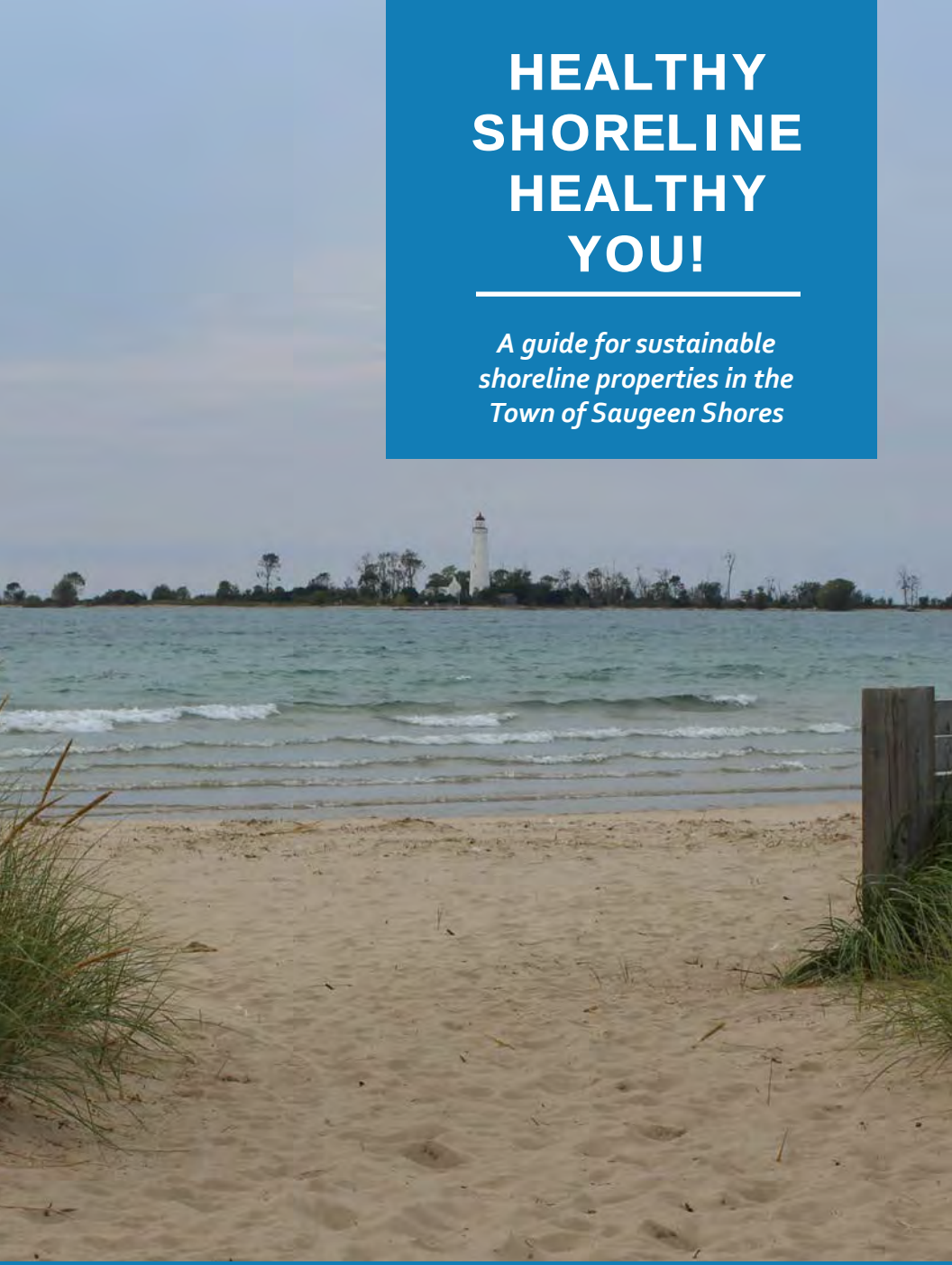
HEALTHY SHORELINE HEALTHY YOU!

A guide for sustainable shoreline properties in the Town of Saugeen Shores



Best management principles for the shoreline of

LAKE HURON

Saugeen Shores

the Coastal Centre

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PURPOSE OF THIS GUIDE

Human impact is increasing across the Lake Huron shoreline with cottages getting larger, towns expanding for tourism, and land use practices changing. There are many different opinions on how to manage your shoreline, coming from many different sources; federal provincial, municipal, conservation authorities and non-profit organizations.

