

Coast Watchers Protocol

PREPARED BY:
LAKE HURON COASTAL CENTRE





Our Vision: *A healthy Lake Huron coastal ecosystem*

Our mission: *To provide leadership and expertise, in collaboration with partners, to achieve a healthy Lake Huron coastal ecosystem*

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Welcome To Coast Watchers

Welcome to a group of passionate volunteers who are dedicated to collecting important data on Lake Huron. This guide will be a resource to come back to throughout the season as you develop key skills needed to monitor your shoreline.

Coast Watchers was designed to educate and engage members of the coastal community and allow you to take an active role in the conservation and protection of our lake. Along with the data you collect, we hope to enrich your experience in the program through opportunities to learn more about Lake Huron's coastal ecosystems, threats to habitat health, and opportunities for action.



The data you collect will contribute to local decision-making surrounding water quality, shoreline restoration, climate change indicators, species at risk and invasive species. Every year volunteers contribute over 89,000 data points and donate over 1,500 hours of volunteer time to the program. We have you to thank for creating an incredible long-term data set that gives us a detailed profile of the place we love most- Lake Huron.

Feel free to contact us for additional information on topics that are of interest to you. You may also be interested in becoming involved in, or telling your neighbours about, our other programs provided by the Coastal Centre, such as the Coastal Conservation Youth Corps and the Green Ribbon Champion sand dune restoration program.

Thank you for your dedication and hard work! I am excited to work with you throughout this monitoring season. If you have any questions, please email coastwatchers@lakehuron.ca or leave a voicemail at (226)-421-3029.

A handwritten signature in black ink that reads "Alyssa Bourassa".

Alyssa Bourassa
Coastal Stewardship Technician
Lake Huron Coastal Centre

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General Protocols

How to Become a Coast Watcher

1. Complete the sign-up form here: www.lakehuron.ca/coastwatchers
2. Wait to be contacted by the Coast Watchers program coordinator via email
3. Choose a consistent monitoring location and share the GPS coordinates with the program coordinator via coastwatchers@lakehuron.ca
4. Watch the most current Coast Watcher training session and read Coast Watchers protocol here: www.lakehuron.ca/cwtraining
5. Click the link in the email provided by the program coordinator to create an account on the Coast Watchers application (app)
6. Start monitoring!

Training

Training is very important to produce consistent results in the data collection. However, some aspects of Coast Watchers monitoring are qualitative and will have some form of variation from person to person. The training provided to participants in the Coast Watchers program equips volunteers with the necessary knowledge and experience to complete each monitoring session. Volunteers are trained on the use of equipment required to complete the reports through online resources.

Due to an influx of volunteers, all training resources will be posted to www.lakehuron.ca/cwtraining rather than yearly live sessions. It is the responsibility of all new volunteers to read the Coast Watchers protocol and watch the recorded training video before they begin monitoring. The program coordinator is available via email (coastwatchers@lakehuron.ca) or by phone (226-421-3029) to answer specific questions.

Monthly Check-ins

Check-ins are offered at 5:00 pm on the first Tuesday of each month during the monitoring season (May-Oct). This is an **optional** 30-minute meeting for Coast Watchers to ask the program coordinator questions and to meet the other volunteers. To sign up for a monthly check in visit <https://www.lakehuron.ca/coastwatchers>.

Introduction to Mobile App

The Coast Watchers app is used to submit data and photos. It was designed reduce the need for filling out physical field sheets, making it easier for Lake Huron Coastal Centre (LHCC) staff to analyze the data volunteers collect. It will allow flexibility to adapt report questions to meet the needs of environmental organizations, researchers, and local decision makers who find this

data useful. By streamlining the data collection and analyzation process, information can be easily shared with partnering groups in real time to make an even bigger impact on Lake Huron.

How to Access the Coast Watchers App

After you register to become a Coast Watcher, the program coordinator will send you a link to the mobile application via email.

