



# Charter Toolkit

## PLASTICS ACTION KIT

WATER  $\approx$  HUMAN  
BODIES

**H**ow is our own health intertwined with the health of the Great Lakes? What does water teach about our understanding of 'the environment', our respectful relationship with mother earth, and our responsibilities to protect future generations? The Great Lakes Commons Charter along with other sources of knowledge help us answer these questions.

This guide offers a short overview on these questions and a 6-part learning framework connecting our thoughts, emotions, and actions. If you have comments on how to improve this guide or how you found it useful in your own practice, please let us know.

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GREAT LAKES COMMONS



## THE WATER AND LIFE CYCLES

This Water ≈ Human Bodies guide on plastics and the Great Lakes highlights the connections between the waters in and outside our skin. There are many resources covering the topic of plastic pollution and water, but we hope this Charter Toolkit guide celebrates several unique perspectives that help unpack and enliven the Great Lakes Commons Charter. The Charter can be seen and supported in 5 Great Lakes languages on our website. Here is one section we want to highlight in this guide:

**Moved by a hope that we can yet create a thriving and life sustaining future for our Lakes, we step forward to take up our responsibility to care for and act on behalf of these waters, our Great Lakes Commons. Seeing that the health of our waters is intertwined with our own health and that of generations yet to come, we are called to assert a deeper connection and more powerful role in the future of our waters.**

The water cycle is the life cycle. Water connects our internal bodies (heads, hearts, organs, hands, legs, feet) with our outside environments (homes, forests, prairies, beaches, farms, roads, factories, etc). 75% of our earth is covered by water and our bodies are roughly the same concentration of water. We are born into water. Our mother's womb is our first environment. Mother earth gives us life and in return we can choose to protect her for future generations and all life we share this home with.

Read and support the Charter at: [www.greatlakescommons.org/charter-declaration](http://www.greatlakescommons.org/charter-declaration)

## HEALING NOT HARM REDUCTION

Ecologist, author, and cancer survivor Dr. Sandra Steingraber reports that we have 60 possible carcinogens in our air, 66 in our food, and 40 in our water. In her book and documentary "Living Downstream" she rightly focuses on the causes rather than the treatment of disease. The lifecycle and water cycle position us all downstream from local and global pollution. But her precautionary and wholistic principles are dormant in Great Lakes water policy.

Personal care product manufacturers know they can legally add tiny plastic beads to their scrubs and pastes without proving this plastic will enter watersheds or absorb tens-of-thousands of modern chemicals. These added toxic sponges spread around the world and concentrate their toxicity up the food chain once eaten by larger and larger organisms. Humans are at the top of this food pyramid. Dr. Sherri Masson's research revealed that in 2012, there were 450,000 plastic particles in the Great Lakes for every square kilometer (the lakes total 244,106 square kilometers). Studies have shown that by 2050, if we continue to pollute our waters at the same rate as today, there will be more plastic than fish in the ocean.



## HEALING NOT HARM REDUCTION CONT'D

In 2018, after a decade of ignorance, concern, and then citizen advocacy, these microbeads will be banned in the Great Lakes, but our water laws still haven't updated their approval processes and ethics. Why haven't the regulators -- our regulators -- reversed the burden of proof for new products and chemicals in our lives? The precautionary principle would help us protect water not only before it is polluted with trillions of toxic microbeads, but would require manufactures to prove their products don't have negative impacts before government approval.

We are also currently comfortable legalizing maximum amounts of pollution, rather than legislating the prevention and removal of all chemicals until they are proven safe for all life for at least seven generations. Every few years a new product is put on the market without these water ethics. Banning bisphenol A, triclosan, and microbeads are a dangerous example of a reactionary and risky water governance regime that doesn't align with the life/water cycle.

A watershed approach would include synchronizing standards across political boundaries. It makes no difference to the overall health of the Great Lakes when only one state or province bans a substance while bordering jurisdictions have different standards. The plastic and toxics released in one Great Lakes location are carried by currents and winds to another country or community. This pattern has been tracked, showing pollution from large industrial centres such as Chicago and Milwaukee ending up on Lake Michigan's eastern shores. The southern and eastern shorelines of Lake Erie are polluted by Detroit and Cleveland. The southern shores of Lake Ontario accumulate the wasteful behaviours of Toronto. There is always someone downstream.





## CONSENT AND SELF DETERMINATION

There is also a lot to learn from the “Violence On The Land, Violence On Our Bodies: Building An Indigenous Response to Environmental Violence” resource report (a full list of related sources are at the end of this guide). The origins and impacts of the issues above are not neutral -- they do not affect people equally. Indigenous and other marginalized women along with Two Spirited, LGBTQ, and other gender non-conforming people are burdened with more environmental violence.

Plastics, along with every other product we extract from mother earth, come from a place someone calls home. The production and disposal cycle of consumer culture reaches beyond the Great Lakes but is also rooted here. In the above report, there are four stories of environmental racism within the Great Lakes. We learn about the 2:1 ratio of females to males being born in Aamjiwnaang First Nation (near Sarnia between lakes Huron and Erie) and the struggle for reproductive justice. Petro-chemical plants are consistently next door to poor and Indigenous communities with exposures to high concentrations of toxins in lands and waters trespassing life-giving bodies.