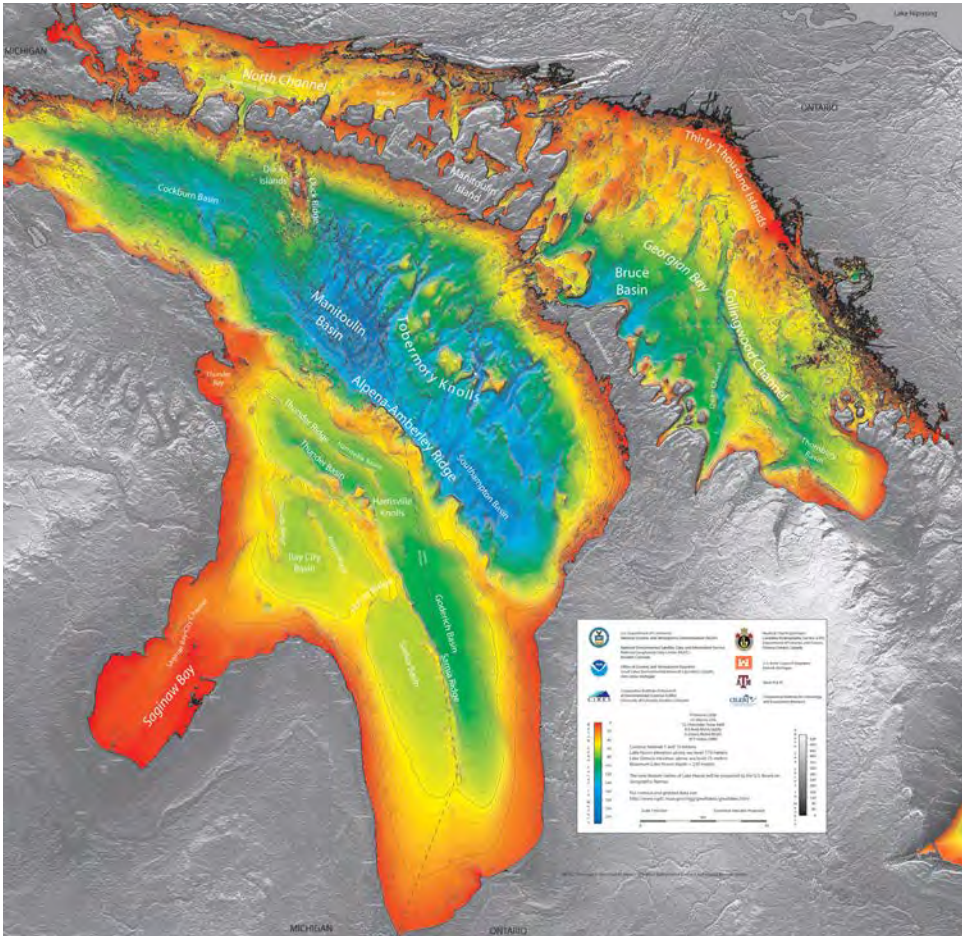
This guide has been prepared to support landowner stewardship of properties adjacent to Lake Huron's shores in the Town of Saugeen Shores. The beauty of Lake Huron continues to attract year-round residents, and the importance of landowner contributions to best stewardship practices becomes increasingly significant if communities want to conserve beach and shoreline quality. By reading this guide, you will also learn more about how Lake Huron 'works', as well as how we can all become more resilient to changes along the coast. We have structured this guide to equally consider conservation, development and recreation, with the understanding that we all have to work together to keep our lake healthy and beautiful for generations to come.

HISTORY OF LAKE HURON

LOOKING WAAAY BACK

The Saugeen Shores area of Lake Huron is situated on the Traditional Territory of the Saugeen Ojibway Nation (SON). First Nation and Metis communities have a long history with the Lake through transportation, recreation, and sustenance. French settlers of this area called Lake Huron "La Mer Douce", which translates to "the fresh-water sea". Over time there have been many influences to Lake Huron, including development, industry, power generation, and tourism. All of these play into the dynamic conditions of Lake Huron's shoreline and nearshore waters.

Lake Huron hosts over 1,000 shipwrecks, 43 lighthouses, and hundreds of communities. This lake has a residence time of 22 years, meaning that water on average will spend 22 years in Lake Huron. This shows the importance of reducing human inputs because of the long-term impacts they have on lake health. Today, Lake Huron is enjoyed by thousands of visitors and provides fresh drinking water to 1.6 million people.



FISH FINDER TRIVIA!

9,000 years ago lake levels were lower, exposing a ridge that currently lies 76 metres under the surface. The ridge extends from Alpena, Michigan to Amberley, Ontario. The ridge was used by First Nations to intercept migrating caribou herds. Divers have found stone hunting structures along this narrow land bridge. Lake levels were lower because glaciers from the last ice age trapped large amounts of fresh water. As the glaciers melted, the Great Lakes water levels rose to near-current conditions. This map shows water depths across Lake Huron. Red colours symbolize shallow areas, whereas dark blues symbolize deep areas of the lake. You can see the ridge going from Alpena to Amberley, dividing the lake into deep and shallow basins.

LAKE LEVELS

RIDING THE HIGHS & LOWS

Lake Huron is part of the 5-lake system of the Great Lakes. Water level fluctuations cause this system to experience seasonal and annual water level changes. Most seasonal fluctuations occur due to evaporation over the 59,588 km^2 surface area of water, but are also influenced by human alterations including water use, and runoff from land entering the lake through streams and gullies.

DUDE, WHERE'S MY BEACH?