How to Create a Coast Watchers Account

Click the link sent by email from the program coordinator. Click 'sign up' on the log in screen to create an account.

Coast Watcher ID

Once an account is created, each Coast Watcher is assigned a NEW Coast Watcher ID. Existing Coast Watchers that already have a Coast Watcher ID will be replaced with a new number. Coast Watchers IDs are used to uphold the privacy of volunteers when talking about their data in public reports. Volunteers can also use this ID when communicating to the program coordinator through email or over the phone if they'd prefer to remain anonymous.

You can find your Coast Watchers ID by clicking 'report' arrow then 'account' at the bottom right of the screen.

Consent Forms

Consent forms (liability and information release) are now included in the process of creating a Coast Watchers account.

Data Submission

Field sheets that have previously completed on paper have been adapted to online reports that are submitted through the app:

If you **DO** have access to a mobile phone, tablet or computer:

- Record and submit all data and photos through the Coast Watchers app

If you do **NOT** have a mobile phone, tablet or computer:

- You can mail your completed physical field sheets at the end of each month to the LHCC mailbox: P.O Box 477, Goderich, ON. N7A 4C7

When to Monitor

The monitoring season is 26 weeks long from May 1 until October 31 every year. Coast Watchers commit to monitoring the same place once per week, ideally at the same time on the same weekday. Consistency is important to keep the data consistent and un-biased, capturing

all weather events and climactic conditions across the monitoring season. Exceptions can be made for seasonal residents who are only near Lake Huron for part of the season.

Where to Monitor

Volunteers pick a section of coast that is relevant for them. For example, if you are a cottage owner you can monitor the shoreline in front of your cottage; if you go to a public beach at least once-per-week you can select a point at that beach to monitor. Volunteers must choose a specific spot to monitor from for wind and wave data. Other observational data can be recorded from 15 meters on either side of the primary monitoring location (30 meters total). Please get permission before going on any privately owned property (e.g. neighbours), or avoid monitoring that area if you cannot get permission. Although we ask that people stay consistent with their location, with the updated map feature you can submit photos and data from another location. For example, if you are vacationing at Sauble Beach and see Piping Plovers, we want to know about it!

Submission of Zeros

We ask that Coast Watchers only report on what they see. For example, if there is no wildlife on the beach when you are monitoring, that wildlife report would be skipped on that day. When you start a report, all questions that have a star (*) beside it must be filled out.

Equipment

New volunteers are asked to print the Compass Rose (used to measure wind direction) from the Coast Watchers training page of the LHCC website. The Beaufort Scale (used to measure wave height) can be accessed through the app.

To record windspeed, air, and water temperature, volunteers must be equipped with a water thermometer and/or Kestrel (a sensitive impeller used to report wind speed, air, and water temperature). Volunteers that are interested in using a Kestrel must pay a \$25 equipment deposit fee through the LHCC website store.

Considering the potential increase in the number of volunteers this season, the LHCC will not be able to equip every Coast Watcher a Kestrel. Once the equipment is returned in good condition, the deposit will be fully refunded to the volunteer and the inventory will be updated on our website store for the next volunteer to purchase.

Photo-Monitoring

Pictures can be powerful tools to monitor dynamic shorelines where the appearance of the coast can change rapidly from month to month and year to year.

Procedures

Pick a spot on your beach that you will always take the photo from. This spot should have a view of your beach, including the water, open beach and the vegetation. The example below provides some indication of what we are looking for and illustrates the change to the beach and dunes in response to changing water levels. Photos like this can be included in the storm damage report on the Coast Watchers app.



1950



1990



2018

Atmospheric Conditions

Atmospheric Conditions

Current Date: 14-1-2022, 2:34 pm

Was the observation date different? [+ Add another date](#)

Visibility? *

Yes No

Wave Height (Beaufort Scale) *

4

[Beaufort Scale guide](#)

Wind Direction *

280

Atmospheric Conditions

Wave Direction *

180

Water temperature (C)

18

Air temperature (C)

15

Current Wind Speed (km/h)

7

Max. Wind speed (km/h)

8

Avg. Wind Speed (km/h)

6.5

Atmospheric Conditions

Enter any notes here...

