



THANKS, LUSH!

Charity Pot Report 2017





## AN OVERVIEW

This past year, with LUSH's help, more people had the tools they needed to become water stewards. Water Rangers believe it's our duty to support others as they protect our waters. The hard work and dedication of our testers is why we have been successful.

Our organization is grassroots and community driven: we gather mass amounts of data from our watersheds, enabling community members to protect and revitalise ecosystems. Thanks to LUSH, we were able to create a better app so our volunteers could go out and make a difference.

LUSH also generously donated some gift boxes. We used them as prizes to celebrate our best testers, and to challenge new people to make the world a better place. In the following pages, are some stories and photos, showing the impact you've had on our organization.

Thank you for believing in us!

*Phoebe recently moved from Ottawa to Nova Scotia and her challenge was to find new testing spots close to her new home. She has remained a diligent tester alongside her mom and brother!*

# ABOUT WATER RANGERS

Water Rangers is a non-profit organization based in Ottawa aiming to make water science easy to understand. We deepen our impact by providing tools and training to understand, test and protect waterways.

## PLATFORM

We believe that water quality data should be openly available to everyone in a format they can understand. Open data helps the public, students, and politicians learn and make decisions. It should be accessible as a common good!

Water Rangers' website and app for mobile devices allow users to collect water quality data and report local water issues such as pollution, and algae blooms. Our offline app makes it easy for people to gather data, even when they're in remote places.

We design interfaces to display data the average citizen understands, give them digestible lessons, and encourage participation. By understanding water systems, testers see issues and mobilize to make an impact.

## TESTKITS

After developing the platform, people told us that they'd like to test waterways too! But, we were frustrated that testing equipment was expensive, complicated to source, inaccurate and difficult to use.

We've developed easy-to-understand testkits so that citizens can get involved in monitoring waterbodies. As they revisit sites, they understand ecological change, share results, and intervene on emerging issues. According to our survey results, those who test water increase their awareness of the natural world, multiply their time outside, and renew their commitment for protection.

## EDUCATION

Water Rangers envisions a world where water-based research and crowdsourced information make it easy for anyone to understand when water is healthy and when it needs help.

To help inspire people, and to get them to understand water and good testing protocols, we visit the community to train them. All our activities are hands-on and encourage those participating to deepen their understanding by creating hypotheses and testing them.

For those groups with little resources, we apply for grant money to provide this outreach, and teach them how to use our testing equipment.



# WOMEN IN LEADERSHIP

This project has grown our capacity, and we now have two strong, fiesty women working on it.