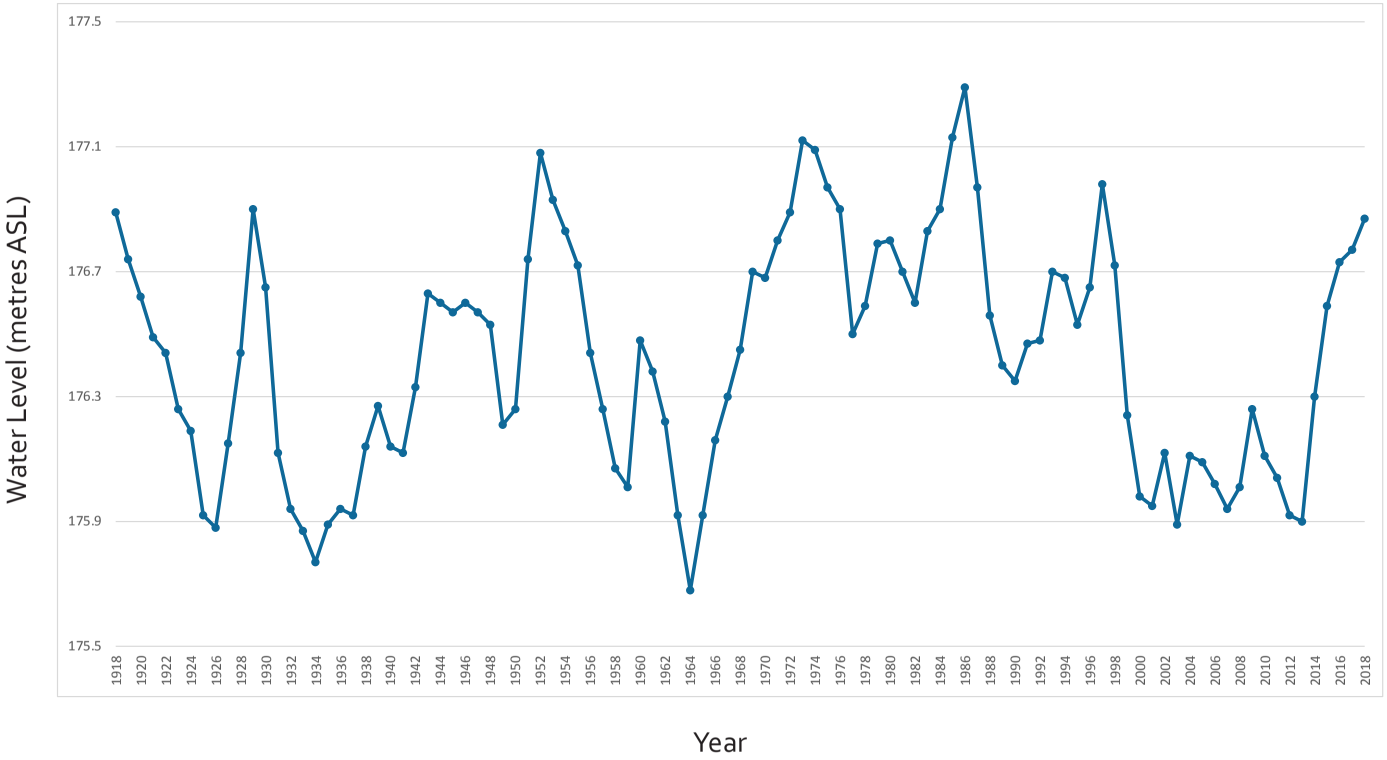
Lakeshore residents are often concerned about lake level changes. Without long-term planning and proper set-backs, rising water levels can impact cottages, roads and beaches. Low levels are concerning for those who use water lines, and for supplying coastal wetland areas. With climate change, we can expect more sporadic annual changes in lake levels, and more intense storm events. In some areas, the recent 20-years of low levels has enabled vegetation to venture farther out towards the water's edge. In 2017, lake levels rose to a typical high, and because of this, vegetation appears to be dominating the beach area. This is a natural phenomenon and not cause for concern; high energy waves will gradually remove vegetation over the fall and winter months. In this guide you'll find tips and tricks to adapt to these changes on your property.

ASK AN EXPERT!

"Lake levels change a lot on my property and I never know what to expect! How can I ensure my property is safe?"

Lake levels fluctuate constantly, up to 10 metres horizontally per year on some properties. Our advice is to become familiar with your shoreline's high and low levels and implement long-term strategies to prevent damage. You can check Great Lakes water levels online at the NOAA or Environment and Climate Change Canada websites. Improving dune health on your beach, having thick vegetated buffers between your home and the shoreline, keeping structures back from the shoreline, and keeping small boats under decks will all reduce risk to your property.

LAKE HURON YEARLY AVERAGE WATER LEVEL, 1918-2018

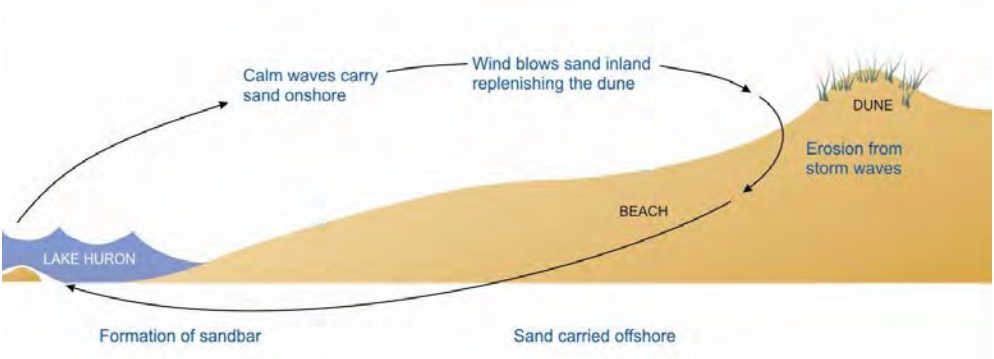


BEACH PROCESSES

YOUR SHORELINE IS ALIVE!
But how does it work?

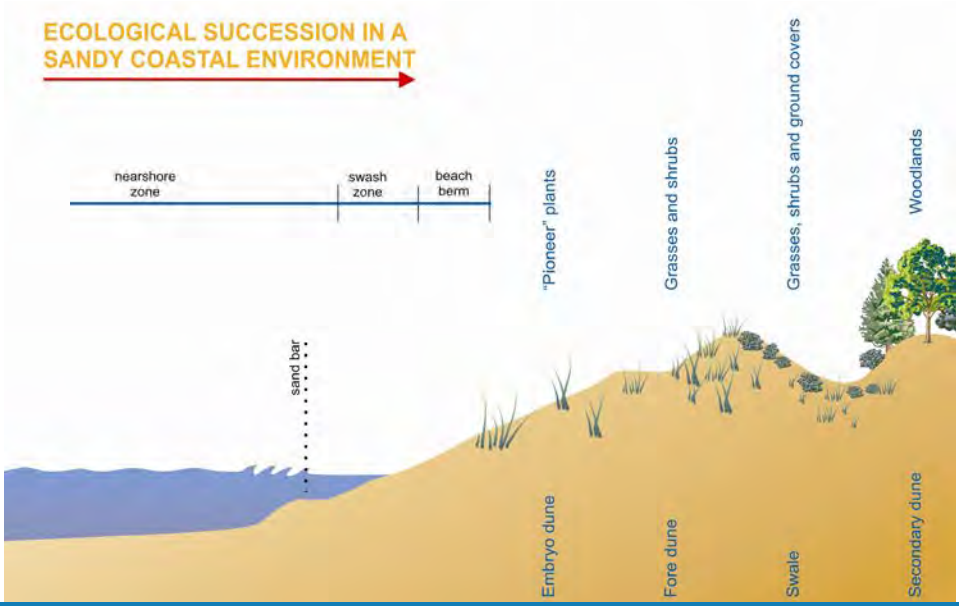
One-third of Lake Huron's shoreline is made of sand, silt, clay, and till. Wind and wave action constantly changes shorelines by picking up fine sand particles in wind or waves, carrying them onto beaches, which are then trapped by vegetation like dune grass. During calm periods, beaches are able to thicken with this added sand, creating beautiful sandy beach areas. If powerful wind and waves from a storm erode sand from the beach, it is carried offshore, often forming a sand bar. The sand bar acts as a temporary protective berm, absorbing wave energy that would otherwise reach the shore causing erosion.

