The Lake Huron Centre for Coastal Conservation

March 2019

Keeping a Great Lake great since 1998!

Upcoming Events

Speaker Series: Southampton - March 21st

Hopefully the weather will hold off this time. That's right we're going to try this again. Come to Southampton and we'll fill your life with the knowledge and wisdom of all our speakers. Topic's will include climate change, alvars and nearshore conservation.

Shoreline Cleanup - April 13th

This is the first clean up of the year coming to a beach near you(Goderich) We'll have more information on this soon but keep the date in your diaries. You'll be mystified, intrigued and slightly disgusted by what we'll pull from the beach.

Toast the Coast - May 4th

We've got art, We've got speakers, what more do you want.. maybe Jazz! That's right this is our spring fundraiser. The Lake Huron Centre for Coastal Conservation is pleased to invite you all to our Toast the Coast event on May 4th. Here we will celebrate all those who volunteer, support and donate to the LHCCC. This community of amazing people have proven their dedication to protecting our wonderful coast. The event will take place at Beach Street Station in Goderich, and features speakers, live music and a first-ever Lake Huron coastal art exhibition.

Now in its 21st year, the Coastal Centre continues to guide and support sustainable environmental practices along Lake Huron's coastline. As a registered charitable organization, over 97% of the Centre's work is funded through donations and grants.

"This event is much more than just a fundraiser," says Erinn Lawrie, Executive Director for LHCCC, "It's a celebration of Lake Huron, the great work that has been done and the important work that still needs to happen. This is an opportunity to make a real difference and connect with other supporters of Lake Huron."

LHCCC has partnered with World Rooted: The Art Project for the People (WRAPP), a collective of artists that celebrate conservation and humanitarian works through art. World Rooted founder Bethany Davidson is coordinating the coastal art exhibit that will feature 13 artists.

The event will also feature three short talks, each about a unique perspective of Lake Huron.

Ticket's will go on sale March 12th and will be $60, spaces are limited so be sure to RSVP.

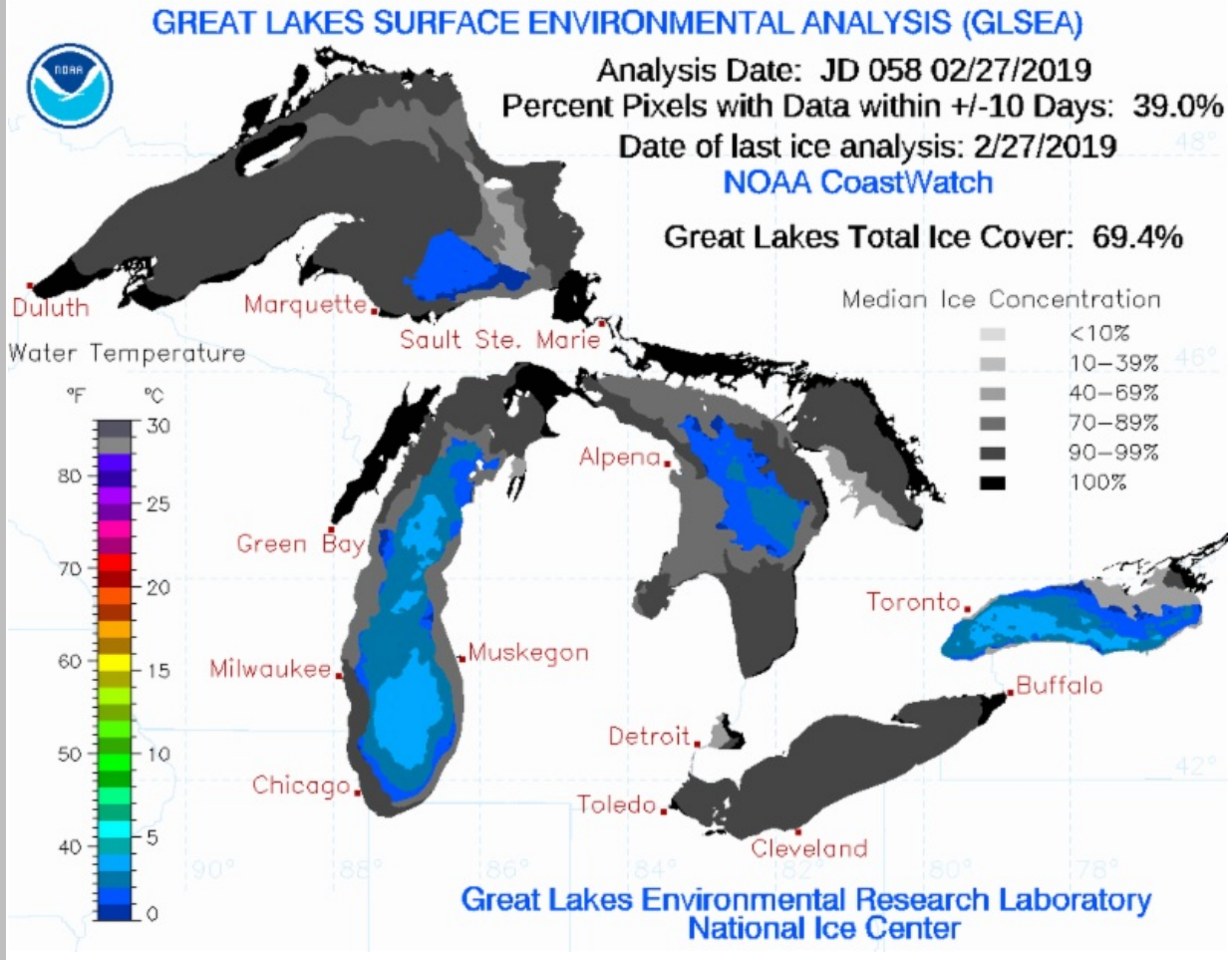
All proceeds go to supporting LHCCC's programs & services.