## KAT KAVANAGH

Executive Director

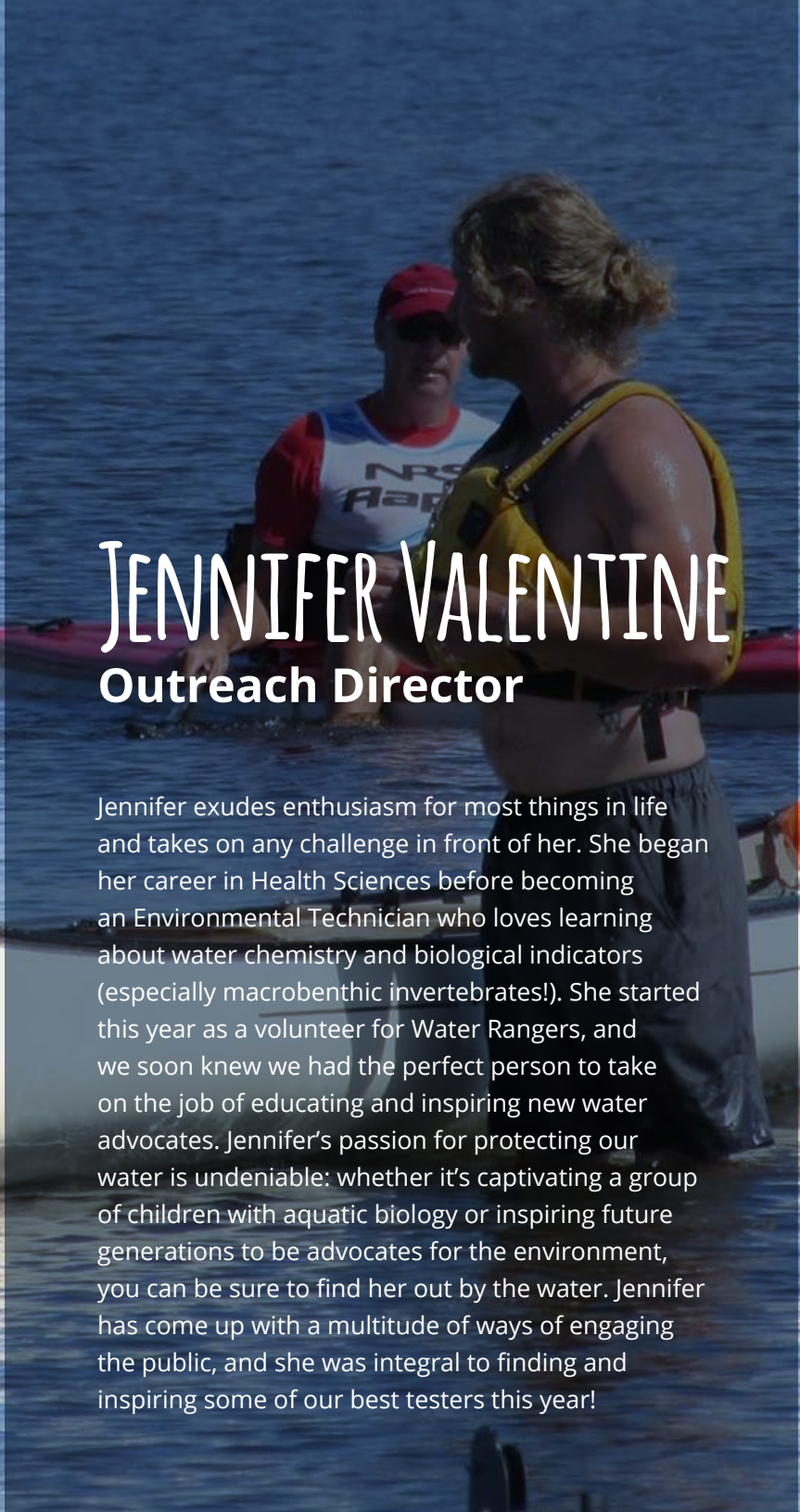
Kat Kavanagh is an award-winning designer and water-lover. She does everything from project management, fundraising, social media, public speaking, training and outreach, test kit design and testing, as well as quality assurance, UX design, web design and build. With a Business Marketing Degree from McGill University, she has translated her passion for design into a successful web and game design business where she seeks projects that make a difference. Kat's passion for water began at the cottage: she's now an active member of her lake association and wants to learn more about her lake. She started Water Rangers in 2015 to try to understand water quality.



## JENNIFER VALENTINE

Outreach Director

Jennifer exudes enthusiasm for most things in life and takes on any challenge in front of her. She began her career in Health Sciences before becoming an Environmental Technician who loves learning about water chemistry and biological indicators (especially macrobenthic invertebrates!). She started this year as a volunteer for Water Rangers, and we soon knew we had the perfect person to take on the job of educating and inspiring new water advocates. Jennifer's passion for protecting our water is undeniable: whether it's captivating a group of children with aquatic biology or inspiring future generations to be advocates for the environment, you can be sure to find her out by the water. Jennifer has come up with a multitude of ways of engaging the public, and she was integral to finding and inspiring some of our best testers this year!