The beaches of Saugeen Shores owe their existence to the topography of the coast. Southampton's large beaches and dunes have formed in the lee of Chantry Island and its shoals. This protective barrier has allowed sand, originating from the Saugeen River, to be deposited in the shadow of the island.



The "Long Docks" south of the river have contributed modestly to the form of the Southampton beach, but the primary influence is the island. On the other hand, Port Elgin's beach, Gobles Grove and Eidt's Grove formed as "pocket beaches", which form in small embayments or crenulate ('U'-shaped) shorelines. The bulk of the sand that makes up the beaches in Saugeen Shores is relic material. That means it was deposited by waves and winds in historical times and is an irreplaceable, non-renewable resource.

Lake Huron has both high and low energy beaches. Higher energy beaches, like in Southampton, see a "give-and-take" of sand throughout the year. Lower energy beaches, like in Port Elgin, have more sand removed by wind and wave action, than is added. On low energy beaches, protecting the sand is essential because they're slower to recover from misguided management. On higher energy beaches, multiple dunes form over time providing a 'sacrifical buffer' during high lake levels. Vegetation grows larger further inland from the water's edge, transforming from dune grass and sedges, to shrubs, and eventually trees. This 'succession' of dunes is natural and is unique habitat for many rare species.



LITTORAL DRIFT

WHAT I DO AFFECTS MY NEIGHBOURS TOO

Did you know there is a 'highway' in the waters close to shore? Long-shore transport is the movement of sand, sediment, and garbage fragments along the coastline in the shallow nearshore waters. In Lake Huron, the general flow of long-shore transport is from North to South, though there are some exceptions.

Long-shore transport is the culprit for moving beach sand from one beach to another. The bluffs of Lake Huron naturally erode, adding sediment to the lake, eventually feeding beaches south of that bluff.

For example, if you throw a basketball into the water in front of your cottage, in a matter of hours, it will travel south to an entirely different community!

Littoral drift is also one of the reasons that large pieces of debris may be found on local beaches, after being washed into the lake from the Saugeen River during times of flooding.

Changes made to shoreline properties will inevitably affect others further down the coast. Working together as a community to protect the shoreline is the best way to keep all the investments on Lake Huron safe and the water clean for all to enjoy. The image above illustrates how sand travels through nearshore waters, affecting our neighbours.

WE ALL SHARE THE SAND!

The sand feeding beaches in the Town of Saugeen Shores is on quite the ride! Most sand comes from areas to the north, sourced from open beaches and bluffs. Sediment travels in near-shore waters and funnels into the lake through streams and rivers. High energy beaches like those found in Southampton have high sand deposition and removal throughout the year due to the location of Chantry Island.

ASK AN EXPERT!

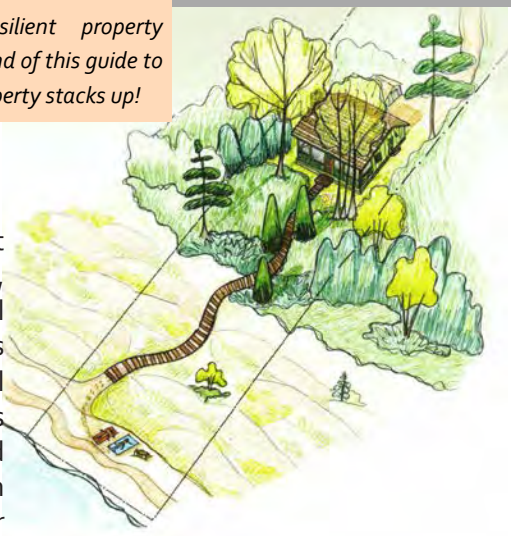
"The previous owners of my cottage raked the beach a lot, and now I have a wet beach with no sand dunes! Should I bring in more sand to help restore this area?"

Bringing in sand or sediment from other areas could increase your risk for introducing invasive species like *Phragmites australis* and can be extremely expensive. If you want to re-build a dune, the most cost-efficient method is to install wooden slat sand fencing from a local hardware store. You will see a new sand dune begin to build within the first year! Planting locally sourced dune grass will also help keep this new sand in place. Ask a neighbour with a healthy patch if you can take some dune grass to re-plant on your property.

ANATOMY OF A HEALTHY BEACH

PROPERTY TIP:

Review the resilient property checklist at the end of this guide to see how your property stacks up!



GRADE 'A' COASTLINE!

Along Lake Huron's shores, the perfect property isn't hard to find! However, properties that can withstand seasonal storm surges and sporadic water levels have a common thread. They are all vegetated! Real estate companies claim that properties with vegetated shorelines sell up to **$150,000 more** than those with groomed, non-vegetated or hardened lake shores. Some solutions to sustainable properties are affordable or free and will increase your property values and protect your investment! The image above shows the "ideal" coastal property. Although historical development in Saugeen Shores allowed cottages to be built on the dunes, experts say it is even more important to have a buffer zone of vegetation to protect your investment.

