair of the
de Gaspé Beaubien Foundation



David Ullrich
Advisor US, and former Executive
Director of the Great Lakes and St.
Lawrence Cities Initiative



Allen Lalonde
Senior Executive of Innovation and IBM
Canada's Research & Development Centre



Leah Konrady
President of ONE REGION



Rodney Northey
Member of Gowling WLG's
Environmental Law Group



Matthew Price-Gallagher
President & CEO,
Watercluster Scientific Inc.



Dr. Rachel Havrelock
Founder and Director of the UIC
Freshwater Lab & Associate Professor,
University of Illinois at Chicago

The AquaHacking Team



Dominique Monchamp
Senior Advisor, Interim Executive Director (October 2019)



Anne-Pascale Richardson
Projects Manager



Kariann Aarup
Advisor



Melissa Dick
Development Officer (since September)



Vittoria De Palma
Controler



Caroline Thomassin
Chief Legal Officer and Corporate Secretary

Collaborators



Isabelle Anouk-Bourduas
Chief Operating Officer (until September)



Alec Sicard
Program and Development Officer (until Apri)



Carmen King
Chief of Communications (March to June)

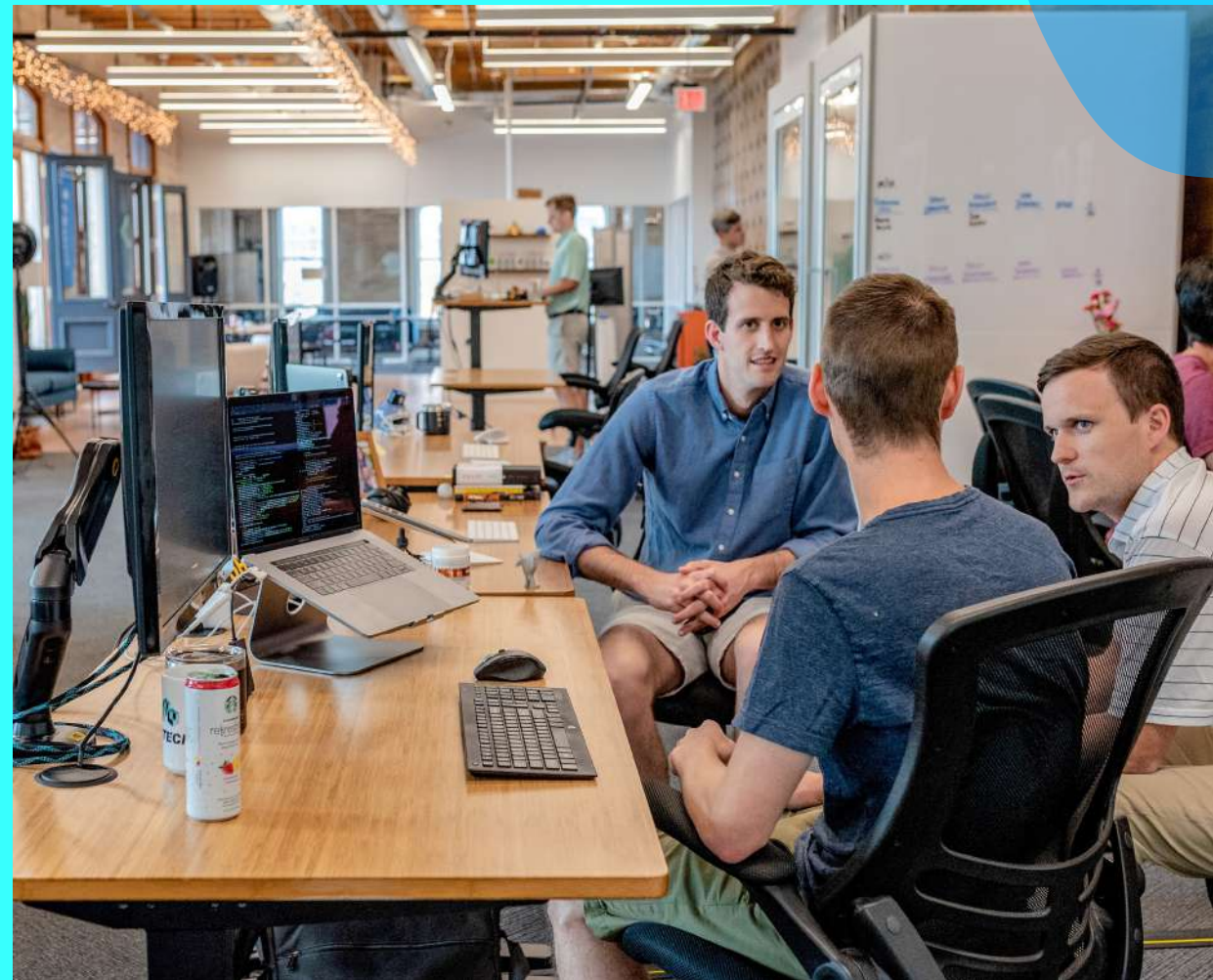


Alexandre Brun
Intern (Summer 2019)



André Dupont
Program and Development Officer (March to June)

Looking Ahead



PROGRAM EVALUATION FOR GREATER IMPACT

It is very important for AquaHacking to be continually evaluating and adapting our program to have a greater impact on the water technology sector. In addition to the debrief meetings and feedback solicited from our key partners in the 2019 program, we also embarked on a formal program evaluation exercise with Credo Consulting Inc. Through this evaluation program, baseline data is being collected from AquaHacking alumni from 2015 to now through surveys, interviews, and focus groups, and recommendations will be presented on how to move forward most effectively.



Looking Ahead



ALUMNI PROGRAM TO PROVIDE ONGOING SUPPORT

Moving forward, important resources will be placed in the development and implementation of an AquaHacking Alumni program that will provide ongoing support and to all participants that complete the semi-final and final events. We believe that AquaHacking can have its greatest impact in the continued support and networking following the Challenge, in order to cultivate the best conditions for the start-ups that go through the program to succeed in developing functional, marketable solutions that have a realistic and measurable impact on addressing water issues.