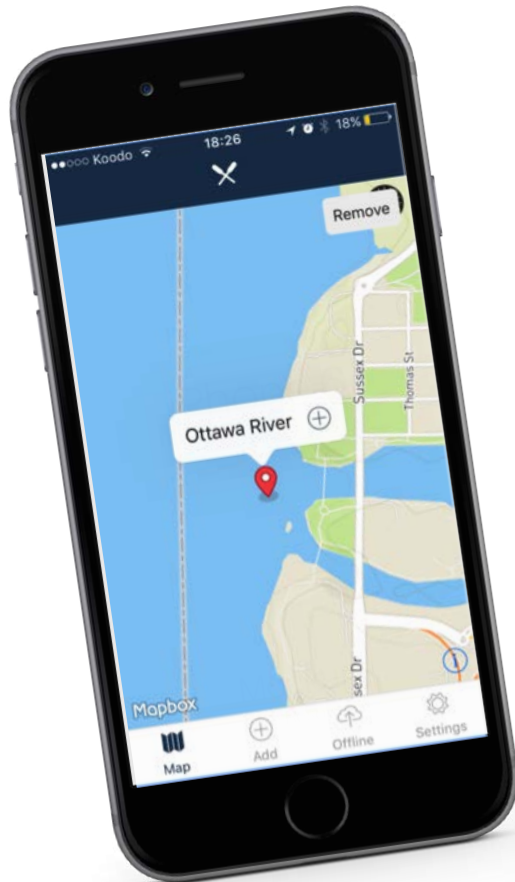


# NEW APP DESIGN!

One of our strengths is our platforms to collect and share data. Thanks to your support, we redesigned our app, and built lots of improvements. These apps, for iOS and Android, work for data collection in the field. You can collect data offline and then upload when you return to civilization!

## BEFORE

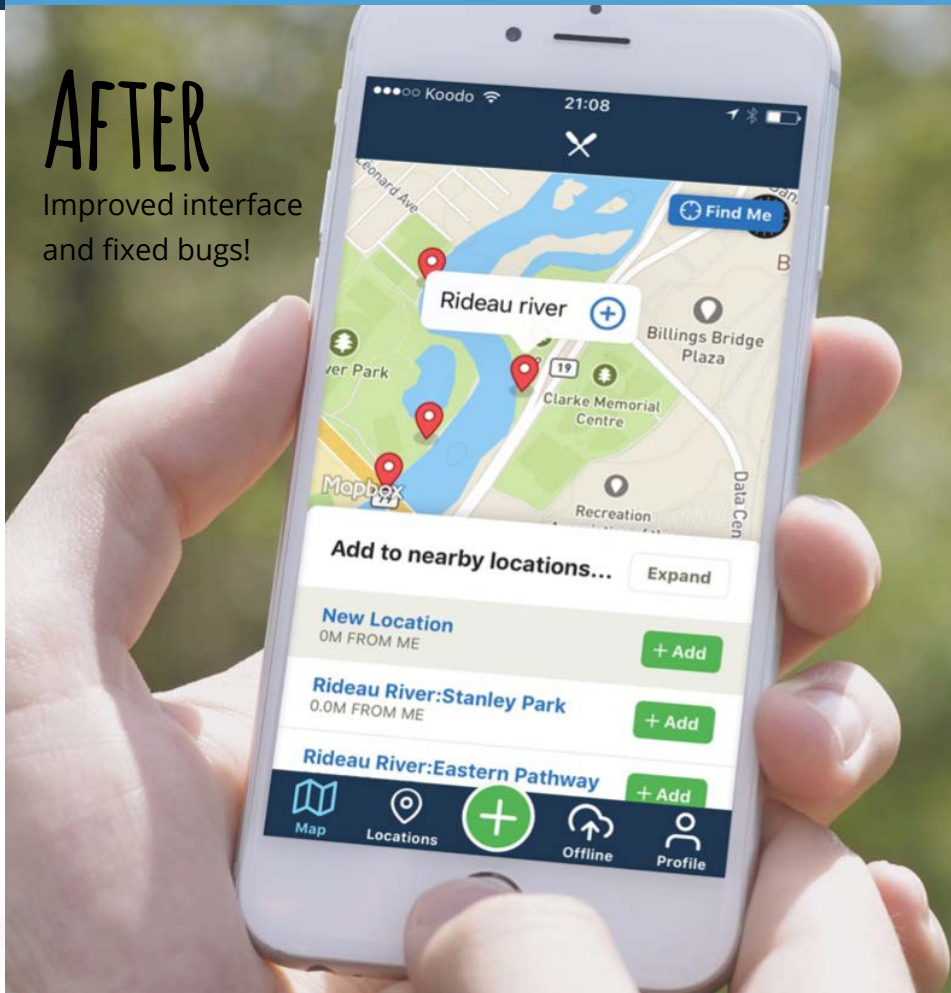
- Difficult to explore
- Couldn't easily geo-locate
- Offline mode crashed if you submitted more than one observation
- Couldn't add to existing places easily
- Couldn't geolocate properly on android phones
- Boring design and navigation was strangely implemented
- Delays in touch screen display



Development of apps is notoriously difficult, and this was no exception. Thanks to LUSH, we were able to release a stable version for both iPhone and Android. We also fixed a lot of errors that were making the user experience frustrating. From user feedback, we built the ability to see the closest location, and so the app is so much more useful! We also redesigned the app so that we could get the experience that our users needed, including showing closest locations. Plus, you can now score points and earn badges!