To address this violence against land, water, and bodies, a consent-based approach to water governance is needed across the Great Lakes and all watersheds. Lead by Indigenous activists globally, the principle of Free, Prior, and Informed Consent (FPIC) respects people’s right to self-determination when risked or impacted by a project (such as a nuclear waste dump, oil pipelines and refineries, mining sites, logging, commercial fishing, hydro-electric dams, etc). Without FPIC, people’s rights, reproductivity, and relationship to the lands and waters are violated. Just as violence against women is criminalized, violence against the lands and waters must also be criminalized and connected to the well-being and agency of women and their communities.

## WATER ≈ HUMAN BODIES

When it comes to the environmental health within and outside our bodies, we have been working carefully to bring together some of valuable views on human-environment relationships, conceptualisations of water and ethics, and requests for consent, respect, and equality.

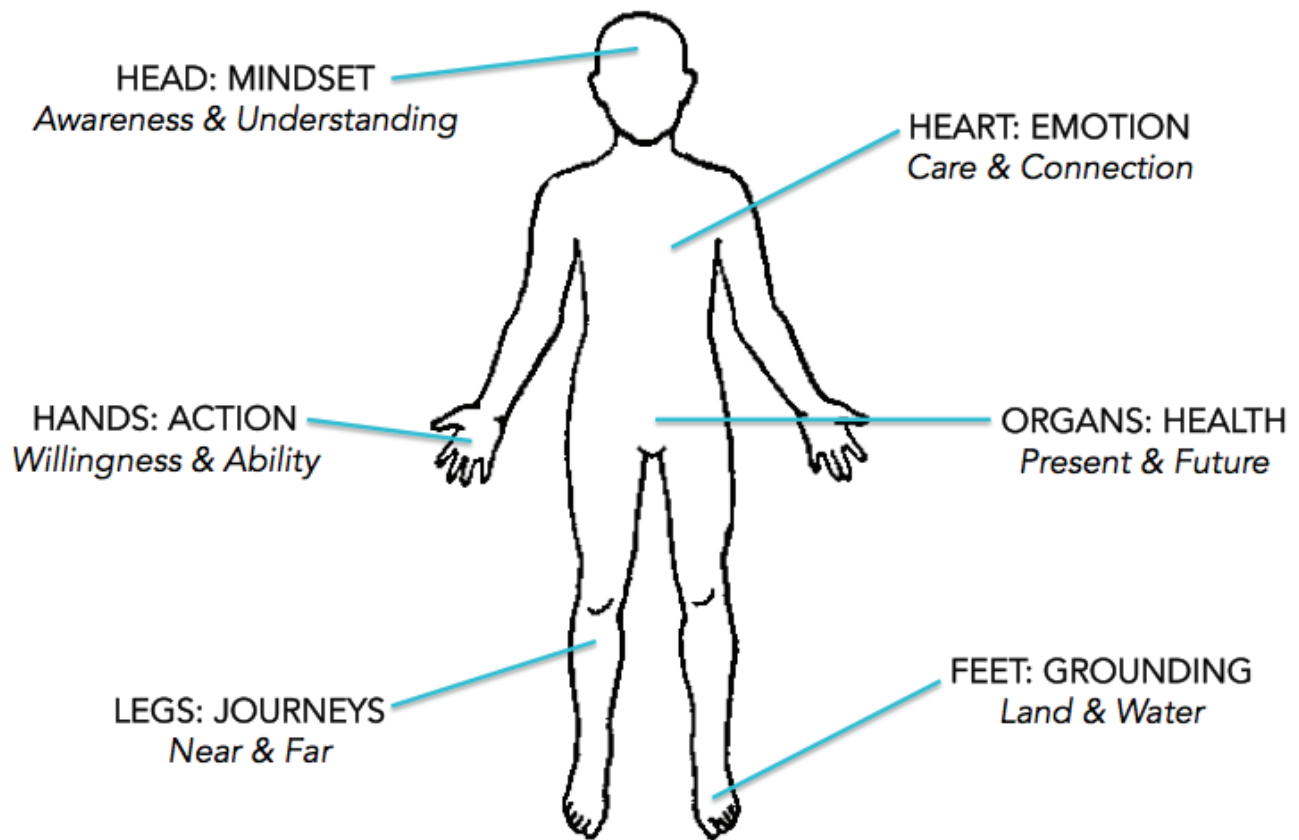
It was of vital importance for us to communicate the interconnectedness between human bodies and water bodies. We decided to create a framework for reflecting on this relationship that would be relatable to anyone who chooses to explore it. We hope you will find this useful for expanding not only your approach to water issues, but a more general relationship with human and environmental health.