MAKING THE CHANGE

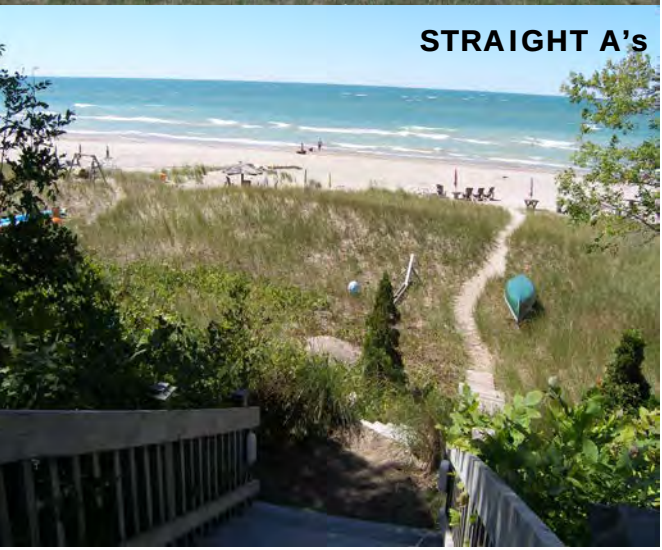
Structures aren't easy to move. If you want to improve your property to be more resilient, think about:

- Keeping a buffer of plants and trees between your cottage and the lake (strategic pruning is your best friend!).
- Plants like dune grass and evening primrose provide important food and habitat for migratory birds, Monarch butterflies, and small mammals.
- Encourage dune formation on your property. Approximately 15 metres is a good width of dunes during high water levels. Dunes will take the brunt of the damage from storm surges, and will re-grow after high water level events.
- Hardened shorelines are less effective long-term than natural ones. Save your money and cancel plans to install a stabilization wall. Instead, invest in vegetation and sand fencing.
- Properties with turf grass attract geese and gulls, contributing their waste products and spoiling beach sand.

NEEDS IMPROVEMENT

This landowner made a garden and a grassed area on the beach. These plants cannot adapt to the scalding heat of the beach and the sand's lack of nutrients. Turf grass attracts geese and gulls, increasing animal waste and potential for e-coli. Planting native beach vegetation like dune grass will be more successful, requires no watering, will discourage nuisance birds and will look gorgeous with the surrounding landscape.

STRAIGHT A's



These owners used dune grass to fill in their yard adjacent to the beach. Not only does this remove the need to irrigate, but it provides an oasis of habitat for butterflies and songbirds. In summer, a narrow winding path allows access to the beach. The dune grass planted continuously across their yard will trap sand from the beach and prevent it from gathering near their porch and stairway.

ASK AN EXPERT!

"I love my gardens at the cottage! Do I have to remove them to have a healthy shoreline?"

If your garden contains native vegetation (sorry, Hostas aren't native!), then you don't need to make many changes! Keeping your gardens small and close to your cottage will benefit both you and the plants. Using native vegetation will also reduce deer damage, and these species can be landscaped beautifully into gardens. The Coastal Centre has a free native plant guide you can view online at: www.lakehuron.ca/coastal-plant-guide.

HEALTHY DUNES, HEALTHY YOU!

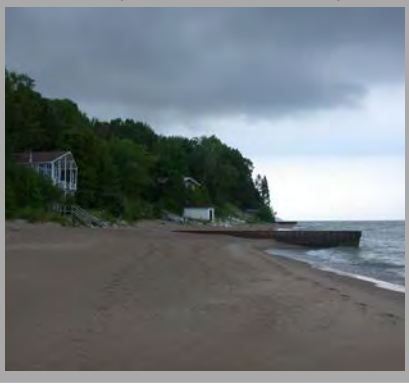
GRASS FOR DAYS

American Beachgrass (dune grass), is a native plant providing many benefits to landowners. In addition to creating habitat for coastal species, dune grass builds dunes by trapping sand on beaches, increasing the depth and breadth of beach. Dune grass roots can grow up to 3 metres long, stabilizing the sand and preventing erosion during storm events. Since healthy dune systems provide free shore protection, they are a cost effective, natural alternative to hardened shorelines and are better for the overall health of the shoreline. Dunes and shoreline vegetation will also improve the lake's water quality. Loss of sand dunes and beach grass cause a lower beach profile which leads to wet beaches, creating ideal conditions for E. coli and bacterial outbreaks. E. coli seriously affects our ability to safely to swim in the lake, so it's in everyone's best interest to keep a healthy beach. The natural services dunes provide equates to a value of $2,000 per linear metre. Talk about a return on investment!

ASK AN EXPERT!

"The waves are too strong! Should I build a retaining wall to protect my property?"

On Lake Huron, natural infrastructure will protect your shoreline more efficiently and affordably than anything man-made. In the 1960s and 1980s, it was common practice to install metal or stone armoring to combat high lake levels. Engineers and scientists now widely consider this an option of last resort. Armoring is expensive and unsightly.



Natural dunes and a heavily vegetated buffer zone are the most resilient and cost-effective way to protect against high water levels and storm surges. The lifespan of armored structures on Lake Huron rarely exceeds 20 to 25 years, plus yearly maintenance typically costs 2% to 5% of the total upfront cost of the structure. Armoring shoreline or re-building derelict structures also requires permit approval by Saugeen Conservation, the Town of Saugeen Shores, and the Ministry of Natural Resources and Forestry.

THE BIRD IS THE WORD

Dunes and native vegetation like dune grasses and flowers deter geese and gulls from using the area and keeps their waste off of your beach!

HOLD ON TO YOUR SHOVELS

During high lake levels, it's tempting to remove areas of dune vegetation for recreation or beach use. However, removing areas of dune vegetation on Lake Huron is in violation of various regulations of your local Municipality and Conservation Authority. Landowners committing a violation are responsible for restoring the damaged area at their own cost. In some cases, dune restoration has cost $5,000 - $10,000. Summer storms will pull away some of the vegetation at the waters edge giving you more room to enjoy your beach. In a few years, lake levels will be down again and you will have metres of sandy beach back. Experts say that keeping your beach vegetation is even more important during high lake level years to protect cottages from the upcoming fall storms. For more information on this recommendation, visit www.lakehuron.ca.

Experts don't recommend cutting out trees, shrubs and grass to "improve" your view. Instead, strategically trim low branches using hand pruners; NOT lawn mowers, brush saws, rotor-tillers, bobcats, augers, or heavy machinery. Do not use pesticides or Roundup to kill plants either. Pruning will provide more privacy and keep soil stable. Any tree removal on the beach requires approval from the Town of Saugeen Shores. Please contact the town office for more information.