Submit

Air and Water Temperature

**Recording air and water temperature is NOT a requirement of the program. Volunteers should NOT enter the water to record water temperature during inclement weather or the cold-water season. Volunteers will only have access to Kestrel or pool thermometer based on current availability.*

Background

All temperatures will be reported in degrees Celsius (°C). Recording temperatures creates a complete picture of conditions at the sampling site at the time of monitoring and over an extended period.

While temperature may be one of the easiest measurements to perform, it is also one of the most important parameters we test because temperature affects the rates of chemical and biological reactions within the water.

Equipment

- Kestrel anemometer (2000 or 2500) **(if available)**
- Pool thermometer **(if available)**

Procedure: Air Temperature:

To use the Kestrel anemometer, hold it out in front of you. The bottom of the instrument should be pointing to the ground. Ensure the screen is displaying degrees Celsius. Count to 60 and record your measurement in degrees Celsius ($^{\circ}\text{C}$).

To take a temperature reading, use the toggle buttons to reach the temperature screen. There will be a tiny thermometer with the $^{\circ}\text{C}$ at the bottom.

**The Kestrel Anemometer also records Wind Chill. The instrument is displaying wind chill when the thermometer and wind graphic (see wind watch) are visible. You do not have to record this measurement. If the instrument is showing $^{\circ}\text{F}$, press and hold the middle button, while pressing the left or right toggle, to switch to $^{\circ}\text{C}$.*



Procedure: Water Temperature:

Water temperature is taken by walking into the lake, holding the thermometer by the string, and letting it hang into the water column. One meter water depth is usually about waist deep. If you are unsure, please take a moment to measure where 1 m is on your body before entering the lake.

The string attached to the water thermometer has a knot tied at 30 cm from the top of the instrument. Standing in the water at 1 m depth, hold the knot at the surface of the water and allow the instrument to dangle below the surface. Hold the thermometer under the water for at least 1 ½ minutes. Bring the thermometer up to the surface (but not out of the water) and read the temperature.

Record the temperature to the nearest 0.5°C .



Wind

Background

Wind is measured in kilometers per hour (km/h), and circumference degrees. Wind and weather conditions (whether raining or sunny, windy or calm) can have an impact on physical, chemical and biological activity in the water. Wind speed and direction can be an indication of the source of some airborne pollutants. It can also affect turbidity, dissolved oxygen and surface water temperature.

Wind direction is important to measure throughout the monitoring season so prevailing winds can be determined. Prevailing winds are considered the dominant wind direction during a season and can greatly influence specific processes occurring at that time of year.

Equipment

- Kestrel anemometer (2000 or 2500) **(if available)**
- Compass Rose **(available for print online)**

Procedure: Wind Speed

Facing into the wind, hold the Kestrel Anemometer in front of your body, with the impeller (spinning fan) parallel to the ground. Wait one minute to allow the instrument to capture accurate measurements.



Record current wind speed (km/h), wind speed average (km/h), and wind speed max (km/h). The instrument displays different icons for each measurement. Use the toggle buttons to change the display. If the instrument is not showing km/hr., press and hold the middle button, while pressing the left or right toggle until you see the proper unit.



Current Wind Speed
Wind graphic + Km/Hr.