## AFTER

Improved interface and fixed bugs!



# A TRIBUTE TO KEITH

Apps are hard to do! When funds ran out, Keith Turner, a developer and friend of the organization, volunteered to help us. Without Keith's help, the app would be so much less than it is now.

Sadly, Keith died suddenly at the end of September 2017. Our team is devastated to lose a good friend.

Keith didn't want to be the center of attention, but we want to remember him. In October, we worked hard to release Keith's last work. We also made a spot for Keith to live on: his photo is in the background of our app loading screen, as a tribute to his dedication to protecting waterways.

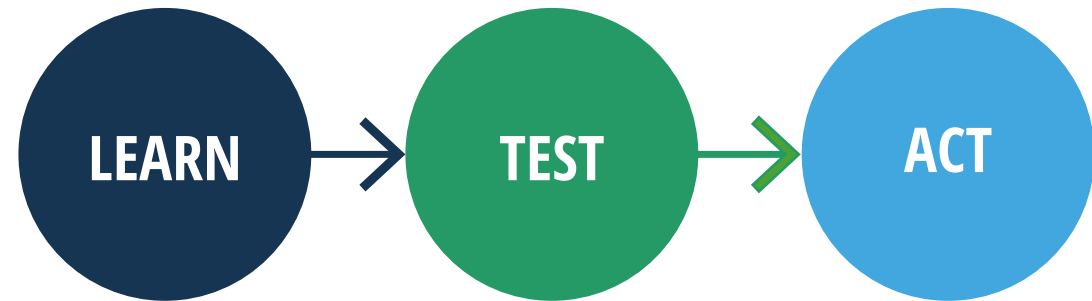
Thanks Keith, for your dedication to making this world a better place. You will not be forgotten.





# HOW WE MEASURE IMPACT

Our theory of change says that when people learn about, and then test water, they are prompted to act to protect waterways.



**900+**

People, including over 750 students, trained in-person in 2017. Less than 15% had tested the water before.

**780**

Observations made in over 300 locations with our testkits in 2017

**96%**

of those who tested the water participated in other activities to protect water

## TESTKIT SURVEY RESULTS

### DOES TESTING CHANGE BEHAVIOUR?

**92%**

Shared their knowledge with curious bystanders, including 85% who taught others about water chemistry or water stewardship.

**90%**

Said that the tests helped them understand their lake or river.

**92%**

Found the testkits easy to use and 85% said we helped them be better water stewards.

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The main takeaway for me is the importance of simply involving people in water quality testing. Most important is engaging youth who will be the eventual stewards of our natural environment.ó

- Conrad Gregoire  
Retired Chemist,  
White Lake



TESTKIT SURVEY RESULTS

# LEADS TO ACTION!



Phoebe was on pH duty. We went to three different sites. Mum was really into it. She's going to take it out to the middle of the harbour when she is out boating next week.

- Eden in Nova Scotia

# CHALLENGES!

We wanted to see how our users make a difference. We set up challenges and rewarded our best with prizes from LUSH. Here are a few of our favourites.



Participated in at least one other action that protects waterways while part of this program

## 74%

Visited the water more often because of this program.