## WATER ≈ HUMAN BODIES FRAMEWORK

*We believe that there are at least six spheres or entry points to exploring the interconnectedness of human and water bodies. This framework is designed as a springboard for ideas, thoughts and self-reflection on this relationship and how you choose to engage with it.*

# WATER ≈ HUMAN BODIES





## HEAD: MINDSET

### Awareness & Understanding

The mind is where we build upon the foundation of care we have in our heart. How we feel about water will shape what we think and what we believe. With a central sense of connection and care, we are motivated to increase our awareness and understanding about our waters. It is with this building of connection that we become powerful rather than powerless to act in the face of threats to water -- both internal and external.

**Consider:** How do we think about water? Why is there so much plastic in our lives in the first place? Do we need to ask better questions to get better solutions?

**Our Thoughts:** We tend to think of water as separate from ourselves. We need to find that feeling of connection. Often this doesn't happen consciously, it happens when we touch, feel, smell and experience water. However, we can build on and open ourselves up to this connection by educating ourselves on the importance of water to human and environmental health. A balance of intrinsic connection and acquired knowledge is our most powerful combination.

We are undeniably part of a world addicted to disposable goods. Plastic has become cheaper than other materials and a matter of convenience. Of course, there are instances where the concept of "single-use" is necessary, such as in healthcare. However, this notion of one use and then throwing things away has become a pervasive part of our world, to the point where we have become blind to it.

Unless you choose to see the "throwaway" aspect of our global culture, you could easily ignore it. However, it is when we begin to reflect on the interconnectedness of our world and environment, that we realise there is no such thing as "away" and that anything we dispose of comes back to us in various forms.

This can be seen in the way that plastic is washing up on our shorelines and eventually in the air and in our bodies. The chemicals and toxics that are both inherent within plastic and absorbed by it in the environment are always present. Our food web is contaminated and as the self-proclaimed "apex predator", we are faced personally with the pollution we cause.

Some solutions are simple. Reduce or eliminate your use of plastic starting with single-use plastic such as straws, cups, and bags (just to name a few). Use glass and other alternative materials to store your food and drink. Spread the word. You are an educator. As much as you learn, you can also teach. Setting a good example can lead to starting a conversation with your friends, family or maybe even your water.



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## HEAD: MINDSET CONT'D

Other solutions are more complicated but you still have a voice. Sign petitions, contribute to citizen science initiatives, and do presentations. Above all remember that you can vote with your ballot and your wallet. Use your ability for the greater good. You are powerful.

