



COAST WATCHERS

THE EYES AND THE EARS OF THE COAST

2021 TRAINING
Lake Huron Centre for Coastal
Conservation

GENEROUSLY FUNDED BY...



BrucePower[™]
Innovation at work



ABOUT THE COASTAL CENTRE

NON-PROFIT

charitable organization established in 1998

SCIENCE

based coastal restoration, education and research

STAFF

3 staff

Board of Directors

Technical Advisors

Co-op Students & Interns



COAST WATCHERS CITIZEN SCIENCE PROGRAM



Entering our 16th season (2021)

The long-term data set allows us to track atmospheric conditions and qualitative measurements along Lake Huron shores.

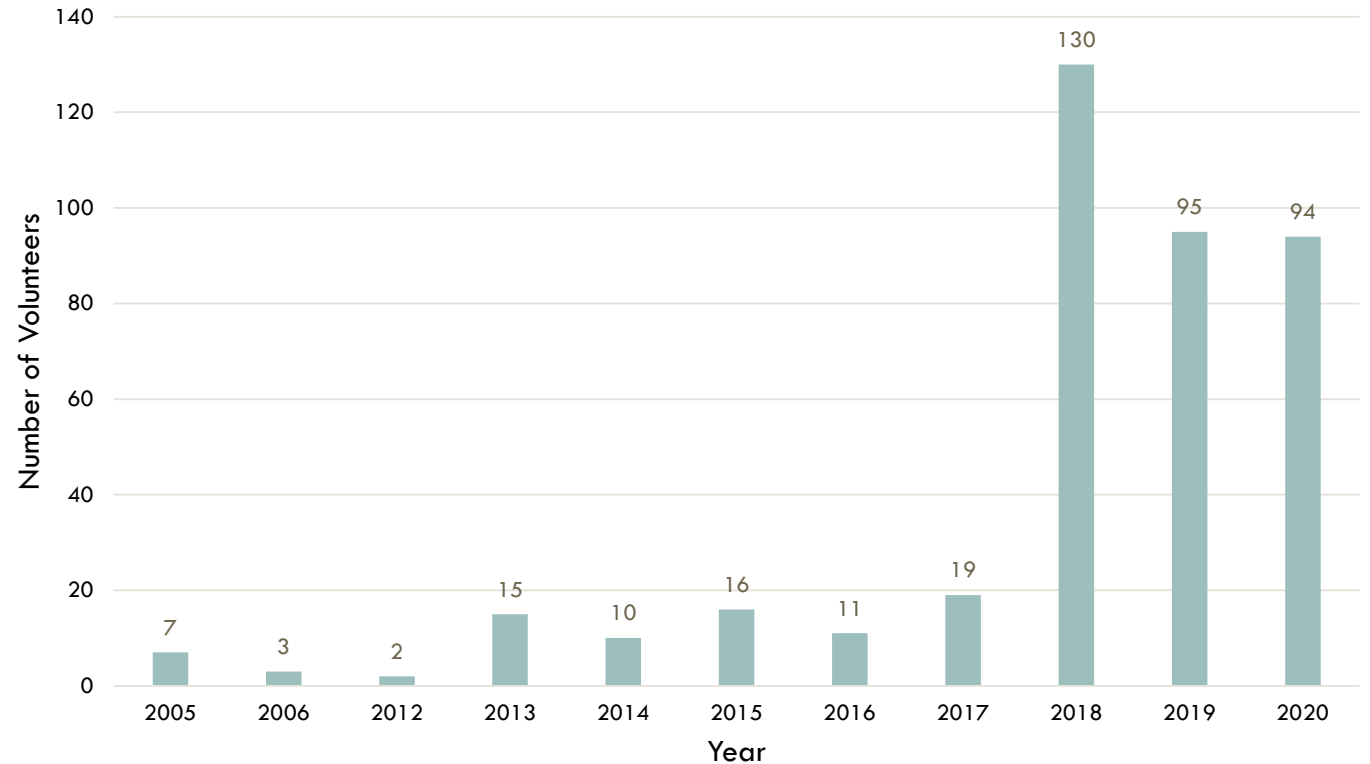
Results direct our programs and the projects we put on, i.e. beach clean ups, education programs, municipal partnerships.

GROWTH IN VOLUNTEERISM

More coastal citizens want to contribute to science.

Individuals are more aware of what they are seeing, and how it affects coastal health.

Individuals want to have a hand in directing environmental efforts in their community.



2020

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LET'S GET STARTED!

www.lakehuron.ca/cwtraining

Required paperwork

- Liability form
- Release form

Monitoring area/ shoreline property address

- **GPS coordinates** (or Google Earth link to location)

Equipment loan and return policies



16th Annual Monitoring Season

**LAKE HURON CENTRE FOR
COASTAL CONSERVATION**

HEALTH AND SAFETY

Use the “Buddy system” – tell someone where you are going

Bring a cell phone and your safety whistle

DO NOT monitor during a thunderstorm

DO NOT go into the water if you feel unsafe

Know your limits, your safety is most important.

COVID-19... Do not go onto closed shoreline areas.
Please obey the recommendations by local health
authorities

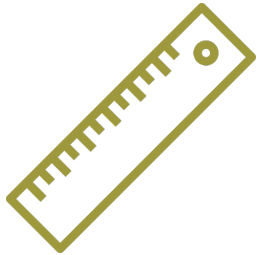


OUR EXPECTATIONS



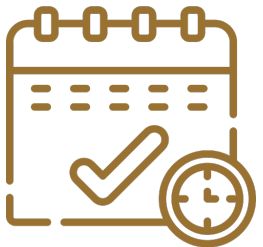
BE THE EYES AND EARS OF THE COAST

- Report shoreline conditions accurately and without bias



WHAT GETS MEASURED, GETS MANAGED

- Make sure the data card is filled out completely and correctly
- (if it is zero, put a zero, don't leave it blank)



CONSISTENCY IS KEY

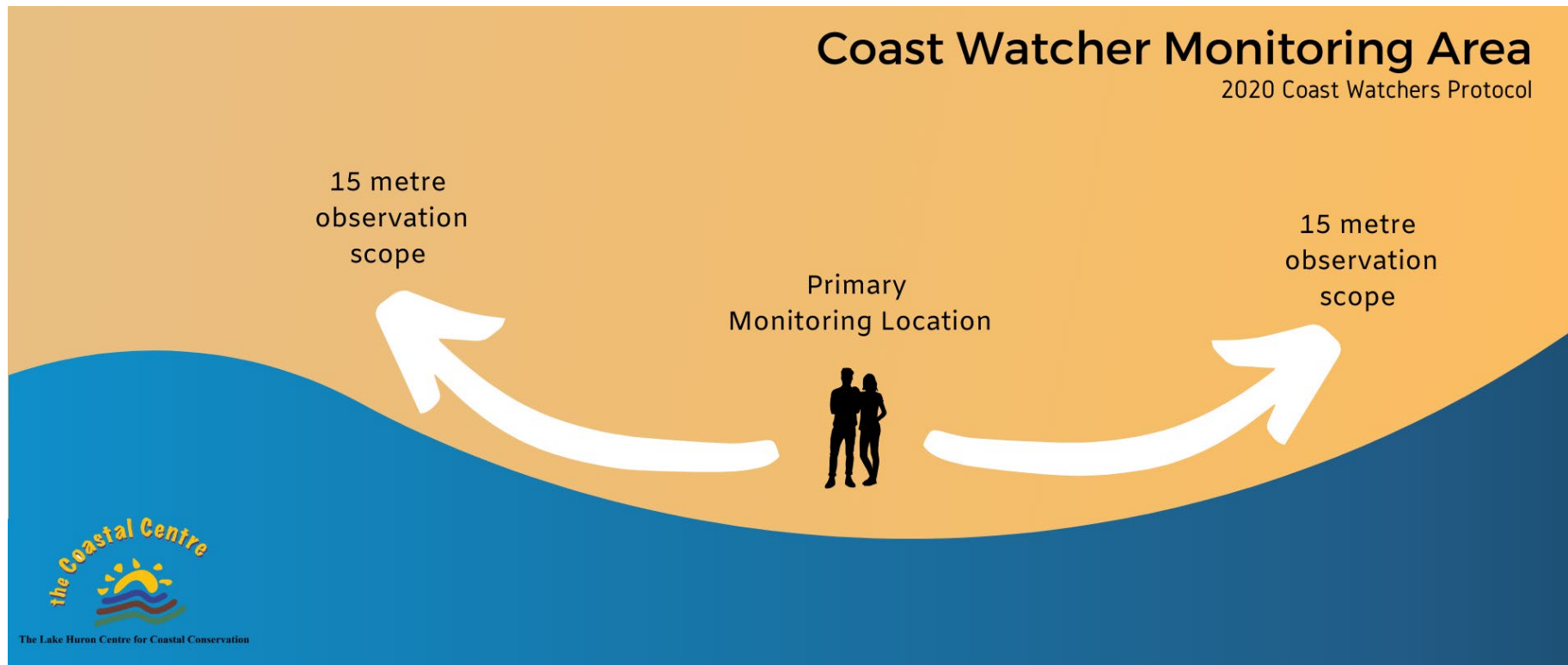
- Volunteers must complete their monitoring the same time and same day of the week for the whole monitoring season May 1 – Oct 31 (unless extenuating circumstances).
- If you are away for more than 2-weeks, please find a buddy who can monitor on your behalf