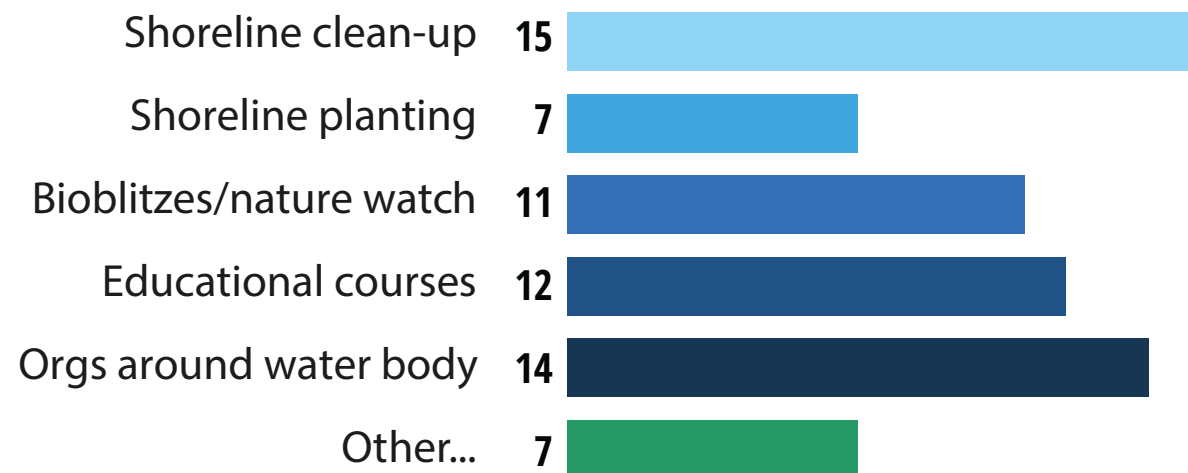
## 66%

Tested in locations they had never visited before.

## 94%

Believe their actions can make a difference.

### WHAT THEY DID







# JULIE SELL

For monitoring her environment

Getting involved is what Julie is all about! Her and her 7-year old daughter Haylee volunteer in their community, and participate in creative personal development. She really loves to get her hands dirty and learn new things!

Julie is studying Environmental Sciences and got involved with Water Rangers to help her apply her passion in the real world. She supports grassroots community-driven testing and believes that citizen science is crucial for monitoring our freshwater ecosystems and inspiring participation in conservation efforts.

Julie often brings her water sampling kit hiking and now monitors a few locations along her favorite trails.

When they go paddling, Julie encourages her daughter to hunt for floating garbage.

We recognized Julie's dedication for encouraging stewardship, her enthusiasm, energy, and passion make her the essence of what we believe as Water Rangers.

Testers like Julie go above and beyond everyday helping us strengthen our commitment to keeping our water clean.



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**I pass these lakes and rivers often but now I am stopping and actually looking at them and determining their water quality and conditions.**

- Julie Sell





# COURTNEY SINCLAIR

For engaging women in the outdoors

Outdoor adventures is Courtney's thing! On her website called Court Outdoors she showcases her SUP adventures, paddling with her dog, ultra-distance marathon SUP/canoe competitions, and outdoor based personal development retreats. Through outdoor leadership she seeks to connect people with the natural world and enriching experiences where they may 'go outside and grow inside'.

Her dog Sully rides shotgun on her board and keeps her company for her paddling adventures on local waterways. When not playing in the rivers close to home Courtney competes in long distance paddling races, racing 367 km in endurance events in 2017. She is the first female to

complete the 103 km Kingston to Ottawa half distance course on SUP and was the 2017 Ontario Ultra Paddling Points Series Champion the first on SUP and first woman to win this title.

At Northern Edge Algonquin Park she facilitates Women's Workshops that focus on health and wellness and personal development concepts. Truly an inspirational person, she is fearless, focused, driven to overcome challenges and demonstrating they can be done.

Courtney's enthusiasm for the outdoors is perfectly aligned with ours, and we thank her for all the work she's done promoting water stewardship!







# SUSAN ELLIS

For naturalizing her shoreline

Maintaining a natural shoreline is something Susan is very passionate about. This year, the Ottawa River experienced extreme flooding, which raised water levels in many areas. Susan's efforts to naturalize her shoreline significantly reduced erosion along her section of the Ottawa River.

As a member of the Field Naturalists, Susan enjoys documenting wildlife who frequent her little patch of grass. She has made quite an impact along her section of beachfront by letting grass grow. Susan not only increased the biodiversity of plant and animal species by providing a suitable habitat, but also increased the stability of the soil reducing the impact of seasonal erosion events.

Susan does her part by reducing her footprint wherever she can. Simple actions like choosing local produce, using non-toxic products, and reducing her use of plastic help Susan be more sustainable. Her vegetable and wildflower gardens attract bees and other beneficial insects; she also collects rainwater to reduce her consumption of our freshwater resources.