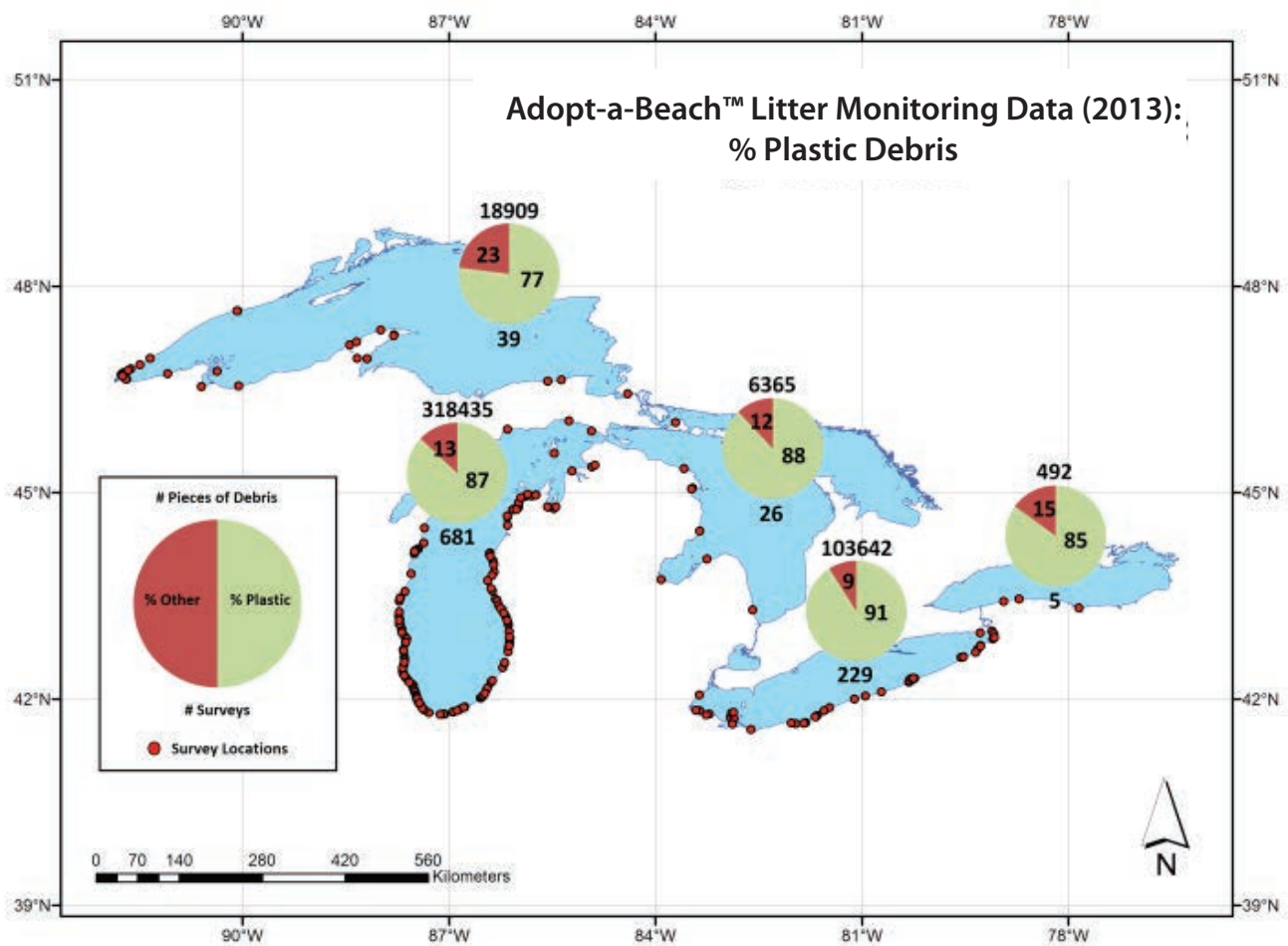


Image Source: [www.lakescientist.com/microplastics-pollution-great-lakes](http://www.lakescientist.com/microplastics-pollution-great-lakes)



## HEART: EMOTION

### Care & Connection

It all begins in the heart. Without emotional connection to the lakes and our external and internal waters, it is very hard to feel motivated to care for them or to act to protect them. Our heart is where connection to water starts. We feel it, rather than see it. If we can stimulate more people to connect in new ways to the water as well as tap into deep-rooted connections -- this will lead to action.

**Consider:** What is our connection to water? What does care look like? How do we acknowledge and demonstrate our grief and gratitude to the lakes?

**Our Thoughts:** Our connection to water can range from extremely simple to very complex. Whether you love to watch the water, smell the freshly washed air, let it run over your hands, listen to the waves or the babbling of a stream -- this is where connection begins, in experience.

Some of us are lucky to have grown up in, on, and around the water. Whether you live on a shoreline or by a river, perhaps you have a cottage on a waterbody, or you and your family have travelled and spent time by the ocean on holiday. For us, this feeling of connection has a history as part of our childhood, youth and adulthood. Perhaps it's the water flowing from your tap, the water you soak in for your bath, the shower water that rushes over you, a cup of tea you drink. There are no rules for our connection to water. Some people feel a connection without a direct experience. Water is a part of us.

Regardless of how the connection comes about or how it manifests itself, it often leads to a duty of care. This sense of duty sits on a spectrum and very often is not directly associated with explicit action. Care has so many different forms that at certain times it may be unrecognisable. With direct and indirect acts of care, you can do what you feel is right. This can include making conscious choices in your everyday life that minimize your negative impact on water in your internal and external environment. This can be things as simple as being aware of using too much water when you shower, choosing to avoid single-use plastics, supporting companies that treat our waters with respect.

When we communicate about our waters, it tends to be with either grief or gratitude. Some of us choose to share stories of social and environmental injustice, wrongdoing, or greed. Others focus on sharing words, photographs, videos or different forms of storytelling that show gratitude or celebrate water in some way. For example, someone might share a beautiful photograph of Lake Superior because they like the colours and the feeling of being at the beach. However, there might not be a conscious awareness that the photograph communicates a celebration of the lake, of its beauty, and the lifestyle it gifts us.