RECIPE FOR A HEALTHY DUNE

1. *Abundant and continual supply of dry sand (high energy beach)*
2. *Wind and waves to move sand high onto the beach*
3. *Vegetation that captures & retains sand*

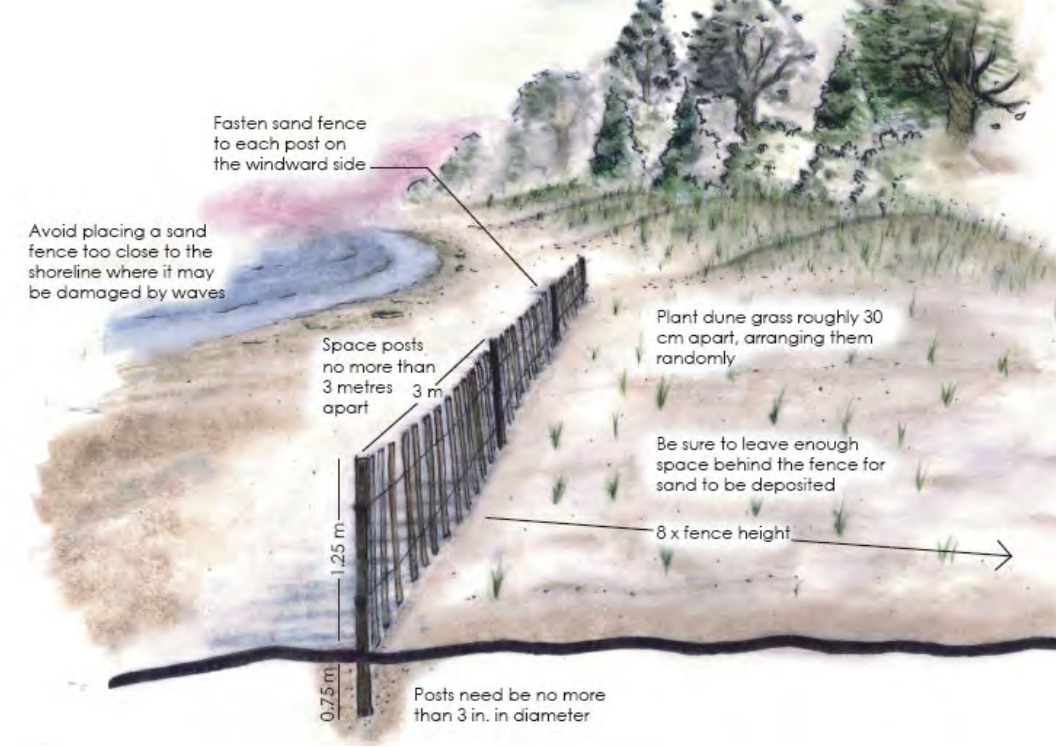
RESTORING YOUR BEACH

WHAT CAN I DO TO PROTECT & RESTORE MY SAND DUNES?

Maintaining natural vegetation and practicing "dune friendly landscaping" allows landowners to benefit from the natural services like flood and wind protection that dune ecosystems provide. Restoration of damaged or degraded dunes can be done easily using sand fencing and native dune vegetation to rebuild the thickness of the beach sand for long term stabilization. Sand fencing slows down wind blown sand and allows it to build behind the fence. Wooden slot style fencing is an effective and inexpensive method to increase the accumulation of sand and to maintain existing sand on beaches. Once a thick layer of sand has established an "embryo dune", vegetation such as dune grass can be introduced to stabilize the loose sand. Creating designated pathways through established or restored dunes can reduce the effects of erosion and the stress on native vegetation.

WHAT TO PLANT

The best plants to use for dune restoration include: American Beach Grass, Wheat Grass, Wild Rye, and Sandbar Willow. After a few years, once these plants are well established, oak trees and birch trees can be planted on your private property to improve the buffer zone between your cottage or home and the lake. Want more information? Check out the Coastal Centre's *Dune Planting Guide* available at www.lakehuron.ca/beaches-and-dunes.



MANAGING DUNES DURING HIGH LAKE LEVELS

In low lake levels, dunes and beach grass migrate out towards the shoreline, but when lake levels rise, the front edge of these dunes gets washed away by wave action. This causes a loss of beach area between water and dune. In most cases, dune grass is the only thing preventing waves from eroding your beach all the way up to your cottage, so it is important to keep them in place. Be patient. When lake levels go down again, you will have plenty of non-vegetated shoreline to enjoy.

A healthy dune in Saugeen Shores includes a wide foredune vegetated to the wave-uprush point. A typical healthy foredune has sand that is 6 metres wide and 1.2 metres tall. Mature dunes can be much larger.

HOW TO BUILD A SAND DUNE

1. Use sand fencing made of non-treated natural wood installed parallel to shoreline, 3 metres wide by 1.2 metres tall
2. Plant dune grass behind sand fence, 30 centimetres apart in September to October, harvested from a local source (ask a neighbour to share!)
3. Keep turf-grass lawn out of the dunes, it will attract geese.
4. Create one 'S' curved pathway 1.2 metres wide maximum from cottage to water to reduce wind erosion
5. Keep vehicles off the dune. Their heavy wheels will crush the plants and cause damage.

WHAT'S ON MY BEACH?

As much as we try to care for our beach, the lake can bring some unsightly items to shore during storms. Here are some common items that wash up on the Lake Huron shoreline.

Natural organic materials are beneficial to beach environments because they provide nutrients to beach plants and nesting habitat for some bird species. Most wash-ups of organic material are manageable and can be left alone, but in some cases, for example, a wash-up of loose tree trunks or multiple feet-deep of grass and branches, hand removal may be necessary. The Town of Saugeen Shores has a beach maintenance plan that describes what activities the Town undertakes to clean up beach debris, available at www.saugeenshores.ca.

Algae blooms are natural in lake ecosystems. Blue-green algae can be a health concern for humans and wildlife. If algae is present, do not drink, touch or swim in these areas unless the Health Unit has verified it is safe to do so. Often after a major storm event, algae will wash up on the shore after dislodging from the bottom of the lake because of high energy storms. We have seen more algae in recent decades due to lake temperature warming, increased nutrient inputs and clearer water from zebra mussels consuming plankton.