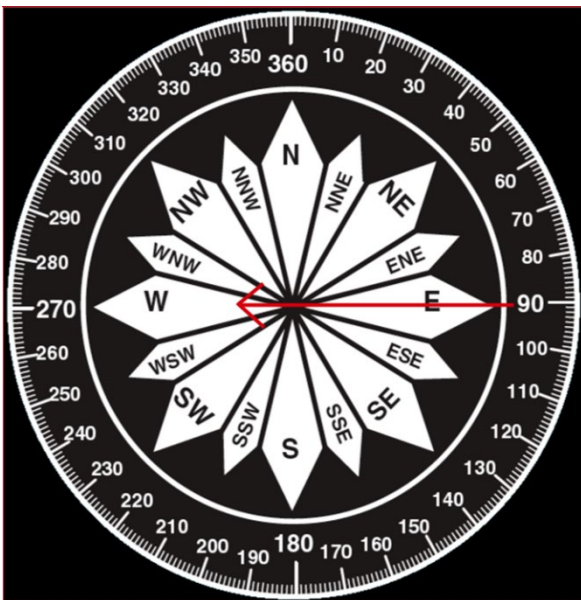


Average wind speed
Wind graphic + Km/Hr. + AVG



Maximum wind speed
Wind graphic + Km/Hr. + MAX

Procedure: Wind Direction



Record the direction of the wind using the Compass Rose. *Wind direction is measured from the direction it originated from.* For example, in the diagram below, if you estimate an East wind (the wind is blowing from the East towards the West), the circumference degree would be 90. In the compass rose diagram here, the red arrow represents the direction of the wind. Record 90°.

Some days wind direction can be difficult to determine. Using a stick with a string attached is a helpful trick; any stick and length of string will do, or look to a flag flapping in the wind. On days with no wind, simply put 'n/a'.

Waves

Background

Wave height and average wave direction are measured using the Beaufort scale. This scale describes wave height using descriptive words and compares these to wind speed.

Wave direction is provided using the same compass rose as described in the Wind protocols. Wave direction can be influenced by wind direction. Wave direction affects transport of sediments, nutrients, and debris. Wave direction is measured from the direction it originated from.



Wave activity moves sand along the shore and re-suspends it in the water. E. coli lives in the sand and will be re-suspended in the water with the sand. As the strength of waves increase, so does the amount of re-suspended sand, and the amount of re-suspended bacteria.

Equipment

- Beaufort scale (displayed on app)
- Compass rose

Procedure: Wave Height

Using the Beaufort scale, select the appropriate number from 1-12 (see next page). Make sure to confirm the number by ensuring the descriptions do match the appearance of the waves. There is a link to the Beaufort Scale on the atmospheric conditions page of the Coast Watchers app. You will rarely, if ever, see a Beaufort Scale reading over 9 on Lake Huron.

Procedure: Wave Direction

Wave direction uses the same procedures as wind direction. Determine the average wave direction by observing the general direction of the waves as they wash up on the shore. Wave direction is measured from the direction it originated from. Use a compass rose to estimate the corresponding degree measurement.

BEAUFORT SCALE

Beaufort Number	Anemometer Reading Wind Velocity		Description	Lake Observation	Nearshore Wave Height
	Knots	Km/hr.			
0	0-1	1	Calm	Glassy smooth; mirror-like	Smooth
1	1-3	1-5	Light air	Ripples	Ripples
2	4-6	6-11	Light breeze	Small short wavelets	10 cm
3	7-10	12-19	Gentle breeze	Large wavelets; crests begin to break	11 - 60 cm
4	11-16	20-28	Moderate breeze	Small waves; some white-caps	60 cm - 1 m
5	17-21	29-38	Fresh breeze	Better formed waves; many white-caps	1 to 1.2 m
6	22-27	39-49	Strong breeze	Large waves, many white-caps; umbrellas hard to use	1.2 to 1.5 m
7	28-33	50-61	Near gale	Large to very large waves; walking in wind is difficult	1.5 - 1.8 m
8	34-40	62-74	Gale	Very large waves; twigs breakoff trees	1.8 - 2.2 m
9	41-47	75-88	Strong gale	High seas; wind damages buildings, blow off roof shingles	2.2 - 3.5 m
10	48-55	89-102	Storm	High seas; wind uproots trees	3.5 - 4 m
11	56-63	103-117	Violent storm	High seas; wind causes widespread damage	4 - 4.5 m
12	>63	>117	Hurricane	High seas; Category 1 hurricane.	>4.5 m

Wave Height Examples:



**BEAUFORT
SCALE 1**

Ripples, but no
wavelets.