## HEART: EMOTION CONT'D

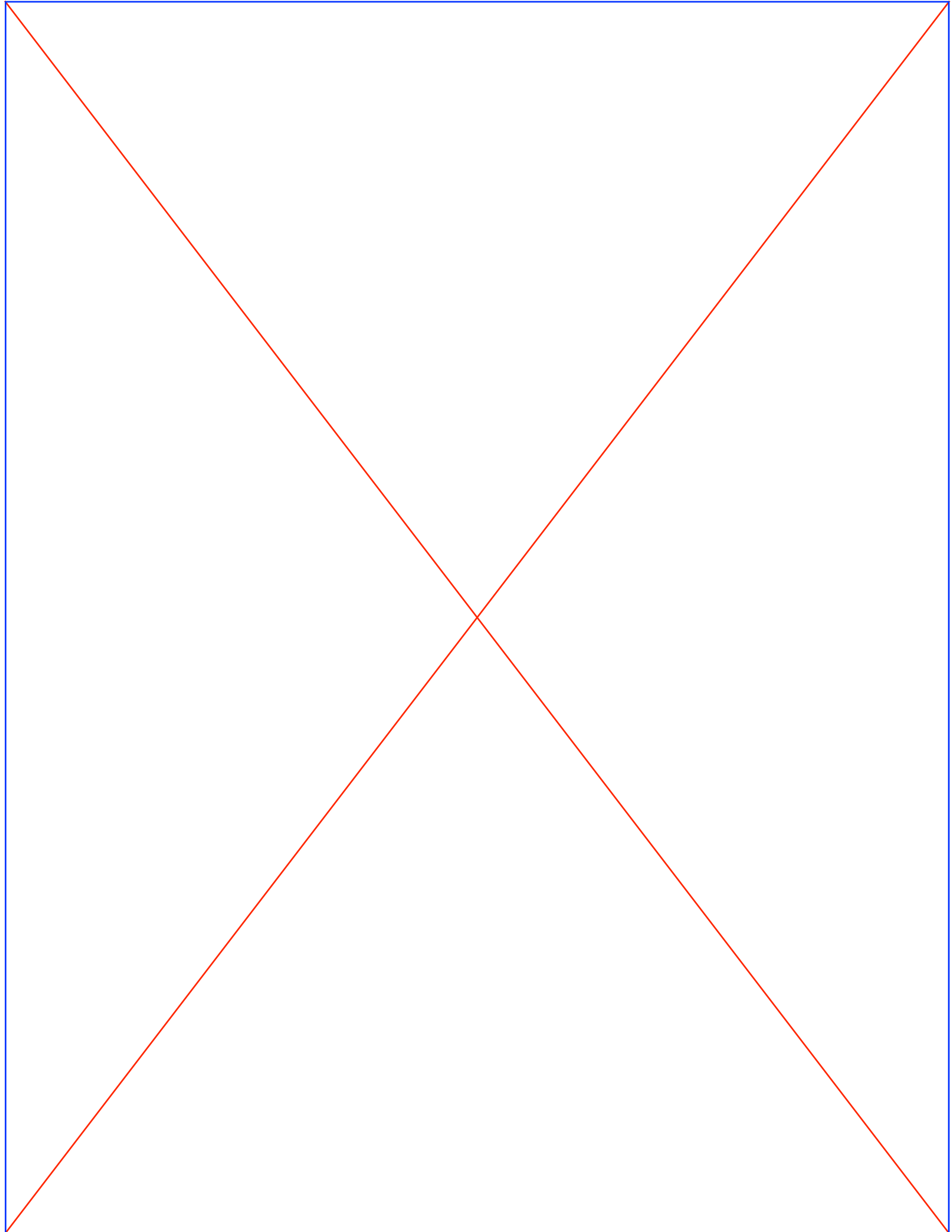
We encourage you to take the time and reflect when you choose to share. What are you expressing? Do the same with previous stories you've communicated. You might find some new meaning in them that you weren't previously aware of. At times, we tell stories of grief and gratitude together. Take this instagram photograph for example. It is a simple shot of a hand full of plastic with the beach and water behind.



What does this say to you? Does it fill you with sadness? What if you didn't know they were pieces of plastic? Would you focus more on the water in the background?

If it wasn't for the evidence of pollution in the foreground of this photo, it might be considered quite beautiful. The way the sunshine is shining off the water, the act of spending time on the shore, listening to the waves, toes in the sand. This photo shows the beauty of the water, the shoreline, and the personal experience of being there. But it also shows the real impact our everyday consumer and corporate behaviours are having on our shared waters.

With the plastic in the photo, we have a story of grief, gratitude, and a call for awareness and action to anyone who willing to feel the urgency of this issue and to do something about it.





## HANDS; ACTION CONT'D

The simple act of picking up plastic debris from your local shoreline soon becomes a choice that will prove meaningful for your internal and external environments, both now and into the future. Never underestimate the importance of your simplest actions.



Glass bottle  
**1 million years**



Plastic bag  
**10 to 20 years**



Plastic bottles  
**450 years**



Cigarette butt  
**1 to 5 years**



Aluminum can  
**80 to 200 years**



Waxed milk carton  
**3 months**



Foam plastic cup  
**50 years**



Apple core  
**2 months**



Tin cans  
**50 years**



Newspaper  
**6 weeks**



Plastic film container  
**20 to 30 years**



Orange or banana peel  
**2 to 5 weeks**

Image Source:

<http://www.epa.vic.gov.au/get-involved/report-litter/litter-news/what-you-dont-know-about-butts>



## ORGANS: HEALTH

### Present & Future

As mentioned in the “Hands: Action” section, our smallest efforts can have extensive effects – both positive and negative. With the body consisting of 65% water, our environmental health and human health are intrinsically interconnected.

**Consider:** What does your body mean to you? Have you considered the relationship between your internal water and external waters? Are there laws or regulations in your society that could lead to a significant body burden?

**Our Thoughts:** Just as pieces of plastic absorb toxics and chemicals in the environment, so do we. Through our skin, our breath, and our diet we are constantly exposed to toxics and chemicals. We make conscious decisions that some of these are worth the risk, for example PBDEs (flame retardants) on our clothes, furniture, carpets. We weigh the risk of fire higher than the risk of chemical exposure.

Plastic becomes yet another way in which these toxics and chemicals reach us. As they travel through the food chain they bioaccumulate and their threat increases. Apex predators such as human beings, become the final resting place of these toxics.