We hope you all join us for live music, incredible art and cocktails by the beach.

Also don't forget to dress for the weather.

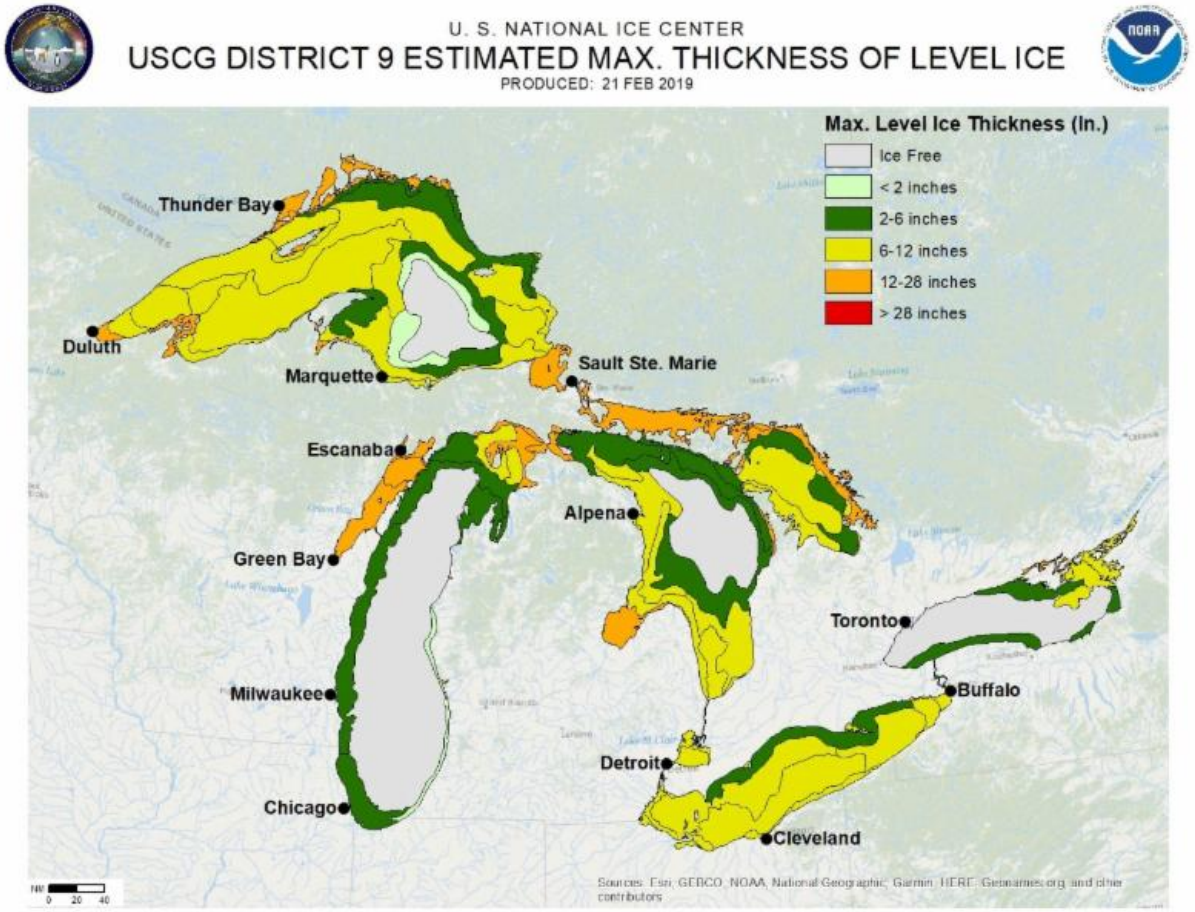
Curious to know about Lake Huron's Ice Development? We've got you covered!