**BEAUFORT
SCALE 4**

Small waves, some
white-caps



**BEAUFORT
SCALE 6**

Large waves, many
white-caps

Visibility

Background

Visibility is defined as a measure of the distance at which an object can be clearly discerned. Visibility affects boating, road traffic, aviation, and other daily activities. Visibility recorded over time can be used to assess trends in atmospheric conditions.

Equipment

- None, binoculars are optional

Procedures

The horizon is the apparent intersection between the earth and sky. When you look at the lake on a clear day you can see the horizon. If the atmosphere is holding moisture, the horizon will be hidden behind fog or haze. If there is a storm approaching, or smog is occurring over the area, the horizon will not be visible.

If you can see the horizon, choose 'YES', if you cannot choose 'NO'.

Visibility Examples:



VISIBILITY- Y

Horizon is clearly visible



VISIBILITY - N

Horizon is not clearly visible

Wildlife Report

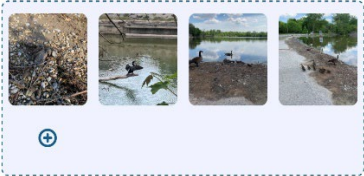
Background

Many different types of wildlife inhabit the coastal ecosystems on Lake Huron. Volunteers may come across birds, mammals, reptiles, insects or other types of wildlife during their monitoring. It's important to maintain a safe distance away from wildlife, especially if it seems to be sick or injured. Record all wild animals you see in this section. Observations of 'pets' like dogs will fall under the human activities report.

Fish and bird carcasses are common sites along the Lake Huron shore. Volunteers regularly visit the shoreline and could very well be the first to observe an abnormal mortality event. As they decompose, their nutrients percolate into the sand and feed plant growth in the coastal zone.

Occasional deaths are to be expected in the coastal zone; these are normal. ***If the beach is covered with dead or lethargic fish or birds, this is an environmental emergency.*** Dead loons, mergansers, cormorants, gulls, and other birds washing up onto area beaches may be caused by an outbreak of avian botulism. Avian botulism is more likely to occur during the late summer and fall. Avian botulism is a neuro-toxin that accumulates in prey items ingested by the bird. The toxin causes paralysis and the infected bird will eventually drown and wash to shore. Large numbers of dead birds are cause for alarm. Dead fish floating on the water surface, or washing up in abnormally large numbers, may signal a sudden drop in dissolved oxygen levels, the influx of some toxic substance, or a disease or infestation of the fish.

< Wildlife Reports



Current Date: 14-1-2022, 2:38 pm

Was the observation date different? [+ Add another date](#)

Do you see a species at risk?*

Yes No Not sure

What species do you see?*

Swan

Swan Number of Individuals *

10

< Wildlife Reports

Swan Alive *

2

Swan Deceased *

0

Swan Decomposing *

0

Notes

Enter any notes here...

Procedure

- If there is no wildlife on the shoreline move on to next report
- Fill out report with observations of alive, dead and decomposing wildlife.
- To improve your species identification skills, visit the resource tab at www.lakehuron.ca
- Large mortality events can be a wash-up of many of the same species, or a multi-species event. Animals still alive may require immediate assistance. DO NOT touch the animal until you get in contact with a professional. Help lines for such events can found under the “Events and Occurrences” section on page __.

Species at Risk

The Ontario Ministry of Natural Resources and Forestry’s Committee on the Status of Species at Risk in Ontario (COSSARO) evaluates the conservation status of species occurring in Ontario and makes recommendations on their status. Ontario’s Endangered Species Act (1971) protects species listed in regulation under the Act and their habitats. The OMNRF is responsible for enforcing the Act. Some species are also protected under the Fish and Wildlife Conservation Act.