Over the course of our lives, we will accumulate over 700 foreign synthetic chemicals in our body. This is called Body Burden, defined as “...the total amount of a particular chemical present in a human or animal's body, typically a radioactive element or other toxic substance” (World Health Organisation, 2016). Each of these chemicals poses significant threats to the health of our central nervous system, our blood, bones, immune system and reproductive organs. You can see more specifics in the United Nations Safe Planet Campaign illustration on the following page.

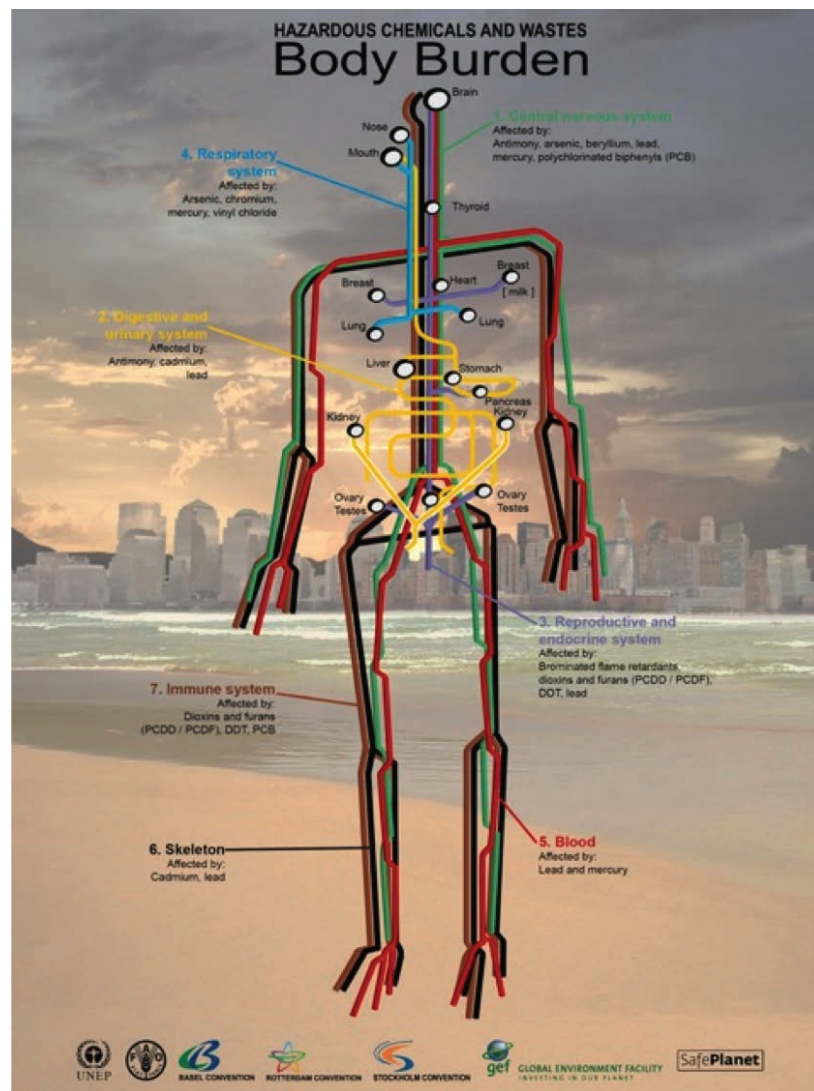
One of the most disturbing parts of this story is that just as there is no easy way to clean plastics and toxics from our waterways, there is also no way to “detox” our bodies. Once these chemicals are present they remain within us. However, there is one way to expel toxics from our bodies. Sadly, it is not one that most of us would be willing to accept knowingly. It is also known as the miracle of life and the creation of our next generation -- childbirth.

We are preloading the next generation with our accumulated internal pollution and bringing newborns into a world where there is no such thing as a “fresh start”. There is only more chemicals and toxics to accrue as they live and grow.



## ORGANS: HEALTH CONT'D

Given that a woman's body is the first environment that we inhabit as the givers of life – it is of vital importance to have female leadership on this issue. Traditionally, women are entrusted as the “waterkeepers” of their communities. Women also make over 80% of the choices for household furnishings, food, cosmetics, and other items. They have the power to vote with their wallets, which will in turn help protect themselves and their families from a polluted present and future.





## LEGS: JOURNEY

### Near & Far

We all take journeys. These can be physical, emotional, psychological, and spiritual. We can journey in our own backyard or across thousands of miles to another country. We can also journey into our heart and our head. We hope that this toolkit can be the start of a journey for you – in exploring your relationship with the Great Lakes.

**Consider:** What does it mean to be upstream or downstream? How do we organise action across whole watersheds? Do you feel connected to other people in the Great Lakes or in other parts of the world?

**Our Thoughts:** There are many different ways to approach the idea of a journey. To physically travel through the Great Lakes is to understand their immense size, interconnectivity, and importance to our ways of life.

Take a moment to picture your life as a river flowing into the Great Lakes and eventually the Atlantic Ocean – past many people and places. This situates us in a position of responsibility where our everyday actions, behaviours, and choices have real consequences for those downstream. This can be both now and in the future, so it becomes a conversation about care for others (human and non-human), inter/intra-generational justice, and also about consent or lack thereof. Just as future generations have no say in the preloading of their bodies with pollutants accumulated over the mother's lifetime, the same could be said of people all around the world who are 'downstream' that are given little say in the health of their internal and external environments.