WHERE TO MONITOR?

Pick a spot on the coast that is relevant for you. (take a GPS point or google your location)

Monitor from that exact spot every time (your Primary Monitoring Location).

Observation data is recorded 15-m on either side of the primary monitoring location.

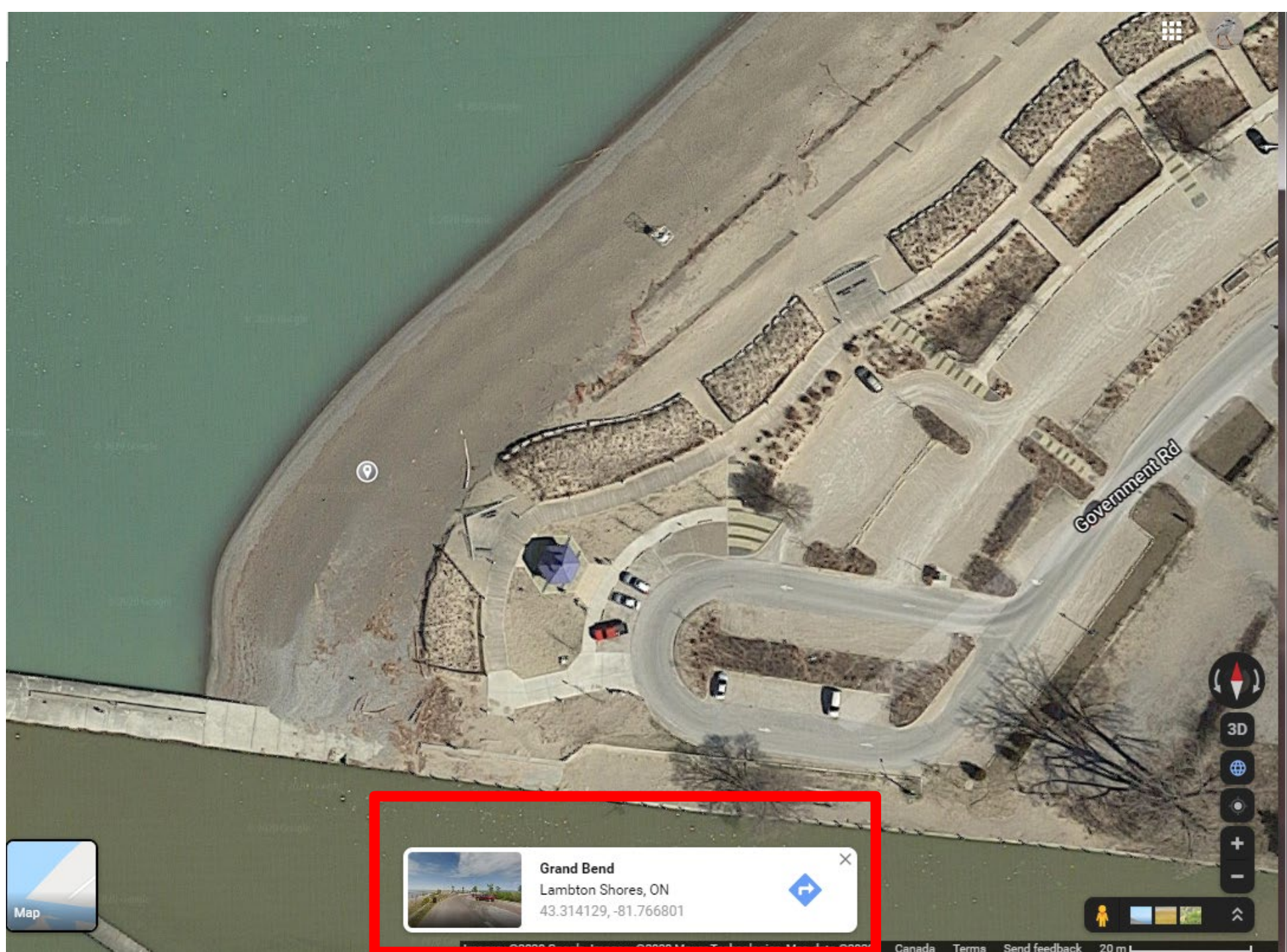


YOUR LOCATION

Your location is:

"West of the
Pavillion at the
peir in Grand
Bend Main
Beach"

43.314129,
-81.766801



RECORDING THE DATA

Field data sheets

Fill out ALL fields in the data sheet.

If there is no wildlife, circle NO or write "none"

If you are unsure of species, you can just write,
One bird, species unknown

**A ZERO IS JUST AS IMPORTANT AS ANY
OTHER NUMBER!**



FIELD DATA SHEET



COAST WATCHER NAME: _____

COAST WATCHER #: _____

DATE (dd/mm/yr): _____

TIME (am / pm): _____

Bird Studies Canada: 519-586-3531 ext 128

Lake Huron Centre for Coastal Conservation: 226-421-3029

CITIZEN SCIENCE MONITORING

Is the horizon visible?	YES	NO	Wave height (beaufort scale)
Wind Direction (Degree)			Wave Direction (Degree)
Water Temp (*C)			Air Temp (*C)

KESTREL MEASUREMENTS*

Current Wind Speed:	Max Wind Speed:	Avg. Wind Speed:
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WILDLIFE EVENTS (take pictures)

Species name or type (fish, bird, reptile, etc.)	Alive	Dead	Decomposing
<i>Species List</i>	#	#	#

PLASTIC WATCH (take pictures)

Plastic wash up?	Yes	No
Beach clean-up needed?	Yes	No
Beach clean-up done?	Yes	No
Pounds of litter removed:		
Most common types of litter:		

SPECIES AT RISK (take pictures)**

Species (list)	#

ALGAE BLOOMS (take pictures)

Location	Visible	Length (m)	Width (m)
In Water	yes no		
On Beach	yes no		
Other (notes)			

STORM DAMAGE (take pictures)

Activity	Visible (checkmark)	Type
Large Natural Debris		
Large Human-made Debris		
Erosion or Beach Terracing		

HUMAN ACTIVITIES

Activity	#
People on Beach	
Water activities (no motor)	

FIELD DATA SHEET

Species name or type (fish, bird, reptile, etc.)	Alive	Dead	Decomposing
<i>Species List</i>	#	#	#

Plastic wash up?	Yes	No
Beach clean-up needed?	Yes	No
Beach clean-up done?	Yes	No
Pounds of litter removed:		
Most common types of litter:		