Before using a beach, ask yourself:

1. Are local beaches posted with warning signs or listed online?
2. Has there been a heavy rainfall in the last 24-hours?
3. Can you see your feet in the water at adult waist height?
4. Are there other hazards present, like dead fish or birds?

Man-made materials are never beneficial to shorelines, and should be cleaned up immediately. Plastic and man-made waste can take many different forms. It can be as large as tires, jugs, or fishing nets, or as small as straws, water bottle lids, helium balloons, or microbeads. In all cases, these items can pose a safety hazard to humans and animals. Often, animals become victims by entanglement, or mistaking the waste for food. If there is a large plastic wash-up event, contact the Coastal Centre or Town of Saugeen Shores to document the event and determine if it can be prevented in the future. A community beach clean-up could also be arranged.

Animal die-offs are common in the Great Lakes, but are still very important to document. They can be a result of natural factors such as storm surges or oxygen depletion in the water. If there are a lot of dead wildlife washing up on your shore, take photos and report it to Saugeen Conservation or the Coastal Centre for further investigation. Fish die-offs should also be reported to the Ministry of Natural Resources and Forestry at 1-800-667-1940. For more information visit: www.ontario.ca/page/dead-animal-or-fish-found-your-property.

ASK AN EXPERT!

"We get wash-ups of weird substances and garbage every year! Who should I call for help removing this from my beach?"

If there is a large spill or wash-up of oil, chemical, or unknown substance, always contact the Ontario Ministry of Environment and Climate Change Spills Actions Centre to report the damage at 1-800-268-6060. Take pictures if possible to document the spill or wash-up!

MANAGING STORMWATER

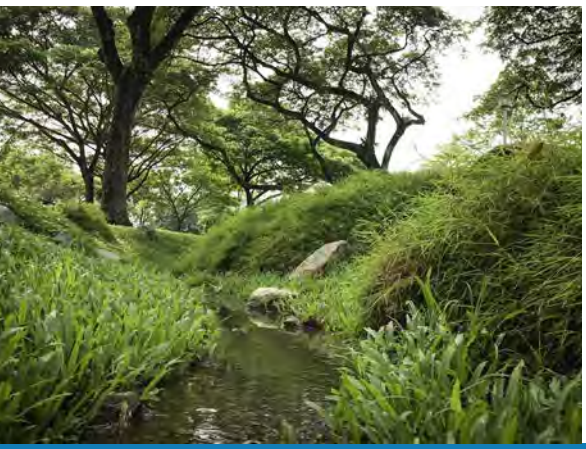
When it rains, runoff can pick up materials from the land before it enters storm drains and local water bodies. Low impact development (LID) is a stormwater management strategy that seeks to mitigate the impacts of increased runoff and stormwater pollution by managing runoff as close to its source as possible, by filtering, storing, and returning stormwater to the ground. Effective management of stormwater is critical to the continued health of our streams, rivers, fisheries and Great Lakes.

An increase in hardened, impervious surfaces prevents water from infiltrating into the ground and increases the amount of contaminated surface runoff. Letting water flow quickly over your property can also increase erosion in some areas. **Permeable Surfaces** are those which allow rainwater to seep into the ground. Using **Permeable Pavers**, such as gravel, interlocking stones, or pervious asphalt allows water to seep down into the ground, reducing water pollution and storm water runoff. Permeable pavers offer many other benefits as well, like long-term durability, and recharging of groundwater aquifers.

Directing Runoff on your property can help slow it from reaching storm drains, and allow it to percolate into the ground. Directing rainwater to the middle of your lawn will also keep it away from the foundation of your home. You can also use a **Rain Barrel** to collect water to use later in your garden and on your lawn, saving money on your water bill, and reducing large volumes of runoff on your property. For each inch of rain that falls on 500 square feet of roof, you can collect about 300 gallons of water.

A **Rain Garden** is a planted depression in the yard that absorbs rain water from hard surfaces. By planting native grasses, wildflowers, and shrubs that thrive in wet conditions in your rain garden, you can reduce the amount of water which flows over the land, into storm drains, and across your beach. Native plants along shorelines help stabilize soil, absorb excess water and sediments, and use up some of the nutrients. They also provide habitat for wildlife, like butterflies, dragonflies, frogs, and songbirds.

Vegetated Swales are shallow stormwater channels planted with native grasses and shrubs, that slow stormwater discharge, reduce sediment, and promote water filtration. These swales work well in managing storm water runoff in beach areas.



NATIVE PLANTS FOR YOUR RAIN GARDEN OR SWALE

Black-eyed Susan
Prairie Smoke
Bayberry
Blue Vervain
Blue Flag Iris
Swamp Milkweed
Butterfly Milkweed
Fireweed
Canada Bluejoint
Porcupine Sedge
Spotted Joe-pye Weed
Ironweed
Wild Columbine

PATHWAYS & SETBACKS

Beaches and dunes are vulnerable to excessive human activity. Specialized dune vegetation and the structure of the dune system can become compromised when shortcuts across the dune are repeatedly used or lawn furniture is used in the dune. Creating designated pathways or boardwalks can minimize the impact that human activities have on dunes and shorelines. By creating an "S" shaped path, erosion of the dune by winds can be minimized. Keeping toys, furniture, and structures off the dune will benefit you and the beach over the long term.

Boardwalks are an effective way to direct traffic across a property. They can be installed as temporary structures in the spring and removed in fall. They can also be used to improve accessibility on sand and cobble beaches. Flexible boardwalks are best, and help keep toes from burning on hot sand! Remember, boardwalks should only be used on your own property, not in public beach zones.