For some, worrying about wider water issues is a luxury. There are significant numbers of people that have neither the means nor the ability to act to protect them, focused solely on daily survival of themselves and their family. So often the negative repercussions of pollution on any scale falls on those not given the means to deal with it, because of finances, healthcare, and other necessities. It is the responsibility of those of us fortunate enough to have clean municipal water access as well as some disposable income and time, to act in the face of these issues to help not only ourselves, but those impacted by the harsh realities of plastic and toxic pollution -- through no fault of their own and without their consent. As we know from examples such as Flint Michigan and Aamjiwnaang First Nation, these issues are real, alarming, and happening in the Great Lakes.

How connected do you feel to people and wildlife here in the Great Lakes or even farther afield. Do you feel connected to the water and can the water teach us how to live upstream and downstream? What we do to water affects not only ourselves, but everyone and every being around us.



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## LEGS: JOURNEY CONT'D

In order to instigate real and meaningful action to solve issues such as toxic and plastic pollution, it is vital that people feel a sense of connection. It will be people just like you that make solutions possible and journeys are integral to this connection. Our journey and the water's journey help us explore our role in safeguarding waters near and far.



## FEET: GROUNDING

### Land & Water

The connection we feel in the heart is made deeper and more meaningful by what we experience with our bodies -- especially our feet. With more nerve endings than any other part of the body (over 200,000) our feet send signals to the brain about the characteristics of the surfaces we walk on. With theories of "grounding" (the benefits of walking barefoot outside) becoming more well known, it is important to focus on the feet as a centre for our relationship with the world around us.

**Consider:** Do you live or spend time in the Great Lakes? How do you enjoy them? Do you walk, run, swim, or paddle? Have you seen evidence of behaviours on land affecting the water? What does being an "environmentalist" mean to you? Has it changed?

**Our Thoughts:** As our internal and external environments are connected, so too is the land and the water. It is important to understand the "Land to Lake" relationship. Everything we do on land eventually impacts the water, including agricultural runoff, oil spills, cigarette butts, and plastic and toxic pollution to name a few.

If we were to look simply at the presence of plastic and toxic pollution in our waters, it is concerning enough. However, if we explore the lifecycle of plastic (from production to disposal) we realise that the issue and its impacts are so much more than the end result of them being in our water. Demand for plastic creates more reliance on oil and related extractions of fossil fuels to be sent by ship, rail, and pipeline. Oil spills pollute water as well as the guaranteed CO2 spills on a planet already burning too much of it. Scattered across the Great Lakes are toxic communities that bear the risk of petro-chemical production without any of the "reward". People in these places are usually living on a First Nations reserve/reservation or a poor town. So when we look at plastics in the Great Lakes let's consider the places and people impacted along the entire product lifecycle -- from extraction to production and consumption to disposal.