SPECIES AT RISK (take pictures)**	
Species (list)	#

ALGAE BLOOMS (take pictures)			
Location	Visible	Length (m)	Width (m)
In Water	yes no		
On Beach	yes no		
Other (notes)			

STORM DAMAGE (take pictures)		
Activity	Visible (checkmark)	Type
Large Natural Debris		
Large Human-made Debris		
Erosion or Beach Terracing		

HUMAN ACTIVITIES	
Activity	#
People on Beach	
Water activities (no motor)	
Water activities (motor)	
Motorized vehicles (on beach)	
Dogs on Beach	
Other	

PHOTOGRAPHS	
Image of:	CW#_YEAR_MM_DD_PHOTO#

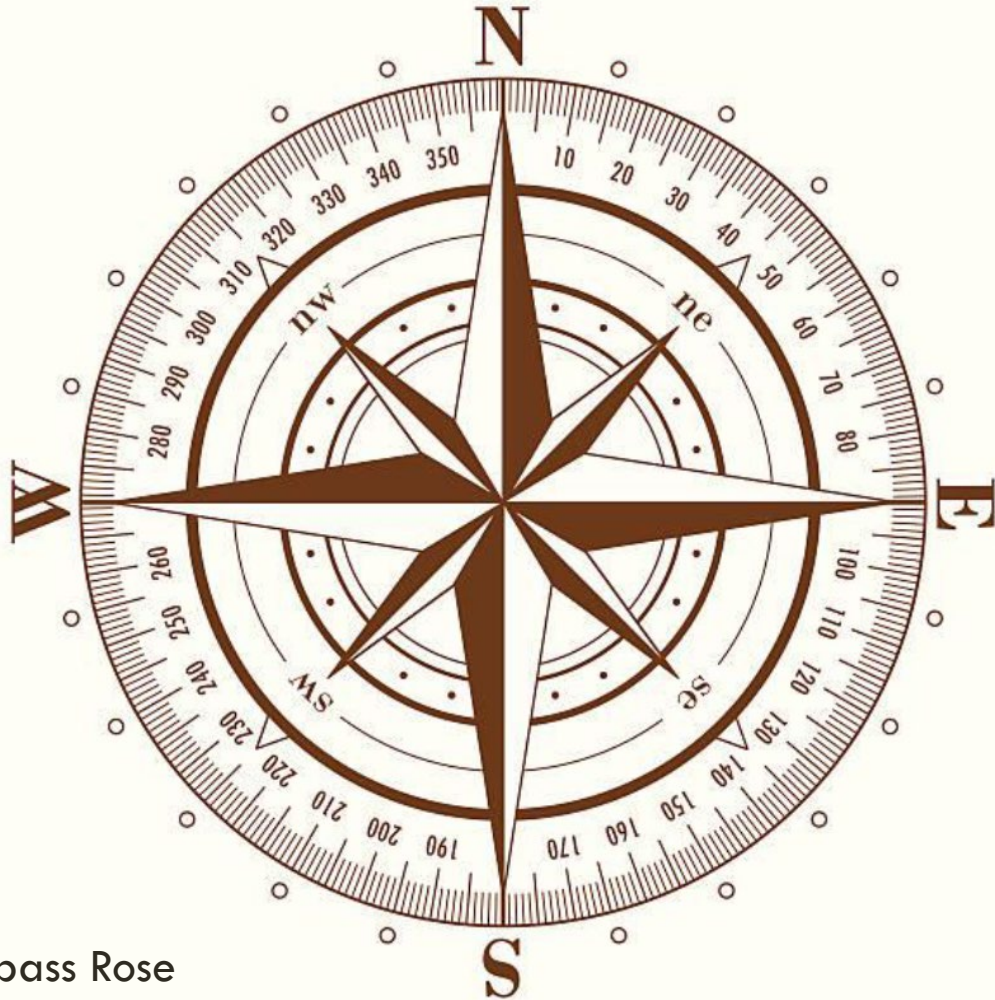
OTHER OBSERVATIONS

*All wind speed data should be collected using a Kestrel 2000 Anemometer for consistency

**All Piping Plover sightings should be recorded and immediately reported to Bird Studies Canada

Thank you for being a Coast Watcher!

EQUIPMENT



Compass Rose

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

EQUIPMENT




Kestrel Wind Meter



Pool
Thermometer

QUANTITATIVE MEASUREMENTS

Wind Direction

		COAST WATCHER NAME: _____		COAST WATCHER #: _____	
DATE (dd/mm/yr): _____		TIME (am / pm): _____			
<small>Bird Studies Canada: 519-596-3531 ext 128 Lake Huron Centre for Coastal Conservation: 226-421-3029</small>					
CITIZEN SCIENCE MONITORING					
Wave height (beaufort scale)		Wave Direction (Degree)			
Wind Direction (Degree)		Air Temp (*C)			
Water Temp (*C)					
KESTREL MEASUREMENTS*					
Current Wind Speed:		Max Wind Speed:		Avg. Wind Speed:	
WILDLIFE EVENTS (take pictures)			PLASTIC WATCH (take pictures)		
Species name or type (fish, bird, reptile, etc.)	Alive	Dead	Decomposing	Plastic wash up?	Yes No
Species List	#	#	#	Beach clean-up needed?	Yes No
				Beach clean-up done?	Yes No
				Pounds of litter removed:	
				Most common types of litter:	
SPECIES AT RISK (take pictures)**			ALGAE BLOOMS (take pictures)		
Species (list)	#		Location	Visible	Length (m) Width (m)
			In Water	yes no	
			On Beach	yes no	
			Other (notes)		
STORM DAMAGE (take pictures)			HUMAN ACTIVITIES		
Activity	Visible (checkmark)	Type	Activity	#	
Large Natural Debris			People on Beach		
Large Human-made Debris			Water activities (no motor)		
Erosion or Beach Terracing			Water activities (motor)		
PHOTOGRAPHS			Motorized vehicles (on beach)		
Image of:	CWR_YEAR_MM_DD_PHOTO#		Dogs on Beach		
			Other		
OTHER OBSERVATIONS					

*All wind speed data should be collected using a Kestrel 2000 Anemometer for consistency

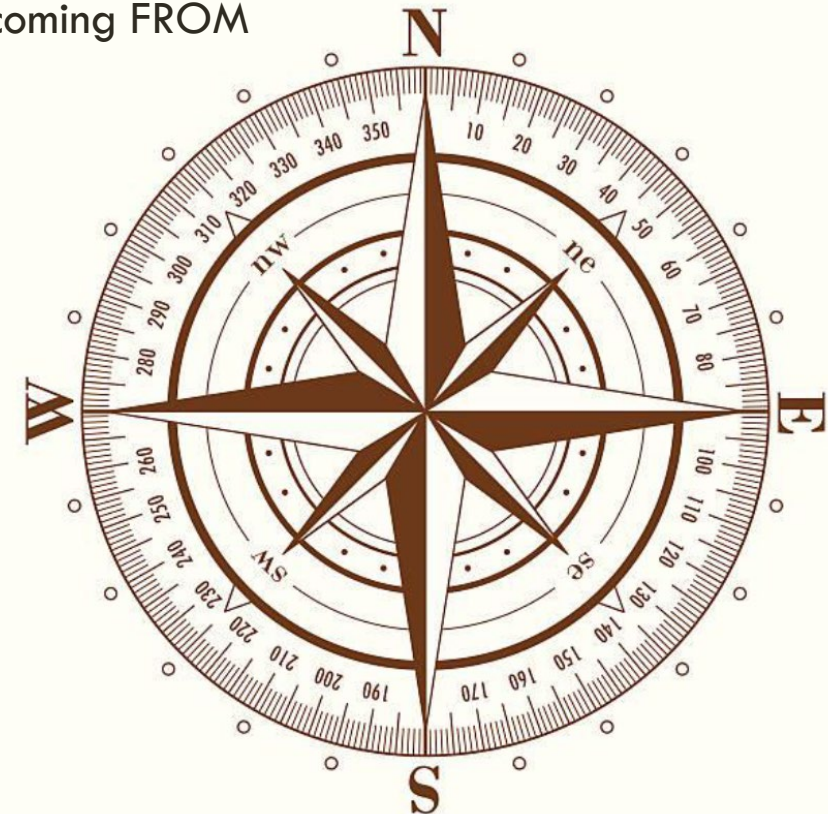
**All Piping Plover sightings should be recorded and immediately reported to Bird Studies Canada

Thank you for being a Coast Watcher!

