



The Lake Huron Centre for Coastal Conservation



A very **Happy Canada Day** to all of our coastal communities on Lake Huron! We hope you all have a very healthy and prosperous summer season. Tag us in your Canada Day pride on Lake Huron using **@coastalcentre** on Facebook, Instagram, and Twitter!

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## Learning Opportunities for Summer!

We are so happy that so many of our lake lovers are enjoying the Learning about Lake Huron summer coastal webinar series!

If you weren't able to make the past three all about Hardened Shorelines, Plastic Pollution, and Water Levels, not to worry! We've recorded all our webinars for the year and they are accessible through our [website](#) or on our [YouTube channel](#).

We have three more webinars coming up in the next month and a half all about native plant species on Lake Huron, Species at Risk, and Coastal Restoration. These webinars are put on through our Coast Watchers Citizen Science Program and our Green Ribbon Champion Program, funded by Bruce Power, Nuclear Waste Management Organization, and TD Friends of the Environment Foundation.

You can register for the three upcoming webinars on our [website](#). We hope to see you there!

THE LAKE HURON CENTRE FOR COASTAL CONSERVATION PRESENTS:

# Learning about Lake Huron...

## A Summer Coastal Webinar Series



WED, MAY 20, 2020 : 2-3 PM

Harnessing Nature's Power: Green infrastructure vs. hardened shorelines.

THURS JUNE 4, 2020 : 10-11 AM

Plastic Pollution: Microfibers to tires, how do we sort through the waste?

THURS JUNE 18, 2020 : 2-3 PM

Go with the Flow: Water levels and what shapes Lake Huron.

WED JUL 8, 2020 : 10-11 AM

Throwing Shade: The right plants for your coastal environment.

WED JULY 22, 2020 : 2-3 PM

Identifying Imitators: Comparing species at risk to their look a-likes.

THURS AUG 6, 2020: 10-11 AM

How to: Coastal restoration on beaches, dunes, and forests.

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## Who's Responsible for the Waste?



Now that the majority of shoreline areas have re-opened to the public (after a long awaited hiatus due to the public health precautions in place), you would think people would be more cognizant than ever to show mother nature and the local community respect when visiting the shore for the day. However, we are seeing the opposite to be true all across Lake Huron's coastal region. We have received countless reports, and seen for ourselves the litter and plastic pollution left behind by our visitors. What happened to the old phrase "take only pictures, leave only footprints"?

Two sides of this issue we see raised time and time again are, "why don't they provide more garbage cans, why don't municipal staff clean it up"? OR "This is nature! There is no maid service here, pick up after yourself!". This is why we have decided to feature this topic this month, to look at the question, will more garbage cans fix this issue, or do we really just need revamped education around pack-in pack-out principles and low-waste lifestyles?

In reality, this is a question that land managers have faced and has been documented in North American parks and protected areas as far back as the 1960's. The outcome always seem to



be, if we provide more garbage cans, visitors will never start reducing the waste they bring in, but if we take garbage cans away and encourage 'leave no trace', there may be more litter in the short term, but it may encourage societal change to those visiting the area in the long-term. In an era where plastic pollution makes headline news almost weekly, don't you think it is time we begin pushing (not nudging) people towards making these types of changes, in the name of healthier coastal ecosystems AND more sustainable lifestyle choices? Many cities and countries agree, with places like Tokyo advertising 'pack-in, pack-out' front and center at every day use area; and

other cities like Vancouver altering their infrastructure to accommodate increased use while doubling up the zero-waste messaging. With this in mind, how do we tackle this issue at home, and who is responsible for cleaning up our coastal communities? In our opinion, it is a mutual responsibility... let us explain...

One of the major contributors to the plastic pollution on Lake Huron is waste escape from shoreline recreation, garbage and recycling transportation escape, and littering. With open garbage receptacles and wildlife keen for a chance at picking through some fresh garbage, the potential for litter entering our lake is basically 100%. The responsibility of limiting waste escape and plastic pollution therefore falls on two parties:

1. Visitor responsibility: To pack in, pack out, using leave no trace principles, understand limitations of garbage receptacles at shoreline areas, and to not expect "maid service" to clean up after them.
2. Land manager responsibility: To provide adequate warning to visitors regarding availability of receptacles, participation in low-waste/ leave no trace principles, and to provide appropriately sized and distributed waste receptacles.



### **VISITOR RESPONSIBILITY:**

Our societal entitlement to having lavish amenities at every shoreline area is unrealistic, and unsustainable both for the tax payers on the hook for removing the garbage from the beach (e.g. beach clean-up and grooming costs), and waste removal and disposal costs. For those who are oblivious to the impacts plastic has on coastal ecosystems and wildlife, this can be even more challenging requiring education before their site visit, at the site, and after they leave.

We need to see a shift in the accountability of those using our coasts in protecting the habitat quality by being responsible for removing their own garbage, especially when provided amenities are full. Education about packing-in, and packing-out, whether you are 40 km in on the back-country of Killarney, or at the parking lot of Port Elgin Beach, the premise is the same, take everything home with you that you brought.