Information on Species at Risk locations is sensitive because of the threat of poaching and trapping. Information on the occurrence of these species is the result of observations by many naturalists and volunteers, such as Coast Watchers, as well as agencies and other organizations. COSSARO would not have up-to-date information without the help of Community Scientists reporting their sightings of Species at Risk in Ontario.

The recovery of Species at Risk, especially the protection of their habitat along the shoreline, requires information on their location. Through Coast Watchers, we can have many trained eyes and ears on the coast which makes it more likely that we will detect rare and at-risk species throughout the spring-summer-fall months. All Species at Risk data collected through the Coast Watchers program are shared with the Natural Resources Information Centre (NHIC). Depending on the sensitivity of the species, the NHIC will make the information available to organizations and agencies across the province.

Procedure

- While you are doing your regular Coast Watcher activities, keep an eye out for Species at Risk. Take a moment to go through the additional details in the Species at Risk guide and narrow the list down to Species at Risk in your area.
- If you see a Species at Risk make sure to include it in your wildlife report and report it using contact information on page 25.

Species at risk on Lake Huron include:

Endangered	Threatened	Special Concern	Extirpated
Piping Plover Massasauga Rattlesnake Common Five Lined-Skink Queensnake Spotted Turtle	Eastern Hog-nosed Snake Pitcher's Thistle Chimney Swift Bank Swallow Eastern Whip-poor-will	Snapping Turtle Eastern Ribbonsnake Dwarf Lake Iris Tuberous-Indian Plantain Monarch Butterfly	Karner Blue Butterfly

Algae Wash-up

Background

Abnormal algae blooms have become a chronic issue in recent years, with nearshore or beach areas becoming fouled with large piles of rotting plants. Wave energies from storms and high winds can pull some of these algae off the rocks and deposit the plants on the beach. Some algae washing up onto the beach is perfectly normal, and to be expected. When large amounts of algae pile up on our beach, it tells us that in the previous weeks algae growth has bloomed in the nearshore.

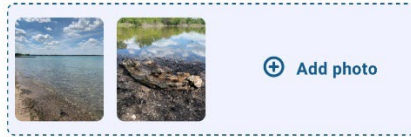
By collecting information on where and when abnormal algae blooms occur along our shorelines, we build a database of occurrence that can be compared to the weather data Coast Watchers collect.

We can also share the data with local municipalities that may, or may not, know about the algae problem on their shorelines. Some Lake Huron municipalities have elected to clean the beach of algae, and having an idea about where and when algae blooms occur can help municipal staff develop appropriate policies for its removal.

< Algae Wash-up

WARNING: Some algae is toxic and can be harmful to humans and animals. Please no NOT touch algae unless you are wearing the proper protective equipment

[Algae Field Guide](#)



Current Date: 14-1-2022, 2:39 pm

Was the observation date different? [+ Add another date](#)

Are there algae in the water?

Yes No

Algae in water length (m) *

2

< Algae Wash-up

Are there algae on beach?

Yes No

Algae category *

Planktonic

Algae that floats in the water column causing water to become green, brown, or reddish

Algae colour *

Yellow

Visual observation

Slimy, Glob, Silky

Odour *

Grassy

Environment *

Procedures

Questions on the algae wash-up report are designed to narrow down which algae is present on the shoreline.

- **WARNING: Some algae is toxic and can be harmful to humans and animals. Please no NOT touch algae unless you are wearing the proper protective equipment (i.e. gloves, enclosed footwear, etc.)**
- If there is no algae on the shoreline move on to next report
- Coast Watchers must choose if they think the algae is Filamentous or Planktonic based on what they observe.
 - **Filamentous algae:** Algae that is linked together to form threads or a mesh like mat or
 - **Planktonic algae:** Algae that floats in the water column causing water to become green, brown, or reddish
- **The algae field guide is available for renference in the field. It is located near the top of the algae wash-up report on the Coast Watchers app.**
- Use the drop down menu of words that describe the apearence, colour and odor of the algae.
- Estimate the legth (extent of algae into water) and width (extent of algae along shoreline) of the algae both on land and in the water.
- Make notes if you see other things of interest, including animals in the algae, litter, or a potential cause of the bloom.
- Photo submission is mandatory for the algae wash-up report.