Stand facing north, with compass rose pointing north


Take measurement where the wind is coming FROM

Note down the degrees (i.e. 210).



QUANTITATIVE MEASUREMENTS

Wave Direction

		COAST WATCHER NAME: _____		COAST WATCHER #: _____	
DATE (dd/mm/yr): _____		TIME (am / pm): _____			
<small>Bird Studies Canada: 519-596-3531 ext 128 Lake Huron Centre for Coastal Conservation: 226-421-3029</small>					
CITIZEN SCIENCE MONITORING					
Is the horizon visible? YES NO		Wave Direction (Degree) 			
Wind Direction (Degree)		Air Temp (*C)			
Water Temp (*C)		Air Temp (*C)			
KESTREL MEASUREMENTS*					
Current Wind Speed: _____		Max Wind Speed: _____		Avg. Wind Speed: _____	
WILDLIFE EVENTS (take pictures)			PLASTIC WATCH (take pictures)		
Species name or type (fish, bird, reptile, etc.)	Alive	Dead	Decomposing	Plastic wash up?	Yes No
Species List	#	#	#	Beach clean-up needed?	Yes No
				Beach clean-up done?	Yes No
				Pounds of litter removed:	
				Most common types of litter:	
SPECIES AT RISK (take pictures)**			ALGAE BLOOMS (take pictures)		
Species (list)	#		Location	Visible	Length (m) Width (m)
			In Water	yes no	
			On Beach	yes no	
			Other (notes)		
STORM DAMAGE (take pictures)			HUMAN ACTIVITIES		
Activity	Visible (checkmark)	Type	Activity	#	
Large Natural Debris			People on Beach		
Large Human-made Debris			Water activities (no motor)		
Erosion or Beach Terracing			Water activities (motor)		
PHOTOGRAPHS			Motorized vehicles (on beach)		
Image of:	CWR_YEAR_MM_DD_PHOTO#		Dogs on Beach		
			Other		
OTHER OBSERVATIONS					

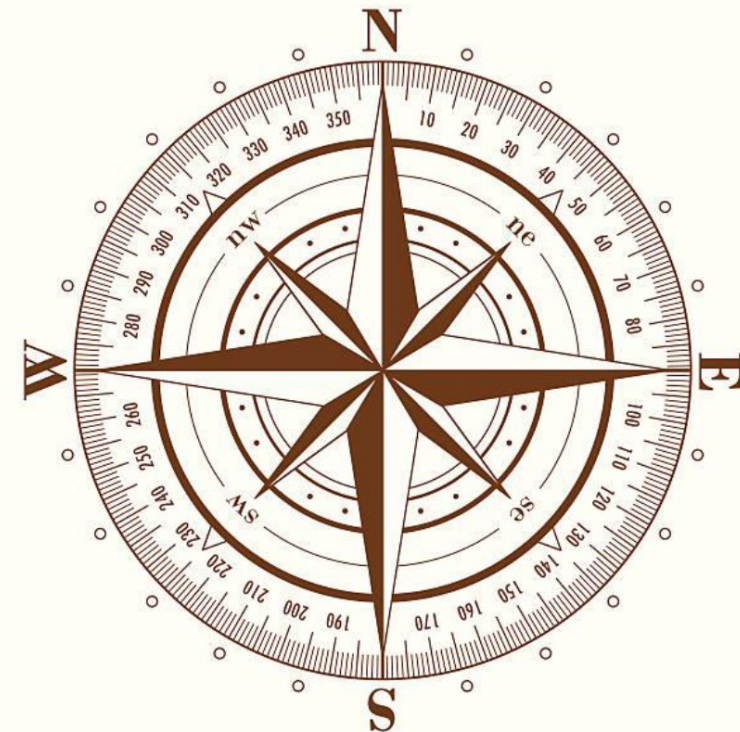
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Thank you for being a Coast Watcher!


Most often the wave direction will be similar to Wind direction.

Please record the same way you record wind direction



QUANTITATIVE MEASUREMENTS

Air Temperature

		COAST WATCHER NAME: _____		COAST WATCHER #: _____	
DATE (dd/mm/yr): _____		TIME (am / pm): _____			
<small>Bird Studies Canada: 519-596-3531 ext 128 Lake Huron Centre for Coastal Conservation: 226-421-3029</small>					
CITIZEN SCIENCE MONITORING					
Is the horizon visible?		YES	NO	Wave height (beaufort scale)	
Wind Direction (Degree)					
Water Temp (*C)		Air Temp (*C)			
KESTREL MEASUREMENTS*					
Current Wind Speed:		Max Wind Speed:		Avg. Wind Speed:	
WILDLIFE EVENTS (take pictures)			PLASTIC WATCH (take pictures)		
Species name or type (fish, bird, reptile, etc.)			Plastic wash up?		
Species List			Beach clean-up needed?		
			Beach clean-up done?		
			Pounds of litter removed:		
			Most common types of litter:		
SPECIES AT RISK (take pictures)**			ALGAE BLOOMS (take pictures)		
Species (list)			Location		
			Visible		
			Length (m)		
			Width (m)		
			In Water		
			On Beach		
			Other (notes)		
STORM DAMAGE (take pictures)			HUMAN ACTIVITIES		
Activity			Activity		
Visible (checkmark)			#		
Type					
Large Natural Debris			People on Beach		
Large Human-made Debris			Water activities (no motor)		
Erosion or Beach Terracing			Water activities (motor)		
			Motorized vehicles (on beach)		
			Dogs on Beach		
			Other		
PHOTOGRAPHS					
Image of:			CWR_YEAR_MM_DD_PHOTO#		
OTHER OBSERVATIONS					

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Thank you for being a Coast Watcher!


If you have a Kestrel wind meter, it will have a thermometer built in, and therefore can use this metric.

If you don't have a Kestrel, use the pool thermometer before submerging it for the water temperature reading.



QUANTITATIVE MEASUREMENTS

Water Temperature

 **COAST WATCHER NAME:** _____ **COAST WATCHER #:** _____

DATE (dd/mm/yr): _____ **TIME** (am / pm): _____

Bird Studies Canada: 519-596-3531 ext 128
Lake Huron Centre for Coastal Conservation: 226-421-3029

CITIZEN SCIENCE MONITORING			
Is the horizon visible?	YES	NO	Wave height (beaufort scale)
			Wave Direction (Degree)
Water Temp (*C)			Air Temp (*C)

KESTREL MEASUREMENTS*			
Current Wind Speed:	Max Wind Speed:	Avg. Wind Speed:	

WILDLIFE EVENTS (take pictures)			
Species name or type (fish, bird, reptile, etc.)	Alive	Dead	Decomposing
Species List	#	#	#

PLASTIC WATCH (take pictures)			
Plastic wash up?	Yes	No	
Beach clean-up needed?	Yes	No	
Beach clean-up done?	Yes	No	
Pounds of litter removed:			
Most common types of litter:			

SPECIES AT RISK (take pictures)**	
Species (list)	#

ALGAE BLOOMS (take pictures)			
Location	Visible	Length (m)	Width (m)
In Water	yes no		
On Beach	yes no		
Other (notes)			

STORM DAMAGE (take pictures)		
Activity	Visible (checkmark)	Type
Large Natural Debris		
Large Human-made Debris		
Erosion or Beach Terracing		