Her efforts to ensure her shoreline remain undisturbed go a long way to help increase the biodiversity of plant and animal species; helping to protect quality of water in the Ottawa River. Susan is a role model for living in harmony with nature!







# CALLIE DENNIS

For collecting river glass

Anyone who knows Callie Dennis, will tell you she is fierce and full of fire. We love following Callie on her adventures because she reminds us to develop our own connections with nature: our favourite memories are of exploring wilderness and nature. As Water Rangers, we imagine everyone as advocates for the environment, no matter what their age.

Spending time outside is what Callie told she enjoys the most about summer; particularly at grandma's cottage. She loves to swim in the Ottawa River, but she hates seeing

garbage along the shoreline. Callie's personal project is river glass: spent a lot of time this summer picking up shards of it.

She loves paddle boarding with her mom and camping trips with her dad. A larger than life personality, this little lady is guaranteed to make waves in the future. Callie believes her efforts can make a difference and they do.

Our testers are seeing more, and doing more, no matter how big their shoes are!



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**Picking up river glass is especially important to do to protect your friends and family from cutting their feet.**

- Callie Dennis





# CALE JACKSON

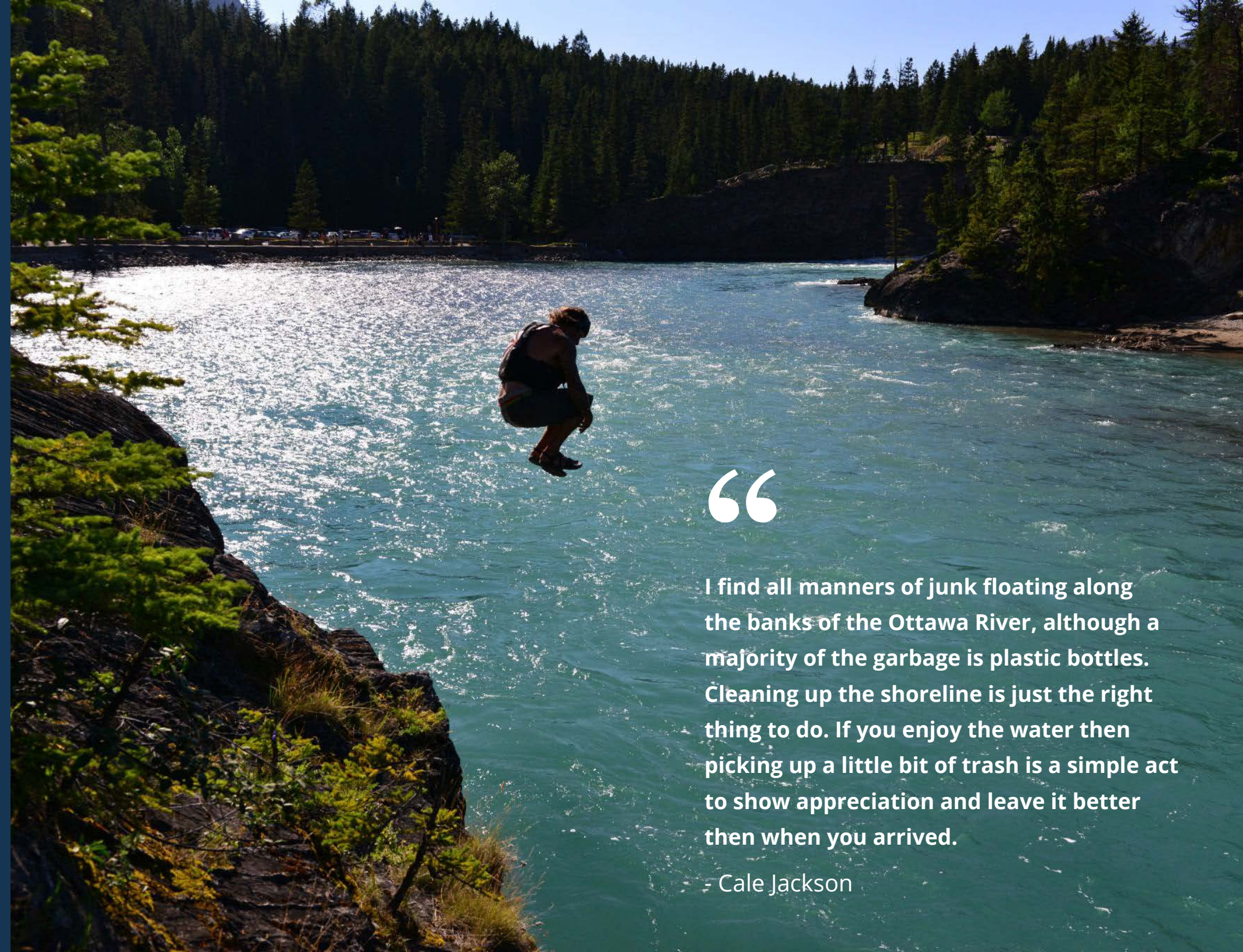
For cleaning up shorelines

As a paddler, Cale Jackson has a deep affinity to water: he says it soothes his soul. He grew up in the Ottawa Valley and loves everything water related.

Cale works as an Environmental Technician treating wastewater, so his job is to literally save the world! "I now work in wastewater treatment. I see all types of industrial, agricultural, municipal and manufacturing wastewater while making a living. We are all water wasters. There are solutions, but above all our attitudes need to change. Rapidly." He says he is constantly amazed at how easily water is forgotten once it flows down the drain.

On one adventure, Cale collected an entire bag of garbage, (the majority of which was plastic products), from what should have been a pristine area: a trail leading to a waterfall. At first he was angry at what he found, but decided to document his experience on Facebook to raise awareness. Cale tries to motivate others so they change the way we interact with our natural surroundings.

Individuals like Cale recognize that even a small things can motivate change. Cale is a notable example of steward for our environment, with a strong desire to protect our waters.



“