To find out more about leave no trace principles, go [HERE](#).

### **LAND MANAGER RESPONSIBILITY:**

Land managers operating waste receptacle amenities need to ensure that the receptacles provided are going to be effective at reducing waste escape, can divert as many recyclables as possible to reduce landfill, and can accommodate the

expected average level of use.

**Molok® waste containers** are a great method for increasing waste storage and reducing waste escape. These units can be seen in action throughout many Provincial Parks in Ontario. This option would be very feasible for shoreline parking lot applications in heavy day-use areas that experience hundreds of visitors per day. 60% of their waste storage is actually 'underground'! Not only are these receptacles animal-proof, they are aesthetically pleasing even when grouped in multiples. Downsides to a unit like this include their price tag, limited areas for installation depending on soil/bedrock type, and the need to have special industrial emptying equipment to pull up the internal bags full of material. This is a long-term solution for many Municipalities and private access points with fixed budgets. A short term solution is providing garbage bins with lock-lids and emptying more frequently.



### Final Thoughts on Shoreline Waste Reduction:

Educating visitors to day use areas and shorelines and changing our cultural norms will take time, but this is no reason not to start implementing changes today! We all play a part in educating visitors and our communities about the issues of plastic pollution on our community's health, pride in our environments, water quality, and habitat for rare species. If less people are throwing things away at the beach, the less strain on our municipal infrastructure, the less waste entering landfill, and the less potential for waste escape (win-win-win!). Four other principles we can suggest are:

1. **Manage expectations:** If visitors understand what to expect when they arrive, they will be able to plan and pack accordingly (according to Leave No Trace Canada's first principle).
2. **Provide signage and messaging at the site:** Encouraging waste diversion and use interpretive signs to educate visitors at the site why they should pack-in pack-out, and how these small actions will have huge benefits for the coastal habitat and local community.
3. **Transition to 'better' infrastructure:** Buying infrastructure takes time when budgets are tight. Encourage pack-in, pack-out as you transition to more appropriate waste receptacles.
4. **Advertise and educate:** Show the community, and visitors the positive efforts taken to reduce waste escape! Get on social media and show upgrades, advertise partner's shoreline clean-ups, and encourage community participation in shoreline sustainability actions.

Together, we can keep our cherished and spectacular shoreline areas beautiful, but it takes all of us to make this happen. I believe in us, and in the power of our coastal communities to be the start of an epic change for the better of Lake Huron.

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## Bedrock and it's Many Mysteries

When we think of Lake Huron, we often picture beautiful sandy beaches, sunsets, spectacular island archipelagos, and rocky



Photos by H. Cann 2014

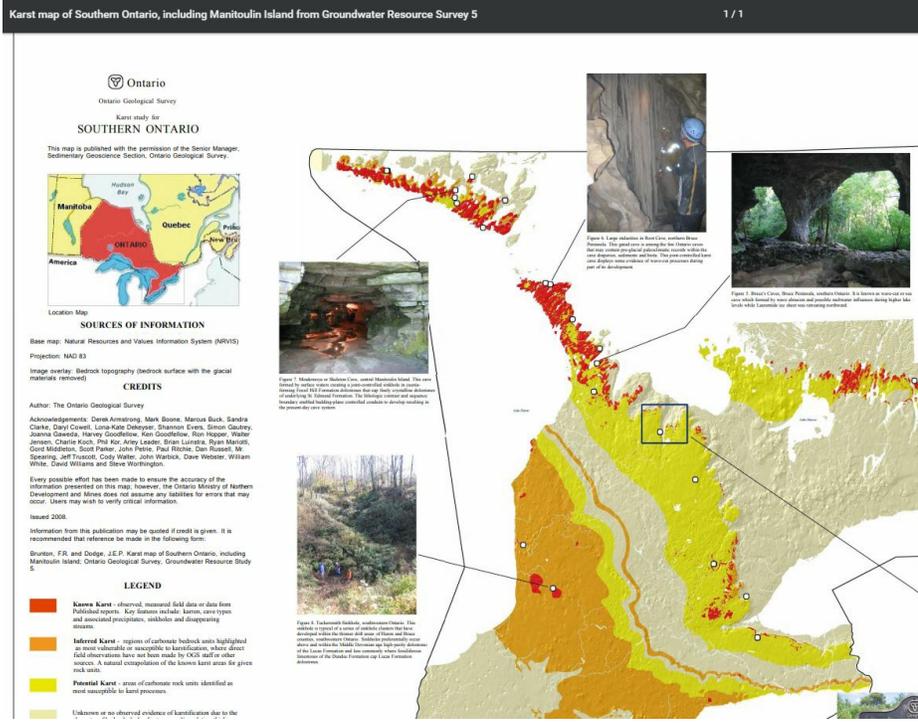


But did you know, only 2-3% of Lake Huron's 6,157 km of shoreline is sand beach and dune? The rest is made up of 7 other amazing coastal ecosystems, one of which may be the most photogenic: bedrock shores.