HUMAN ACTIVITIES	
Activity	#
People on Beach	
Water activities (no motor)	
Water activities (motor)	
Motorized vehicles (on beach)	
Dogs on Beach	
Other	

PHOTOGRAPHS	
Image of:	CWR_YEAR_MM_DD_PHOTO#

OTHER OBSERVATIONS	

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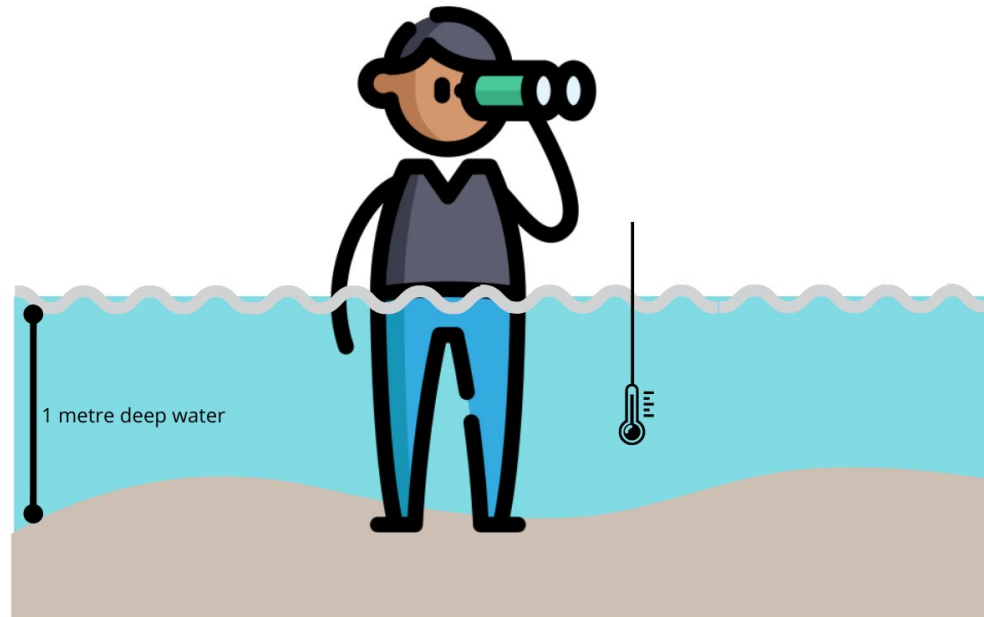
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Thank you for being a Coast Watcher!

Wade into the water to a depth of approximately 1m.

Hold the thermometer by the string so it dangles halfway between the top of the water and the lake bottom.

Hold for 60 seconds, and take measurement without removing thermometer from water. Record reading in CELCIUS.



Submitted by CW019

QUANTITATIVE MEASUREMENTS

Wind Measurements

coast watchers COMMUNITY VOLUNTEER PROGRAM		COAST WATCHER NAME:	COAST WATCHER #:
DATE (dd/mm/yr):		TIME (am / pm):	
Bird Studies Canada: 519-596-3531 ext 128 Lake Huron Centre for Coastal Conservation: 226-421-3029			
CITIZEN SCIENCE MONITORING			
Is the horizon visible?	YES	NO	Wave height (beaufort scale)
Wind Direction (Degree)			Wave Direction (Degree)
Water Temp (*C)			Air Temp (*C)
KESTREL MEASUREMENTS*			
Current Wind Speed:	Max Wind Speed:	Avg. Wind Speed:	
WILDLIFE EVENTS (take pictures)			
Species name or type (fish, bird, reptile, etc.)	Alive	Dead	Decomposing
Species List	#	#	#
PLASTIC WATCH (take pictures)			
Plastic wash up?	Yes	No	
Beach clean-up needed?	Yes	No	
Beach clean-up done?	Yes	No	
Pounds of litter removed:			
Most common types of litter:			
SPECIES AT RISK (take pictures)**			
Species (list)	#		
ALGAE BLOOMS (take pictures)			
Location	Visible	Length (m)	Width (m)
In Water	yes no		
On Beach	yes no		
Other (notes)			
STORM DAMAGE (take pictures)			
Activity	Visible (checkmark)	Type	
Large Natural Debris			
Large Human-made Debris			
Erosion or Beach Terracing			
HUMAN ACTIVITIES			
Activity		#	
People on Beach			
Water activities (no motor)			
Water activities (motor)			
Motorized vehicles (on beach)			
Dogs on Beach			
Other			
PHOTOGRAPHS			
Image of:	CWR_YEAR_MM_DD_PHOTO#		
OTHER OBSERVATIONS			

*All wind speed data should be collected using a Kestrel 2000 Anemometer for consistency

**All Piping Plover sightings should be recorded and immediately reported to Bird Studies Canada

Face the water, wait one minute to allow the instrument to capture accurate measurements at chest or head height.


Using arrow buttons, record the current, maximum, and average wind speeds



Thank you for being a Coast Watcher!

QUALITATIVE MEASUREMENTS

Visibility

		COAST WATCHER NAME: _____		COAST WATCHER #: _____	
DATE (dd/mm/yr): _____		TIME (am / pm): _____			
<small>Bird Studies Canada: 519-506-3531 ext 128 Lake Huron Centre for Coastal Conservation: 226-421-3029</small>					
CITIZEN SCIENCE MONITORING					
Is the horizon visible? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Wave height (beaufort scale) _____			
Wind Direction (Degree) _____		Wave Direction (Degree) _____			
Water Temp (*C) _____		Air Temp (*C) _____			
KESTREL MEASUREMENTS*					
Current Wind Speed: _____		Max Wind Speed: _____		Avg. Wind Speed: _____	
WILDLIFE EVENTS (take pictures)				PLASTIC WATCH (take pictures)	
Species name or type (fish, bird, reptile, etc.)	Alive	Dead	Decomposing	Plastic wash up?	Yes No
Species List	#	#	#	Beach clean-up needed?	Yes No
				Beach clean-up done?	Yes No
				Pounds of litter removed:	
				Most common types of litter:	
SPECIES AT RISK (take pictures)**				ALGAE BLOOMS (take pictures)	
Species (list)	#			Location	Visible Length (m) Width (m)
				In Water	yes no
				On Beach	yes no
STORM DAMAGE (take pictures)				Other (notes)	
Activity	Visible (checkmark)	Type		HUMAN ACTIVITIES	
Large Natural Debris				Activity	#
Large Human-made Debris				People on Beach	
Erosion or Beach Terracing				Water activities (no motor)	
				Water activities (motor)	
				Motorized vehicles (on beach)	
				Dogs on Beach	
				Other	
PHOTOGRAPHS					
Image of:	CW#_YEAR_MM_DD_PHOTO#				
OTHER OBSERVATIONS					

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**All Piping Plover sightings should be recorded and immediately reported to Bird Studies Canada

Thank you for being a Coast Watcher!



VISIBILITY- Y

Horizon is clearly visible



VISIBILITY - N

Horizon is not clearly visible

QUALITATIVE MEASUREMENTS

Wave Height

COAST WATCHERS ENVIRONMENT VOLUNTEER PROGRAM			COAST WATCHER #:
DATE (dd/mm/yyyy):		TIME (am / pm):	
Bird Studies Canada: 519-586-3531 ext 128			
Lake Huron Centre for Coastal Conservation: 226-421-3029			
CITIZEN SCIENCE MONITORING FORM			
Is the horizon visible?		YES _____ NO _____	Wave height (beaufort scale)
Wind Direction (Degree)		Wave Direction (Degree)	
Water Temp (*C)		Air Temp (*C)	
KESTREL MEASUREMENTS*			
Current Wind Speed:		Max Wind Speed:	Avg. Wind Speed:
WILDLIFE EVENTS (take pictures)		PLASTIC WATCH (take pictures)	
Species name or type (fish, bird, reptile, etc.)	Alive Dead Decomposing		
Species List	# # #	Plastic wash up?	Yes No
		Beach clean-up needed?	Yes No
		Beach clean-up done?	Yes No
		Pounds of litter removed:	
		Most common types of litter:	
SPECIES AT RISK (take pictures)**		ALGAE BLOOMS (take pictures)	
Species (list)	#	Location	Visible Length (m) Width (m)
		In Water	yes no
		On Beach	yes no
		Other (notes)	
STORM DAMAGE (take pictures)			
Activity	Visible (checkmark)	Type	
Large Natural Debris			
Large Human-made Debris			
Erosion or Beach Terracing			
PHOTOGRAPHS			
Image of:	CW#_YEAR_MM_DD_PHOTO#		
HUMAN ACTIVITIES			
Activity	#		
People on Beach			
Water activities (no motor)			
Water activities (motor)			
Motorized vehicles (on beach)			
Dogs on Beach			
Other			
OTHER OBSERVATIONS			

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****All Piping Plover sightings should be recorded and immediately reported to Bird Studies Canada**

Thank you for being a Coast Watcher!