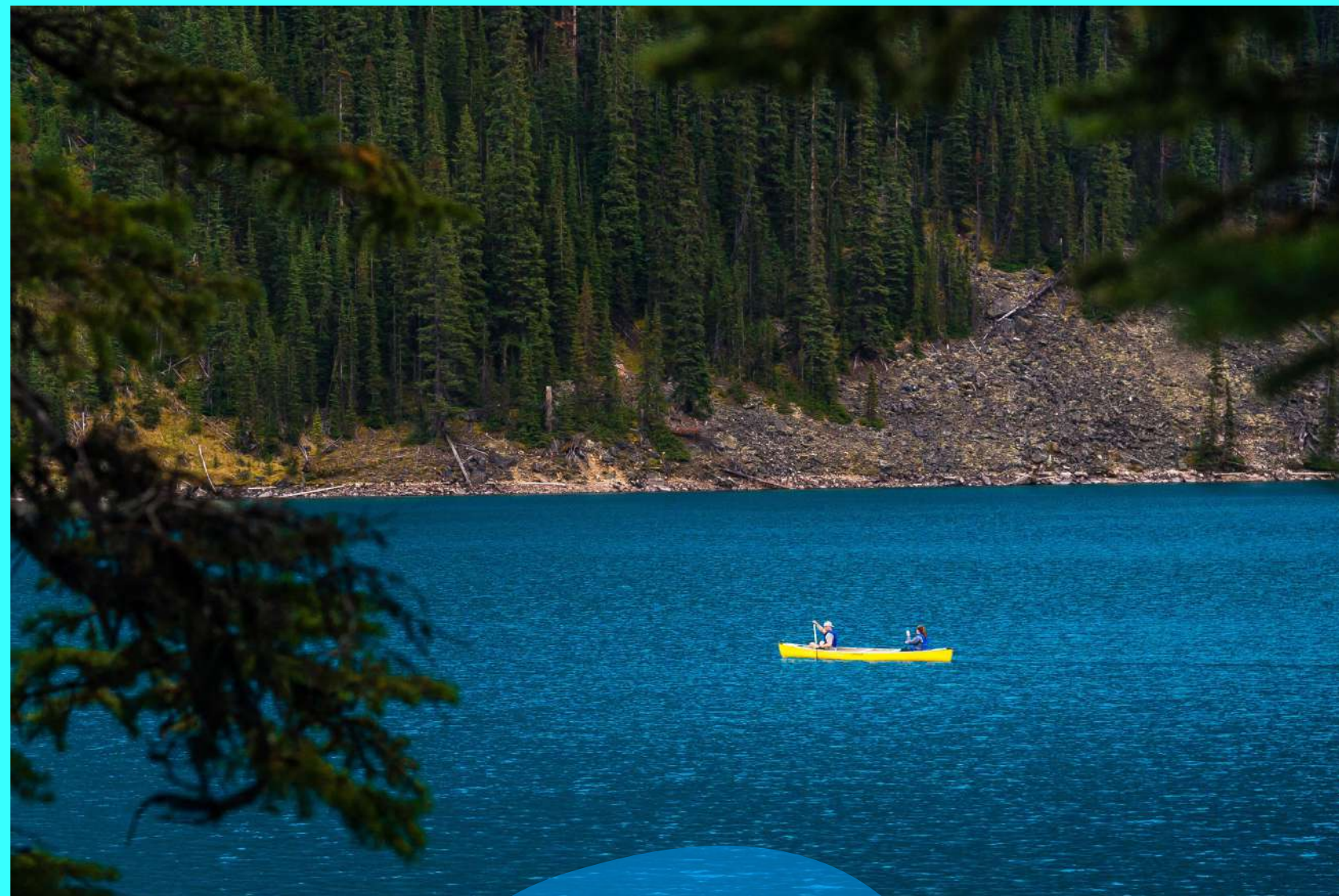
Looking Ahead



TAKING AQUAHACKING COAST TO COAST IN 2020

After an initial 5-year period with focus on water issues affecting the Great Lakes and St. Lawrence River Basin, with the establishment of important partnerships with universities, sponsors, incubators, and water sector leaders in Ontario, Quebec, and the United States, AquaHacking is expanding across Canada with the 2020 Challenge. Through partnerships with local organizations, the AquaHacking Challenge will feature 3 editions in 2020:

- British Columbia (based in Kelowna, BC) – Okanagan Basin Water Board
- Lake Winnipeg (based in Winnipeg, MB) – International Institute of Sustainable Development
- Atlantic Canada (based in Halifax, NS) – Atlantic Water Network



Looking Ahead

BEYOND 2020

Exciting opportunities lie ahead for AquaHacking to be a hub for water tech development and youth engagement across North America. Discussions will continue with partners in the United States and Mexico to explore areas of alignment, network development, and collaborative events. Opportunities to influence the creation and implementation of new technologies in the industrial sector are also being explored.



Looking Ahead



WORDS OF SUPPORT FROM THE MAYOR OF MONTREAL

“I am pleased with the success of the AquaHacking initiative in Montreal, whose innovative approach will now be deployed across Canada. As privileged players in socio-economic development, entrepreneurs play a vital role in Montreal’s identity. In the context of the climate emergency, AquaHacking’s approach is highly relevant and makes it possible to develop solutions for the sustainable management of water, an issue of concern to the City of Montreal. We will be delighted to host the pan-Canadian Challenge Final event in the fall of 2020,” says the Mayor of Montreal, **Valérie Plante**.

Montréal 