Algae Wash-up Examples:



ALGAE ON LAND

Measure length and width



ALGAE IN WATER

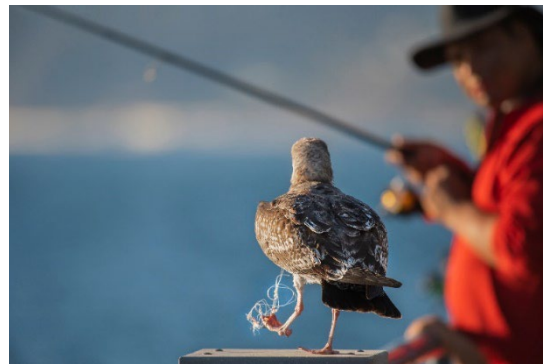
Measure length and width

Plastic Watch

Background

Plastic pollution on the shores of Lake Huron is increasing every year. While many items are visible with our eyes, plastic pollution also exists at the micro-scale as fragments that result from

All of this plastic is a threat to the health of Lake Huron. While impacts of plastic pollution have been well studied in marine environments, little is known about impacts to freshwater lakes. Current research in Ontario is focusing on the sources of plastic pollution with the intent of advising preventative policies. Some research in the US is beginning to look at rates of ingestion in aquatic fish and birds. Research on impacts to humans is forthcoming.



Research on impacts to humans is forthcoming.

Plastic Watch is included in the Coast Watchers program because Coast Watchers are likely to be the first witnesses to a large wash-up of plastic pollution and can notify the Coastal Centre if a beach clean-up event is required for their area.

Plastic Watch

Current Date: 14-1-2022, 2:36 pm

Was the observation date different? [+ Add another date](#)

Plastic Washup *

Yes No

Beach Cleanup needed *

Yes No

Beach Cleanup done *

Yes No

Litter removed (lbs) *

2

Most common type of litter *

Cigarette butts, Beverage cans, Bottle caps

Micro plastic *

Yes No

Micro plastic *

Nurdles, Microbeads, Foam, Fragments

Notes

Enter any notes here...

Procedures

- If there is no non organic material on the shoreline move on to next report
- *Be cautious when removing litter from the shoreline (ie. Do not pick up sharp objects) and always wear personal protective equipment*
- Fill out the plastic watch report based on what is observed that day
- If you notice constant nonorganic materials click that a beach clean-up is needed
- If you see microplastic on the shoreline, please choose from the following options:

Nurdle: a very small, clear or sometimes colorful pellet of plastic which serves as raw material in the manufacture of plastic products. Nurdle spills can occur on Lake Huron

Microbeads: an extremely small circular plastic material that can be seen with the human eye. They are often clear or white in colour. They are manufactured for various applications, especially one made of plastic and used in personal care products, cosmetics, and detergents.

Foam: Styrofoam that is often used for packaging is extremely brittle and can be broken down into microplastic. Foam is often circular and white in colour.

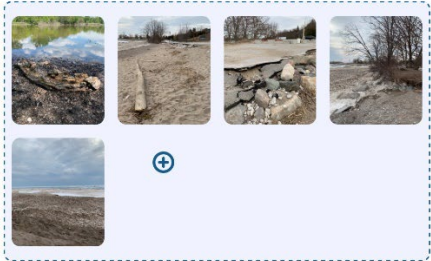
Fragments: Fragments are larger pieces of plastic that have been broken and worn down into smaller plastic pieces over time. They are between 5mm-2.5 cm in size and can be any colour or shape.

Storm Damage

Background

The storm damage report collects information on erosion, beach terracing, large human made debris (i.e. Barrel, asphalt chunks) and large natural debris (i.e. drift wood, brush). Some large debris may require assistance for safe removal. Knowing where erosion is occurring on the shoreline will indicate where the highest water levels are and potential restoration sites for the future.