BEAUFORT SCALE 1

Ripples, but no wavelets.



BEAUFORT SCALE 4

Small waves, some white-caps




BEAUFORT SCALE 6

Large waves, many white-caps

QUALITATIVE MEASUREMENTS

Algae presence

 **coast watchers**
COMMUNITY VOLUNTEER PROGRAM

COAST WATCHER NAME: _____ COAST WATCHER #: _____

DATE (dd/mm/yr): _____ TIME (am / pm): _____

Bird Studies Canada: 519-586-5531 ext 128
Lake Huron Centre for Coastal Conservation: 226-421-3029

CITIZEN SCIENCE MONITORING

Is the horizon visible?	YES	NO	Wave height (beaufort scale)
Wind Direction (Degree)			Wave Direction (Degree)
Water Temp (*C)			Air Temp (*C)

KESTREL MEASUREMENTS*

Current Wind Speed:	Max Wind Speed:	Avg. Wind Speed:
---------------------	-----------------	------------------

WILDLIFE EVENTS (take pictures)

Species name or type (fish, bird, reptile, etc.)	Alive	Dead	Decomposing
Species List	#	#	#

PLASTIC WATCH (take pictures)

Plastic wash up?	Yes	No
Beach clean-up needed?	Yes	No
Beach clean-up done?	Yes	No
Pounds of litter removed:		
Most common types of litter:		

SPECIES AT RISK (take pictures)**

Species (list)	#

ALGAE BLOOMS (take pictures)

Location	Visible	Length (m)	Width (m)
In Water	yes no		
On Beach	yes no		
Other (notes)			

STORM DAMAGE (take pictures)

Activity	Visible (checkmark)	Type
Large Natural Debris		
Large Human-made Debris		
Erosion or Beach Terracing		

HUMAN ACTIVITIES

Activity	#
People on Beach	
Water activities (no motor)	
Water activities (motor)	
Motorized vehicles (on beach)	
Dogs on Beach	
Other	

PHOTOGRAPHS

Image of:	CW#_YEAR_MM_DD_PHOTO#

OTHER OBSERVATIONS

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Thank you for being a Coast Watcher!



ALGAE ON LAND


Measure length and width

ALGAE IN WATER

Measure length and width

QUALITATIVE MEASUREMENTS

Plastic Pollution


coast watchers
COMMUNITY VOLUNTEER PROGRAM

COAST WATCHER NAME: _____ COAST WATCHER #: _____

DATE (dd/mm/yr): _____ TIME (am / pm): _____

Bird Studies Canada: 519-586-3531 ext 120
Lake Huron Centre for Coastal Conservation: 226-421-3029

CITIZEN SCIENCE MONITORING			
Is the horizon visible?	YES	NO	Wave height (beaufort scale)
Wind Direction (Degree)			Wave Direction (Degree)
Water Temp (*C)			Air Temp (*C)

KESTREL MEASUREMENTS*			
Current Wind Speed:	Max Wind Speed:	Avg. Wind Speed:	

WILDLIFE EVENTS (take pictures)			
Species name or type (fish, bird, reptile, etc.)	Alive	Dead	Decomposing
Species List	#	#	#

PLASTIC WATCH (take pictures)			
Plastic wash up?	Yes	No	
Beach clean-up needed?	Yes	No	
Beach clean-up done?	Yes	No	
Pounds of litter removed:			
Most common types of litter:			

SPECIES AT RISK (take pictures)**	
Species (list)	#

ALGAE BLOOMS (take pictures)			
Location	Visible	Length (m)	Width (m)
In Water	yes no		
On Beach	yes no		
Other (notes)			

STORM DAMAGE (take pictures)		
Activity	Visible (checkmark)	Type
Large Natural Debris		
Large Human-made Debris		
Erosion or Beach Terracing		

HUMAN ACTIVITIES	
Activity	#
People on Beach	
Water activities (no motor)	
Water activities (motor)	
Motorized vehicles (on beach)	
Dogs on Beach	
Other	

PHOTOGRAPHS	
Image of:	CW#_YEAR_MM_DD_PHOTO#

OTHER OBSERVATIONS	

*All wind speed data should be collected using a Kestrel 2000 Anemometer for consistency
**All Piping Plover sightings should be recorded and immediately reported to Bird Studies Canada

Thank you for being a Coast Watcher!



MICRO PLASTICS

Plastic pieces that are smaller than your finger tip
(technically 5mm)



SHORELINE LITTER

Medium sized litter that can be easily picked up



LARGE DEBRIS

Debris that is larger than a bread box.

Habitat alterations



Bird Studies Canada: 519-586-3531 ext 128
Lake Huron Centre for Coastal Conservation: 226-421-3029

****All Piping Plover sightings should be recorded and immediately reported to Bird Studies Canada**

Thank you for being a Coast Watcher!




This photo shows
beach grooming and
vehicle trails

Trees or groundcover
vegetation removed

New stairs built down bluff

QUALITATIVE MEASUREMENTS

Human Activities

	COAST WATCHER NAME: _____	COAST WATCHER #: _____
	DATE (dd/mm/yr): _____	TIME (am / pm): _____
Bird Studies Canada: 519-586-3531 ext 328 Lake Huron Centre for Coastal Conservation: 226-421-3029		
CITIZEN SCIENCE MONITORING		
Is the horizon visible?	YES NO	Wave height (beaufort scale)
Wind Direction (Degree)		Wave Direction (Degree)
Water Temp (*C)		Air Temp (*C)
KESTREL MEASUREMENTS*		
Current Wind Speed:	Max Wind Speed:	Avg. Wind Speed:
WILDLIFE EVENTS (take pictures)		PLASTIC WATCH (take pictures)
Species name or type (fish, bird, reptile, etc.)	Alive Dead Decomposing	Plastic wash up? Yes No
Species List	# # #	Beach clean-up needed? Yes No
		Beach clean-up done? Yes No
		Pounds of litter removed:
		Most common types of litter:
SPECIES AT RISK (take pictures)**		ALGAE BLOOMS (take pictures)
Species (list)	#	Location Visible Length (m) Width (m)
		In Water yes no
		On Beach yes no
		Other (notes)
STORM DAMAGE (take pictures)		HUMAN ACTIVITIES
Activity Visible (checkmark) Type		Activity #
Large Natural Debris		People on Beach
Large Human-made Debris		Water activities (no motor)
Erosion or Beach Terracing		Water activities (motor)
PHOTOGRAPHS		Motorized vehicles (on beach)
Image of: _____	CW#_YEAR_MM_DD_PHOTO# _____	Dogs on Beach
		Other
OTHER OBSERVATIONS		

*All wind speed data should be collected using a Kestrel 2000 Anemometer for consistency


**All Piping Plover sightings should be recorded and immediately reported to Bird Studies Canada

Thank you for being a Coast Watcher!



