

The Lake Huron Centre for Coastal Conservation



IMPACTS OF CLIMATE CHANGE ON LAKE HURON

In June 2021 Canada surpassed its all-time heat record in Lytton, British Columbia multiple days in a row, finishing at 49.6 degrees Celsius. There is no doubt that the North is warming fast. We often hear about climate change on the large scale. We know that global carbon dioxide emissions from burning fossil fuels is causing air and water temperatures to increase, sea levels to rise, more frequent and powerful storms, wildfires, droughts, and habitat loss. Such an enormous issue requires worldwide response from scientists, politicians, corporations, educators and more. But let's be honest... all this information about climate change can be overwhelming. Understanding how climate change is impacting your local environment can help put into context how important this issue is and what you can do to help. This article will discuss how increasing air and water temperatures along with ice cover loss is impacting the Lake Huron shoreline.



Warming Air Temperatures

Warming air temperature results in a more turbulent atmosphere. This means that we will see an average of stronger and more frequent storms on Lake Huron. This will result in shoreline erosion from storm surges, wind, and wave action. Dune and beach ecosystems are especially vulnerable these changes. Once sand is removed from the beach cycle it is nearly impossible to recover. A warming atmosphere also means



hotter and longer summers. This will likely entice more people to visit beautiful Lake Huron beaches for more weeks out of the year. This is great for the economy of our shoreline communities, however we must consider the potential increase in human impact on these vulnerable ecosystems that we depend on.

Warming Water Temperatures



Increased water temperatures can impact local weather in the Great Lakes basin. Open water in the winter months due to loss of ice cover will cause moisture to be picked up from the lake and turned into lake effect precipitation for downwind communities. It will also be easier for water to evaporate which can

lead to lower lake levels year-round. Increased precipitation and evaporation can be a dangerous combination for water quality on Lake Huron. Heavier rainfall will cause more nutrients to enter the lake from field run-off. Increased nutrients combined with lower lake levels create ideal conditions for algae blooms.

Ice Cover Loss

Climate change has contributed to a

downward trend of percent ice cover on the Great Lakes since 1973 (see figure below). Nearshore ice displaces wave energy lakeward, protecting the beach from wave-induced erosion. With less ice to buffer energy coming from the lake, we are likely to see stronger waves hitting the shoreline during the winter months. We also can't forget about the animals! Ice cover provides protection for wildlife both on the shoreline and in the water. Whitefish, for example, rely on ice cover to protect their eggs during strong winter storms. Taking away cold-water fish



habitat will cause competition with warm-water fish for the same resources.



What Can You Do?

A global issue requires a global response! The best way to fight climate change is to reduce carbon emissions at the source. Reduce the amount of plastic you consume (psssst... plastic is made from fossil fuels), hang dry clothes, drive less, shop sustainably, use energy efficient appliances, reduce meat consumption (especially beef), reduce food waste, compost, buy local, educate others and elect political leaders that support a progressive climate action plan. These solutions are simple, but together we can have a cumulative impact.



If you live on Lake Huron there are ways to mitigate the effects of climate change directly on the shoreline. One way you can do this is through renaturalization! This is a low-cost, high reward method of protecting beaches and lake front properties from erosion. Native grasses with long root systems (ex. Marram grass & Big bluestem) provide protection against erosion and flooding. It will also provide habitat for wildlife and help keep that beautiful sand on your beach! If you don't have a dune already established on your beach, no worries! You can use snow fencing in the spring, fall and winter to accumulate enough sand and kickstart a dune system. If water levels continue to drop (which will have many lakefront property owners celebrating!) that is the perfect time to work on a sand dune restoration project. If possible, refrain from hardening the shoreline as protection from erosion. These are expensive short-term solutions since wind and wave energy can undercut these structures overtime. Do your part to protect the shoreline by volunteering for our **Green Ribbon Champion program this fall** (see article below).



See what the Coastal Centre is doing to mitigate the effects of climate change through our <u>Green Ribbon Champion Program</u>

Dune Restoration Volunteer Opportunity Fall 2021 HERE

Additional Resources

Coastal Action Plan <u>HERE</u> Key Issues of Climate Change: Government of Canada website<u>HERE</u> Great Lakes Ice Cover Decreasing Over Last 40 Years: NOAA<u>HERE</u>

VOLUNTEERS WANTED!

Dune restoration in Town of Saugeen Shore, Municipality of Kincardine and Township of Huron-Kinloss

By participating in the Green Ribbon Champion program, you will be helping to conserve and protect vegetation and wildlife only found on a dune environment. Native dune vegetation and sand-fencing will allow the dune to grow and re-establish. Vegetation on dunes keep sand in place, protecting from wind erosion, instead of moving sand to unwanted areas of your property structure or losing the sand altogether. Restoring dunes can be helpful in protecting your property from flooding during high wind and wave events or during high water levels.

What you'll be doing

We will be harvesting and planting dune grass species on the beach. We will also be removing invasive species (eg. Phragmites, Spotted Knapweed) using shovels, handpulling and raspberry cane cutters. Some volunteers will help install sand fencing using a post-pounder. You will also be learning about the Lake Huron shoreline and meeting like-minded environmentalists!





Event Schedule - Saugeen Shores

Thursday, October 7, 2021 11am - 3pm

Location:Port Elgin

Friday, October 8, 2021

11am - 3pm Location: Southampton

Saturday, October 9, 2021

11am - 3pm Location: Southampton

Event Schedule - Kincardine

Friday, October 22, 2021

10am - 2:00pm Location: Kincardine

Saturday, October 23, 2021

2:30pm - 5:00pm Location: Kincardine

Event Schedule - Point Clark

Saturday, October 30, 2021

11am - 3:00pm Location: Point Clark

Sign up now!

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.

DONATE TODAY!



www.lakehuron.ca