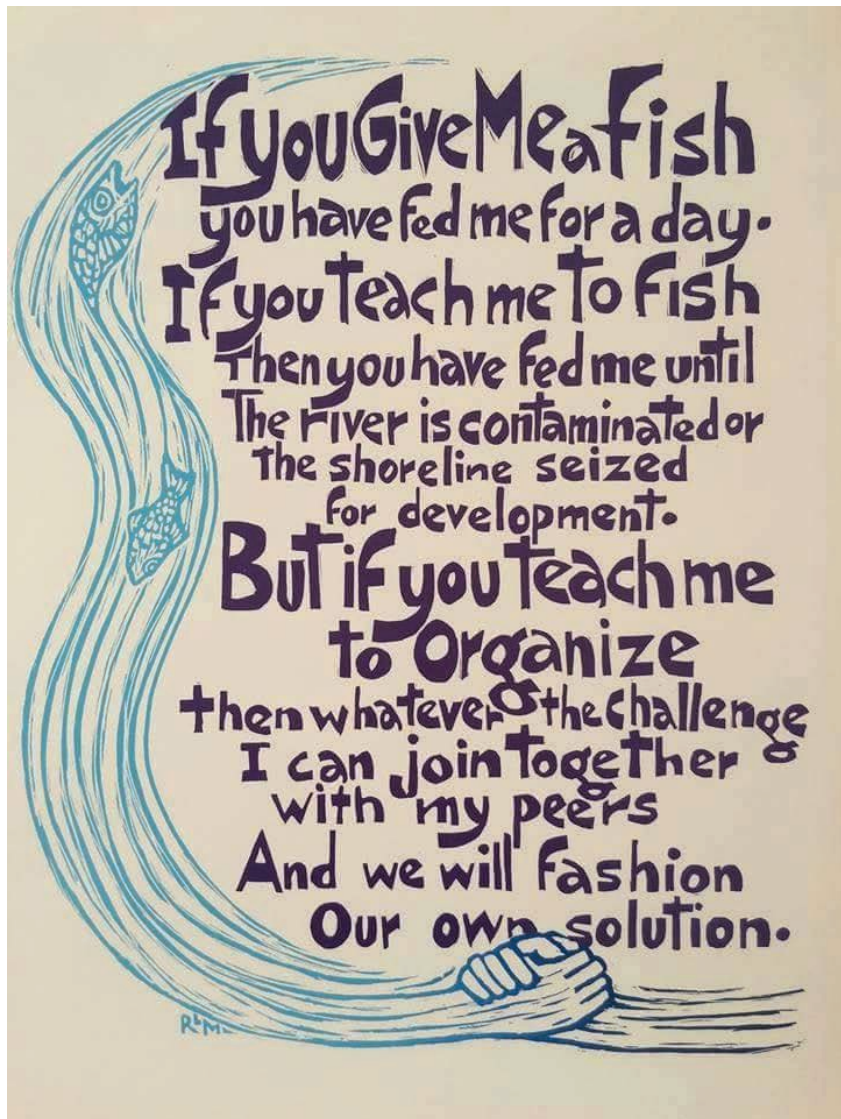


## FEET: GROUNDING CONT'D

Our connection to this plastic process is systemically blocked, however once we make ourselves aware of these connections we start to see the process everywhere. From extraction to disposal, from desire to pollution, and from waterbodies to our bodies we must ground ourselves in our water responsibilities. A simple walk along the shoreline can be the awakening we need to understand that there is no separate “environment”, only different scales of the same one. The water cycle teaches us all this.

It is time to redefine what it means to be an environmentalist. Instead of being seen as ‘protesters’, we need to be viewed as protectors. We are part of mother nature protecting herself. By protecting water are are protecting ourselves. Because lakes Superior, Huron, Michigan, Erie, Ontario and their sub-watershed are all connected, so are the 40 million people living in this basin. We are the Great Lakes and what we do to the waters we do to ourselves.

Let’s act together to be good ancestors to the Great Lakes and all water.



By: Ricardo Levins Morales

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## THE AUTHORS

### **Jennifer Pate**

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Jen is a geographer, communicator and responsible entrepreneur fascinated by human-environment interaction. She has a BA in Geography as well as an MSc in Environment, Science & Society from the University College of London in the United Kingdom. She has been working on the issue of plastic in our waterways for over 4 years and was Filmmaker, Mission Coordinator and Mission Leader on three separate sailing voyages raising awareness of this issue in marine and freshwater environments. In August 2016, she led the world's largest simultaneous sampling for microplastics in history across the Great Lakes.

### **Paul Baines**

*Outreach & Education Coordinator, Great Lakes Commons*

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Paul leaped into the Great Lakes Commons work after reading "Our Great Lakes Commons: A Peoples Plan to Protect the Great Lakes Forever". He then founded the Great Lakes Commons Map in 2012 to crowd-source people's worry and wisdom for water health through data, discussion and story. He comes to this water reconciliation work with a background in critical pedagogy, democratic media as well as environmental and cultural studies. Paul's home is in the Lake Ontario watershed and in the summer of 2016 he toured the Great Lakes for 5 months connecting people, issues and perspectives.





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## MORE RESOURCES

**The Violence on the Land, Violence on our Bodies initiative report and toolkit**  
[www.landbodydefense.org/about/about-the-initiative](http://www.landbodydefense.org/about/about-the-initiative)

**Kicking Out Toxic Chemicals**  
[www.environmentaldefence.ca/campaign/toxics](http://www.environmentaldefence.ca/campaign/toxics)

**Microplastics Pollution In The Great Lakes Ecosystem: Summary of Presentations at IAGLR 2014**  
[www.lakescientist.com/microplastics-pollution-great-lakes](http://www.lakescientist.com/microplastics-pollution-great-lakes)

**Dioxins and their effects on human health**  
<http://www.who.int/mediacentre/factsheets/fs225/en/>

**Beads Befoul Great Lakes**  
<http://www.alternativesjournal.ca/science-and-solutions/beads-befoul-great-lakes>

**Dr. Sandra Steingraber's book and documentary Living Downstream**  
<http://www.livingdownstream.com>

**eXXpedition Lifestyle Guide**  
<http://exxpedition.com/experiments/>

**Guide to Free, Prior, and Informed Consent**  
[https://www.culturalsurvival.org/sites/default/files/guidetofreepriorinformedconsent\\_0.pdf](https://www.culturalsurvival.org/sites/default/files/guidetofreepriorinformedconsent_0.pdf)

**The Toxic Baby. TED talk by Penelope Jagessar Chaffer and Tyrone Hayes**  
[https://www.ted.com/talks/tyrone\\_hayes\\_penelope\\_jagessar\\_chaffer\\_the\\_toxic\\_baby](https://www.ted.com/talks/tyrone_hayes_penelope_jagessar_chaffer_the_toxic_baby)

**REDx Talks - Erica Violet Lee: "Our Bodies and Lands are not Your Property."**  
<https://vimeo.com/200241287>

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Original artwork and design by Lena Wilson.