QUALITATIVE MEASUREMENTS

Wildlife events and Species Reports

**coast watchers**
COMMITTEE FOR COASTAL CONSERVATION

COAST WATCHER NAME: _____ COAST WATCHER #: _____

DATE (dd/mm/yr): _____ TIME (am / pm): _____

Bird Studies Canada: 519-586-3531 ext 328
Lake Huron Centre for Coastal Conservation: 226-421-3029

CITIZEN SCIENCE MONITORING			
Is the horizon visible?	YES	NO	Wave height (beaufort scale)
Wind Direction (Degree)			Wave Direction (Degree)
Water Temp (*C)			Air Temp (*C)

KESTREL MEASUREMENTS*			
Current Wind Speed:	Max Wind Speed:	Avg. Wind Speed:	

WILDLIFE EVENTS (take pictures)			
Species name or type (fish, bird, reptile, etc.)	Alive	Dead	Decomposing
Species List	#	#	#

PLASTIC WATCH (take pictures)			
Plastic wash up?	Yes	No	
Beach clean-up needed?	Yes	No	
Beach clean-up done?	Yes	No	
Amounts of litter removed:			
Most common types of litter:			

SPECIES AT RISK (take pictures)**	
Species (list)	#

ALGAE BLOOMS (take pictures)			
Location	Visible	Length (m)	Width (m)
In Water	yes no		
On Beach	yes no		
Other (notes)			

STORM DAMAGE (take pictures)		
Activity	Visible (checkmark)	Type
Large Natural Debris		
Large Human-made Debris		
Erosion or Beach Terracing		

HUMAN ACTIVITIES	
Activity	#
People on Beach	
Water activities (no motor)	
Water activities (motor)	
Motorized vehicles (on beach)	
Dogs on Beach	
Other	

PHOTOGRAPHS	
Image of:	CW#_YEAR_MM_DD_PHOTO#

OTHER OBSERVATIONS	

*All wind speed data should be collected using a Kestrel 2000 Anemometer for consistency


**All Piping Plover sightings should be recorded and immediately reported to Bird Studies Canada



Thank you for being a Coast Watcher!

QUALITATIVE MEASUREMENTS

Storm Damage

		COAST WATCHER NAME: _____		COAST WATCHER #: _____	
DATE (dd/mm/yr): _____		TIME (am / pm): _____			
Bird Studies Canada: 519-586-3531 ext 328 Lake Huron Centre for Coastal Conservation: 226-421-3029					
CITIZEN SCIENCE MONITORING					
Is the horizon visible? YES NO		Wave height (beaufort scale) _____			
Wind Direction (Degree) _____		Wave Direction (Degree) _____			
Water Temp (*C) _____		Air Temp (*C) _____			
KESTREL MEASUREMENTS*					
Current Wind Speed: _____		Max Wind Speed: _____		Avg. Wind Speed: _____	
WILDLIFE EVENTS (take pictures)					
Species name or type (fish, bird, reptile, etc.)		Alive	Dead	Decomposing	
Species List		#	#	#	
PLASTIC WATCH (take pictures)					
Plastic wash up?		Yes	No		
Beach clean-up needed?		Yes	No		
Beach clean-up done?		Yes	No		
Pounds of litter removed:					
Most common types of litter:					
SPECIES AT RISK (take pictures)**					
Species (list)		#			
ALGAE BLOOMS (take pictures)					
Location		Visible	Length (m)	Width (m)	
In Water		yes no			
On Beach		yes no			
Other (notes)					
STORM DAMAGE (take pictures)					
Activity		Visible (checkmark)	Type		
Large Natural Debris					
Large Human-made Debris					
Erosion or Beach Terracing					
HUMAN ACTIVITIES					
Activity		#			
People on Beach					
Water activities (no motor)					
Water activities (motor)					
Motorized vehicles (on beach)					
Dogs on Beach					
Other					
OTHER OBSERVATIONS					

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SPECIES ID GUIDES

REPTILES & AMPHIBIANS:

ontarionature.org/programs/citizen-science/reptile-amphibian-atlas/species/

BIRDS:

ebird.org/explore

Allaboutbirds.org/guide/search

MAMMALS:

www.inaturalist.org/guides/1327?taxon=848320

BUMBLE BEES:

<https://www.bumblebeewatch.org/app/#/species/profile>



iNaturalist [Q](#) [Explore](#) [Community](#) [More](#)

[Guides](#) / [Ontario Mammals](#)

Ontario Mammals [Offline access enabled](#) [Print](#)

A guide to the mammals of Ontario created to assist those participating in the Ontario Mammals project.

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TAXONOMY

Bumble Bee Watch [Sign In](#) [Sign Up](#)

[Home](#) [About](#) [Record a Sighting](#) [Bumble Bee Species](#) [Map](#) [Gallery](#) [Explore Data](#) [Resources](#)

Rusty-patched bumble bee
Bombus affinis

A photograph of a rusty-patched bumble bee on a purple flower. The bee has a yellow and black body with a rusty patch on its thorax.

Photo by Christy Stewart

Identifying Features
Status: Rare, Endangered in Canada

Two illustrations of bumble bees. The Queen bee is on the left, and the Worker bee is on the right. Both have yellow and black bodies with a rusty patch on the thorax.

- Queen: hair short and even. Hair on head entirely black; emerges early.
- Worker: rusty patch on T2, almost always completely surrounded by yellow hairs.

Range for this species

A map showing the range of the Rusty-patched bumble bee, which is primarily in the eastern United States and southeastern Canada.

Floral Associations


- Common Milkweed
- New Jersey Tea
- Purple Prairie Clover

Look Alike Species

- *B. griseocollis*
- *B. bimaculatus*

Bumble bee illustrations: Paul Williams (identification and color patterns) and Elaine Evans (bee body design).

SPECIES AT RISK



coast watchers
COMMUNITY VOLUNTEER PROGRAM

COAST WATCHER NAME: _____ COAST WATCHER #: _____

DATE (dd/mm/yr): _____ TIME (am / pm): _____

Bird Studies Canada: 519-506-3531 ext 128
Lake Huron Centre for Coastal Conservation: 226-421-3029

CITIZEN SCIENCE MONITORING			
Is the horizon visible?	YES	NO	Wave height (beaufort scale)
Wind Direction (Degree)			Wave Direction (Degree)
Water Temp (*C)			Air Temp (*C)

KESTREL MEASUREMENTS*		
Current Wind Speed:	Max Wind Speed:	Avg. Wind Speed:

WILDLIFE EVENTS (take pictures)			
Species name or type (fish, bird, reptile, etc.)	Alive	Dead	Decomposing
Species List	#	#	#

PLASTIC WATCH (take pictures)		
Plastic wash up?	Yes	No
Beach clean-up needed?	Yes	No
Beach clean-up done?	Yes	No
Pounds of litter removed:		
Most common types of litter:		

SPECIES AT RISK (take pictures)**	
Species (list)	#

STORM DAMAGE (take pictures)		
Activity	Visible (checkmark)	Type
Large Natural Debris		
Large Human-made Debris		
Erosion or Beach Terracing		

ALGAE BLOOMS (take pictures)			
Location	Visible	Length (m)	Width (m)
In Water	yes no		
On Beach	yes no		
Other (notes)			

HUMAN ACTIVITIES	
Activity	#
People on Beach	
Water activities (no motor)	
Water activities (motor)	
Motorized vehicles (on beach)	
Dogs on Beach	
Other	

PHOTOGRAPHS	
Image of:	CW#_YEAR_MM_DD_PHOTO#

OTHER OBSERVATIONS

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 **All Piping Plover sightings should be recorded and immediately reported to Bird Studies Canada

Thank you for being a Coast Watcher!

Information submitted to the Natural Heritage Information Centre, A provincial database for tracking species at risk.