Although these rock faces look deprived of any sort of ecology (plants or animals), they are actually thriving with some of the rarest species in Ontario. Limestone bedrock shorelines are unique because as a Dolostone, are highly erodible. In many areas along the Bruce Peninsula for example, you can see examples of erosion in the flat expanses of rock simply from raindrops perpetually pulverizing into the rock from above, giving the rock a 'pitted' texture. Because of the porosity of dolomite limestone, there is life living on the rock surface and within the rock itself, including bacteria, algae, and fungi.

The erodibility of this rock allows action from ground water to carve out underground cave networks and impressive rock formations called Karst, which you can see through most of Southwestern Ontario.

In other areas, bedrock shorelines are so flat, you could mistake them for poured concrete. Even within these parking-lot-esque landscapes, some tenacious plants will find a small crack and begin to grow, surviving with little soil, little room for roots, and very few nutrients. These species are highly susceptible to damage from even a simple footstep or accidental tug while making your way down a slope.



Karst map of Southern Ontario, including Manitoulin Island from Groundwater Resource Survey 5 (Ontario Geological Survey, 2008)

Because so many of these species are endangered due to lack of habitat or lack of proper protection, it is more important than ever to 'watch your step' in these areas, not to mention accidentally trampling the many snake species or bird nests you might find in these extreme environments!

## Turtles on the Move!



Ontario has 8 diverse Turtle species that all rely on coastal environments for habitat! We are now in the heat of **turtle nesting season**, where female turtles dig nests and lay their eggs. They will mature and emerge in August and September. Gravel or sand soil types, sunny warm locations and areas near water are often selected by turtles for nest sites which on Lake Huron's coast often look like beaches, rocky shorelines, roadsides and sometimes, like in the case of this turtle, even in the middle of a gravel road. This site selection can lead to turtle mortality due to vehicle and pedestrian traffic, and even predation from hungry animals like raccoons and skunks.

If you are lucky enough to see a turtle nesting, like the photographer of this image was, stay 10 metres away as to not disturb her nesting process, which may take between 10 minutes and an hour to complete. If turtles are disturbed, they may hold their eggs in (called being egg-bound) and leave their nesting site, in some cases causing the animal distress. It is so important to remember that turtles have a 1% survival rate from egg to mature breeding age, which is one reason why turtles in Ontario are at risk.

Do not try digging up the nest or moving the eggs if they are in an awkward location. You can always mark the location with a pylon or another type of marker close to the nest to prevent people from walking or driving over it. Turtle scientists and trained professionals also cover nests with predator proof screens to try and protect the eggs until they hatch. If you see a square wire basket sitting on a gravel or beach surface, this may be a predator screen protecting a turtle nest!



Don't interfere with the screen, but instead give it a 'wide-berth' and enjoy the thought that some baby turtles may be growing right beside you!

If you see one of these little white gems (pictured above), broken and on the ground, this is a sign of a predated turtle nest. Unfortunately someone had a snack and that 'clutch' of eggs has probably been compromised.

If you see a turtle, turtle hatchlings emerging, or a turtle nesting, you can report your sightings and photographs to [iNaturalist.org](https://www.inaturalist.org) which is a great Citizen Science website that tracks turtle populations and distribution in Ontario. Your contributions make a big difference in how scientists make land management decisions! To learn more about turtles on Lake Huron, we have a series of awesome videos on our [website](#) and [youtube](#) channels!



Photographs in this article were taken by S. Cann and H. Cann from safe distances (+10 metres), using a zoom camera lens.

## NEW OPPORTUNITIES AT THE COASTAL CENTRE

We are excited to announce that we are **HIRING!**

If you or someone you know loves Lake Huron, has exceptional communication skills and environmental experience, we welcome you to apply to our Coastal Stewardship Coordinator Position.

To find out more about this and other opportunities at the Lake Huron Centre for Coastal Conservation, check out our [\*\*WEBSITE.\*\*](#)

Successful applicants will be interviewed and begin in the new role in the upcoming weeks. All physical distancing and health and safety protocols will be followed and considered as priority through this process.



Did you know that the Coastal Centre is a registered charitable organization and **97% of our work is funded through donations and grants?** Your contributions help keep our communication and educational programs alive, including this newsletter.

**Thanks to YOU,** our wonderful donors and supporters, we are able to run important programs that help protect the lake you love! Your gift today will help ensure we pass on a positive environmental legacy to our future generations. We can't do it without you!

**DONATE TODAY!**

*The Lake Huron Centre for Coastal Conservation is a registered charity founded in 1998 with the goals of protecting and restoring Lake Huron's*

*coastal environment. We are the voice for Lake Huron.*



**[www.lakehuron.ca](http://www.lakehuron.ca)**