**I find all manners of junk floating along the banks of the Ottawa River, although a majority of the garbage is plastic bottles. Cleaning up the shoreline is just the right thing to do. If you enjoy the water then picking up a little bit of trash is a simple act to show appreciation and leave it better than when you arrived.**

- Cale Jackson





# SHANDY LABINE

## Educating youth

Inspirational people like Shandy Labine have the ability to stimulate change and nurture passion in others. As you can see in her pictures, Shandy loves working outside in wildlife conservation!

Shandy is an Environmental Sciences teacher at Algonquin College. She puts her heart and soul into every course she teaches, inspiring the next generation water stewards. Shandy was nominated by her students for the Exceptional Teaching Award in 2015 and again in 2017. Shandy is, without exception, what all teachers should strive for!

During the summer, acting as Team Lead for the Ministry of Natural Resources and Forestry (MNRF) Youth Ranger Program.

Shandy also spent a few summers monitoring tropical reef activity and tagging and releasing sea turtles. Part of her job was to patrol and monitoring breeding areas collecting data for researchers. Volunteers like Shandy have enabled scientists to learn things like how they live, what they eat, and how they reproduce. Her work protects these turtles by ensuring more hatchlings make it to the ocean.

Shandy has been a big supporter of Water Rangers, and believes it's through grassroots efforts like ours that we can inspire the next generation of environmentalists!.







# AND MANY MORE!

We have encouraged so many new water stewards to act to protect waterways this year. Here's a few photos from people who went above and beyond to remove garbage (one girl discovered a tire and would stop at nothing to get it out). Others helped us make amazing experiences for youth (one teacher sourced boats so that we could bring kids right out on the water). There's also many who volunteered to spread our message. Thanks to LUSH for helping us recognize their efforts!







When is the last time you visited a stream, lake, river or ocean? Take a second to remember how you felt. If you are like us, you recall the incredible calm of being near water. **Water is life!**

So how do we keep our blue planet healthy? Never has there been a time when there are more opportunities for people just like us to work with others to protect our water and, with our changing climate, there has never been a greater need to do so. When we work together, share data and educate people, we can change the world.

As Chris Hadfield, our favourite retired astronaut, said: **“Science communication is vital to our quality of life. It helps everyone understand the problems that we face, and shares the ideas and solutions that can improve life for us all.”**

# THANK YOU!

Please contact [kat@waterrangers.ca](mailto:kat@waterrangers.ca) if you have any questions