<https://www.ontario.ca/page/species-risk-ontario>



Piping Plover
- Endangered



Snapping turtle – special concern



Pitchers Thistle- Threatened



Monarch Butterfly
- Special Concern

INVASIVE SPECIES



Garlic Mustard



Emerald Ash Borer

Information submitted to the Invasive Species Centre, a provincial database that tracks invasive species populations.

www.invasivespeciescentre.ca/learn/invasive-plant-species

Phragmites Australis



Invasive Species Centre

REPORT A SIGHTING

HOME WHO WE ARE WHAT WE DO LEARN NEWSROOM GET INVOLVED DONATE

COAST WATCHER NAME: COAST WATCHER #:

Search...

Contact Us

Learn About Invasive Species

Economic Impacts

Invasive Plants

Invasive Fish and Invertebrates

Aquatic Plants

Forest Pests and Pathogens

ISAW

Teacher Resources

Reference Resources

Risk Assessments

Invasive Plants

Invasive plants are non-native trees, shrubs, and herbaceous plants that are spread by global trade, human and animal transport and escaping from gardens. They invade forests and block out native plants from growing, which in turn decreases the available habitat for native wildlife. Many invasive plants cannot be used by wildlife for food which puts grazing pressures on the few native plants that remain. They also pose threats to agricultural fields, due to their ability to spread quickly, outcompete crop and forest plants, and deteriorate soil quality. The thick spread of invasive plants makes them costly and time consuming to remove once they have taken hold.

Giant Hogweed

Giant hogweed is a member of the carrot family and its resemblance to Queen Anne's lace caused it to become a garden ornamental. However, giant hogweed spreads easily and can establish along roadsides, ditches, and streams. Giant hogweed has a thick (3-8 cm in diameter) bright green stem with dark reddish purple spots and coarse white hairs at the base of the leaf stock. The plant can be 2-5.5 metres tall with broad leaves that are deeply lobed and serrated. It produces a large upside-down umbrella-shaped head up to 80 centimetres across with clusters of tiny white flowers from late spring to mid-summer. Giant hogweed has a phototoxic sap, that when exposed to light can cause severe burns.

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Thank you for being a Coast Watcher!

SUBMITTING YOUR DATA

Access to a computer

- Field Data Sheets are available online on the CW website, and are included in your CW package.
- Record your data into the Microsoft Excel Spreadsheet if you can.
- Send your Excel Spreadsheet or images of your data cards 1x/ month to:
coastwatchers@lakehuron.ca

No computer access

Field data sheets can be mailed to the coastal centre 1x/ month

Lake Huron Centre for Coastal Conservation

PO Box 477

Goderich, ON

N7A 4C7

PHOTO- MONITORING



1950



1990



2018

SAVING PHOTOS

TEMPLATE:

CW#_YEAR_MM_DD_PHOTO#

For example:

001_2015_05_01_1

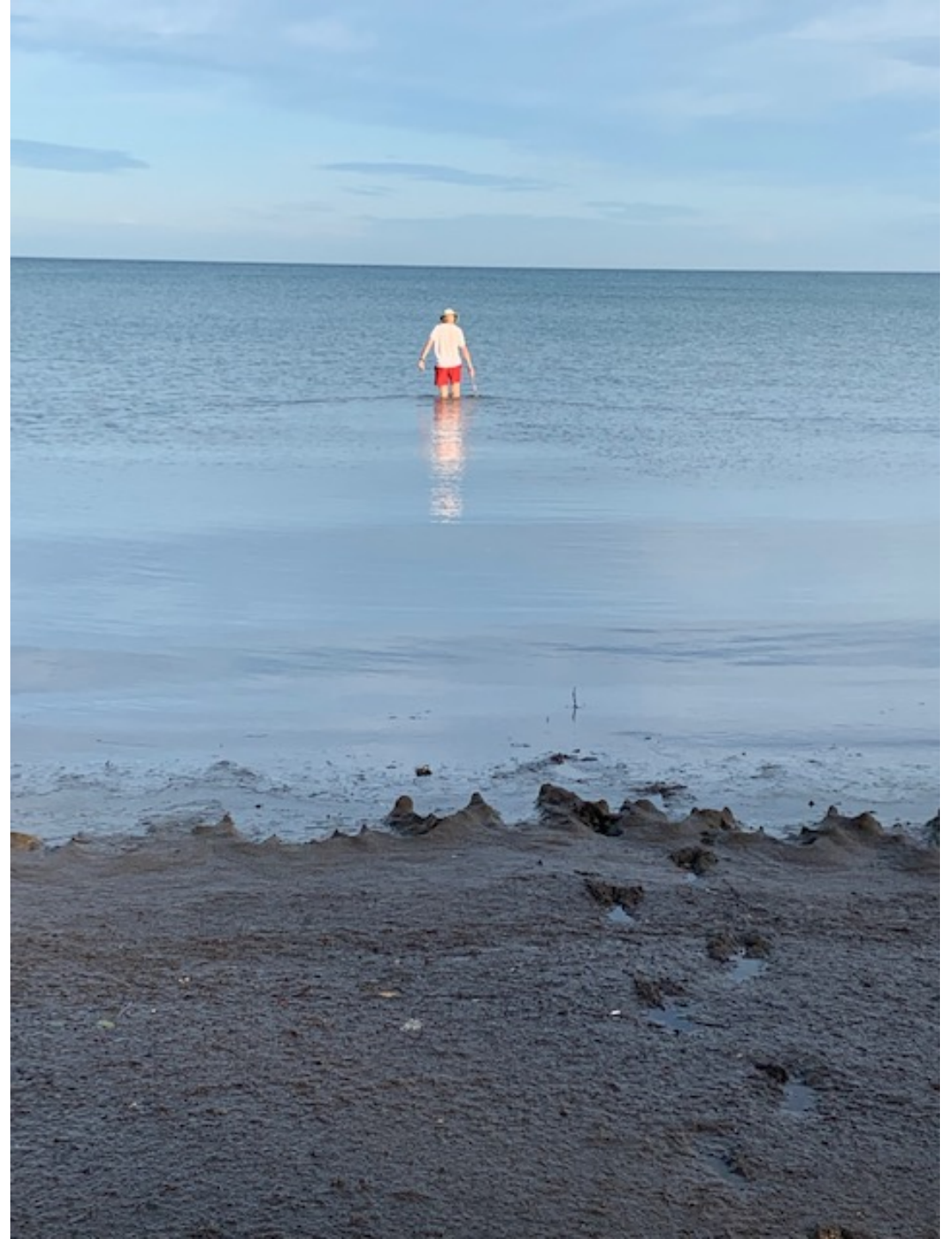
001_2015_05_01_2

LETS GET STARTED!

If you haven't already provided this, please
send this information to:

coastwatchers@lakehuron.ca

- Mailing Address
- Signed forms (download them on www.lakehuron.ca/cwtraining)
- GPS location of your primary monitoring location



OVERVIEW

Start of season duties – Season starts: May 1

- Contact the Lake Huron Centre for Coastal Conservation to confirm your participation;
- Ensure all Coast Watcher forms have been submitted and/ or are up to date;
- Look for an alternate Coast Watcher to help with monitoring if you are planning to be away;
- Ensure all of your equipment is working and you have enough field sheets for the season.

End of season duties – Season ends: October 31

- Submit final excel spreadsheet / field data sheets;
- Submit the final photographs;
- Complete Coast Watcher annual evaluation



CALLING THOSE INTERESTED IN WEBINARS WEBINARS!

LAKE HURON CENTRE FOR
COASTAL CONSERVATION

2021 Coastal Webinar Series

◆◆◆◆◆◆◆◆

Save the Dates!

May 11th: Break-up with Plastic

June 8th: Living Shoreline

June 29th: Shoreline Development

July 20th: Coastal Plants

August 10th: Shorebirds

August 31st: Species at Risk

7:00-8:00 pm EST



For more information about the Coast Watchers Program or other initiatives by the Lake Huron Centre for Coastal Conservation, visit lakehuron.ca

THANK-YOU

Daniela Klicper
Coastal Stewardship Coordinator
Lake Huron Centre for Coastal
Conservation

coastwatchers@lakehuron.ca
226-421-3029