< **Storm Damage**



Current Date: 14-1-2022, 2:48 pm

Was the observation date different? [+ Add another date](#)

Number of Large Natural Debris *

1

Large Natural Debris seen *

Log, Driftwood, Brush

Number of Large Human-Made Debris*

< **Storm Damage**

Number of Large Human-Made Debris*

1

Human-Made Debris seen *

Barrel, Asphalt

Erosion*

Yes No

Beach Terracing*

Yes No

Notes

Large chunks of asphalt from parking lots is eroding onto beach

Procedure

- If there is no storm damage present on the shoreline move on to next report
- Fill out large human made debris and natural debris seen on the shoreline
- Indicate by clicked 'yes' or 'no' if there is erosion or beach terracing occurring at the monitoring location (see pictures as an example).

Example of Erosion:



Example of Beach Terracing:




Human Activities

Background

The Lake Huron shoreline has always been a place of recreation and relaxation in the hot Ontario summer months. Many beach communities are known for specific recreational pursuits, while others are used for a wide range of activities.

As summers become hotter and more and more people move to the shoreline, we expect a greater number of people to visit the Lake Huron coast and visit more frequently. This may have detrimental impacts to coastal ecosystems. By monitoring human activities, we can better understand how the shoreline is being used and by how many people over time.

< **HumanActivities**



Current Date: 14-1-2022, 2:45 pm

Was the observation date different? [+ Add another date](#)

People on beach *

Water activities (no motor) *


Water activities (motor) *

< **HumanActivities**

Motorized vehicles (on beach) *

Dogs on beach *

Notes



Procedures

- If there is no activity in any category move on to the next report
- Estimate how many of each activity is observed on the shoreline at the time of your reporting

Zeros can be used once the report has been started

Events and Occurrences:

Living and visiting the lake often shows us some strange and unique occurrences such as pollution spills, fish and bird die-offs, massive erosion events or species at risk nesting and migration. It is important to collect this information so we can inform our partner organizations and find solutions if there is an environmental risk or a rare species to monitor.

Pollution Hotline

The Ontario Ministry of the Environment and Climate Change has a toll-free, 24-hour public hotline for reporting spills and/or acts of pollution. This service is available at **1-800-268-6060**. In addition to locating polluters from callers' tips, the hotline is also used to gather information on new and emerging environmental issues. Hotline callers may choose to remain anonymous.

Illegal harm to plants and animals

The Ministry of Natural Resources and Forestry has a toll-free, public hotline for reporting illegal harm to plants and animals protected by legislation in Ontario. This service is available at **1-877-TIPS-MNR (847-7667)**. Use this line if you witness an illegal act that harms an endangered or threatened species in Ontario. (See the Species at Risk section for more information).

If you do contact either hotline, please be sure to inform us of the situation you are reporting immediately after you have notified the MOECC/MNRF. Please phone 226-421-3029 or 519-523-4478, or email coastalcentre@lakehuron.ca.

Wildlife Die-off Events

- If you see significant numbers of dead birds or bats in one location contact the
 - **Canadian Cooperative Wildlife Health Centre: 1-866-673-4781**
- If you discover a fish die-off, contact the
 - **Ministry of Natural Resources and Forestry: 1-800-667-1940**
- If you suspect the fish died as a result of a spill, call the
 - **Ministry of the Environment, Conservation and Parks Spills Action Centre: 1-800-268-6060**

Piping Plover Observations

All Piping Plover sightings should be immediately reported to Bird Studies Canada. You can contact Bird Studies Canada at: **ontarioplovers@birdscanada.ca or 519-586-3531 ext. 128**

More Resources

More information on Species at Risk in Ontario can be found on the Ontario Ministry of Natural Resources and Forestry website: <http://www.ontario.ca/environment-and-energy/species-risk-ontario-list>.

Thank you to the generous sponsors of the Coast Watchers Program

