

## Lake ontario meets microplastic

Do you live near a body of water? Regardless, we all need water to survive. Canada, happens to have a lot of fresh water (4th largest freshwater reserves in the world). Unfortunately, over time, the Great Lakes, specifically Lake Ontario has suffered from pollution. Lake Ontario has enough plastic bottles in the lake to fill 28 Olympic-sized swimming pools! The problem is, it is not just plastic bottles it is straws, lids, plastic cutlery, plastic bags, and take-out containers.

How long does it take to truly get rid of plastic completely? It takes 1000 years to get rid of plastic. But in order to get rid of it, it needs to become micro-plastic first then disappear. Microplastics are tiny pieces of plastic that have broken down through time. Unfortunately, animals such as fish, birds and other marine wildlife eat plastic which is very harmful. As you go through the food chain, we eat marine animals like fish, shrimp, clams, and crabs. This plastic doesn't just affect marine life, it also affects us.

I'm sure everyone has heard about plastic pollution. The problem is, we really haven't done anything about it. We are all guilty of using straws or a plastic bag, we all buy cucumbers that have one use plastic. If we really do want to make a difference we need to start somewhere. Lake Ontario has been polluted to the point where seeing fish is very scarce. I often go to Lake Ontario and when you look down into the water I don't see plants, I see a sea bed of plastic. This horrifies me and many others to know that lower Ontario's drinking water is polluted with plastic and many other harmful chemicals (road salt).



Plastic pollution found on Lake Ontario at the waterside

<https://images.theconversation.com/files/214574/original/file-20180412-543-1nt4di7.jpg?ixlib=rb-1.1.0&q=45&auto=format&w=754&fit=clip>

Why do we need to fix this problem right now? By 2050 plastic will make up 80% of all the litter in the Great Lakes. The biggest part of plastic pollution is micro plastic because it is the hardest to find and get out. There are 5 types of microplastic, fibres, microbeads, fragments, nurdles and styrofoam. Fibres are

very fine threads that get removed from your clothes as you wash them, even though the water goes through a water waste treatment plant they are sometimes so small they cannot be removed. Fibres make up 71% of microplastic pollution. Microbeads are beads found in toothpaste, face wash, and some soaps. Microbeads can also bypass the treatment and end up in the Great Lakes. Fragments are fragments of larger plastic, when plastic is introduced to UV light it softens then the water can break up the plastic into fragments. Nurdles are like microbeads but they are melted and used as moulds for lids, containers, and other small plastic products. Styrofoam is the worst for the environment because it can break down but it can't biodegrade.

Despite the efforts the citizens, the bigger companies like restaurants, shopping centres and food retailers constantly use 'one use plastic. Many restaurants have stopped using straws, they have either used paper straws instead or no straw at all. I interviewed one of the owners of Nomads in Port Credit Mississauga where I live, they told me that they have stopped using straws in their restaurant completely.



Plastic pollution in the ocean

<http://www.un.org/en/events/environmentday/assets/img/featured-image-index.jpg>

Another organization that has been doing something to help is The United Nations. The United Nations have created World Environment Day, which will take place on June 5th. World Environment day also known as WED is a day to enlighten the world about pollution more specifically plastic pollution. Their goal is to beat plastic pollution.

So what can we do? We can't stop plastic pollution, but we can stop using as much plastic. Bring your own bags to the grocery store, recycle your glass, to name a few. There is so much that slips our mind and there is so that we can do that we don't. Together we can make a difference!

## Bibliography

Peter Goffin. (2018) . CTV news.

<https://www.ctvnews.ca/lifestyle/what-sort-of-garbage-enters-lake-ontario-researchers-probe-aquatic-trash-1.4039924>

Water keeper. Water keeper. <http://www.waterkeeper.ca/cases-microplastics>

Plastic pollution the silent killer. (2017). Ripley aquarium.

<https://www.ripleyaquariums.com/canada/plastic-pollution-great-lakes/>

Beyond our oceans. U of T.

<https://www.utoronto.ca/news/beyond-our-oceans-microplastics-pollute-rivers-and-lakes-too>

United Nations. (2017). <http://www.un.org/en/events/environmentday/>