This year's ice cover is the highest since 2015 and is above the long-term average maximum (55% coverage) that typically occurs in late February and early March. As of February 27th 2019, the total ice cover on the Great Lakes is 69.4% and 73.1% on Lake Huron.



How does this measure to previous years? Lake Huron's maximum ice cover in 2018 was approximately 70%, 30.4% covered in 2017, and around 45% in 2016. That's an increase in average ice cover percentage from the previous 3 years. For historical comparisons please visit the Environment Canada and The National Oceanic and Atmospheric Administration (NOAA) websites.

The Government of Canada identifies 5 stages of ice development ranging from "Thick Lake Ice" (5- 15 cm), "Medium Lake Ice" (15- 30 cm), "Thick Lake Ice (30 – 70 cm), and "Very Thick Lake Ice (greater than 70 cm). Thicker ice is typically found in the northern portions of Lake Huron. The map below shows the estimated maximum thickness of ice as of February 21st, 2019.



Environment Canada is forecasting air temperature will be near normal till Mid-March, and to expect thick and medium thick lake ice along the southeastern coastline. Along with open water in the centre of the Lake. Water temperature on the Great Lakes are around 40 degrees and below.

As always, know the dangers of ice. You can see the shelf ice close to the coastline, but it's important to remember that there is moving ice underneath. Lake Huron ice can change rapidly- especially at the coastline. Please stay safe and stay off the ice. Let's enjoy the lake in all her glory from a safe distance!

Frozen Lake Life

A quick intro to the winter activities of lake wildlife

Have you ever been skating on the lake or just looked at the great fields of ice and wondered what happens underneath? Where do the fish go? What happens to all of the plants? Do frogs actually freeze all winter? Well I'm going to, or at least try to answer all of those questions.

What we need to understand is that the lake doesn't completely freeze in the winter. It's actually very simple. So, when water freezes into ice it expands but stays the same mass, this means that it becomes more buoyant than the rest of the water causing it to float. This ice then acts like insulation for the water beneath keeping it well above freezing. This means that all of the life can remain unfrozen and moving. The water still gets significantly colder than in the summer (you wouldn't want to go swimming in it). It traps oxygen in the water meaning life can still survive, however it also blocks future oxygen from entering.

Fish

Now fish! Where do the fish go? I mean they can't leave the lake, are they just swimming around down there? Do they even realize that it's winter?

Not only do they notice but their behavior changes quite drastically. Fish are cold blooded, this mean's that their blood is the same temperature as the lake, so as the lake gets colder the fish slow down. Everything slows, their movement, heart rate and their metabolism. Fish have saline(salt) in their bodies which lowers the boiling/freezing temperature, this helps to protect them from completely freezing solid. They also have a few clever tactics to help them survive. Because lakes cool from the top down it means that unlike the summer the deepest parts of the lake now hold the warmest water. Lot's of fish will group together here and go into a 'winter rest' where they barely hunt or even move. Or some will bury themselves in the warmer sediment to settle for the winter. Some of the colder water species like Trout or Salmon are better at dealing with the cold (hence the name) so they can stay more active during the winter; however, all fish must be careful not to be too active and use up too much oxygen as none can enter the lake if it's entirely frozen. Lake Huron rarely freezes completely so they don't have to worry about it as much.

Everything Smaller

Phytoplankton and zoo plankton use a similar tactic to the warmer water fish. They normally settle in to sediment to keep themselves warm and wait for summer. The ice also blocks most of the sunlight from coming through which means that they cannot photosynthesize, this is another huge factor to why the oxygen levels in the lake can decrease so significantly in winter.

Frogs

With amphibians like frogs, it depends on the species. The Species that spend most of their time in water will likely enter a state of hibernation and rest in the warmer waters at the bottom of a lake or pond. More land-based frogs will burrow below the frost line or get as low as they can by squeezing into crevices and logs. These species are usually exposed to temperatures below freezing so they contain high levels of glucose (sugar). Glucose acts as a natural antifreeze which will prevent the formation of ice crystals, these crystals are the bigger threat to the frogs as they can puncture organs and cells. Some frogs actually have to ability to fully freeze and then restart in spring when they thaw out.

So, in conclusion fish don't really stop, phytoplankton just chill and frogs actually do have the ability to completely freeze and survive.
I hope this article answers some of your questions on what happens during winter.

The Lake Huron Centre for Coastal Conservation supports environmental efforts along the Canadian coastline of Lake Huron. We foster communication and partnerships between environmental agencies and organizations, working towards a sustainable and resilient coast. We provide education, resources, and information on lake-wide issues and our programs reflect the inter-connectivity between land and water.

DONATE TODAY!