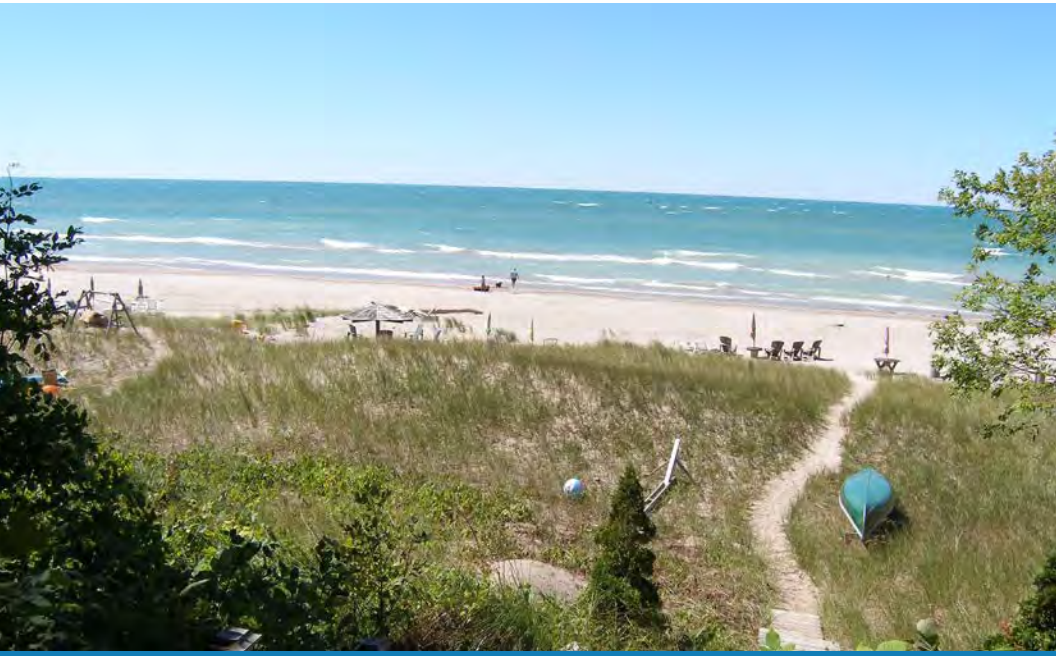
RECIPE FOR A PERFECT BEACH PATHWAY

1. *One "S" shaped pathway per property, or share with your neighbour;*
2. *Less than 1.2 metres wide;*
3. *Angle away from prevailing winds to minimize funneling effect.*

HOW CLOSE IS TOO CLOSE?

Coastal properties provide great water access for recreational watercraft. Proper storage of watercrafts is an important part of protecting coastal properties. Here are some guidelines to follow when identifying storage areas:

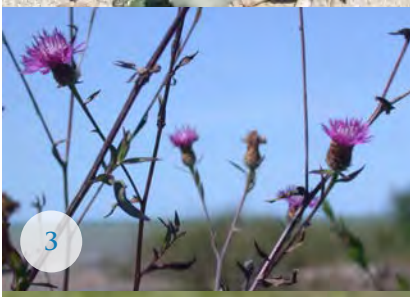
- Keep boats and chairs far enough from the high- water mark so waves won't cause damage or pull them from shore.
- Storing canoes and kayaks on dunes can damage vegetation, contributing to erosion and destruction of habitat – choose to store them under your deck or beside your house, out of the sun.
- Consult the Town of Saugeen Shores and Saugeen Conservation if altering built structures or building new structures along the shoreline, including boardwalks. MNRF approval may also be required when building or altering shoreline structures including in-water structures.
- The beach is public property in the Town of Saugeen Shores, and during times of high water levels, we all feel the pinch. Remember to always be kind and share the beach with others. Keeping personal property such as boats and chairs on your own property will limit damage and inconvenience to those walking the beach.



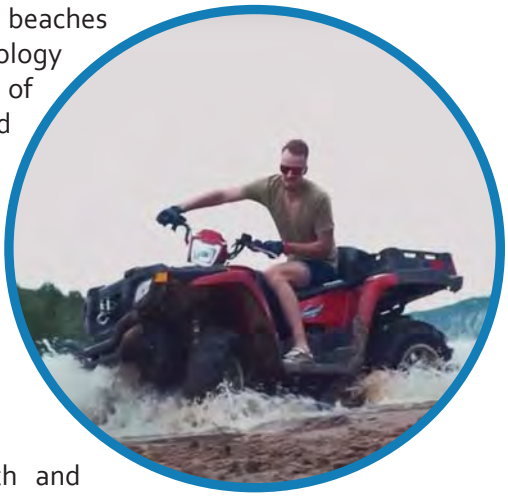
THREATS TO OUR COAST

NEW BUG, WHO'S THIS?

Invasive species pose a threat to shoreline habitats. With aggressive growth and the ability to outcompete native species for resources, invasive species can cause significant damage to sensitive beach, dune and nearshore ecosystems. They can be introduced to areas accidentally on boats and ATV's that have not been properly sanitized, or by escaping from gardens. Motorized vehicles can expose sensitive ecosystems to plants like European Common Reed (*Phragmites australis*) (Photo 1), Coltsfoot (2), Spotted Knapweed (3), Sweet White Clover (4), and Garlic Mustard (5). Some invasive insect species, like the Emerald Ash Borer are destroying populations of ash trees, causing dramatic changes to sensitive shoreline and inland ecosystems. Invasive species like Phragmites can have significant impacts on the financial value of beach front properties. Learning how to identify and remove invasive species is important for protecting coastal environments.



VROOM VROOM AWAY!



Using **vehicles** or heavy machinery on beaches and dunes can be damaging to the ecology and landscape. Many rare species of plants and animals use the dune and beach as habitat, and can be harmed when vehicles are in the area. The weight of motorized vehicles on beaches and dunes can also compact the sand, making it difficult for vegetation to grow and potentially destroying sensitive microhabitats that many shorebirds require.

Dune plants are key to the health and stability of beaches. They gather sand, shelter birds, and withstand wind and waves. But they are very sensitive to a vehicle driving over them. All motor vehicles can kill native beach plants with a single pass, and even the wide flotation tires of quad bikes crush and destroy plants. Most communities have designated trails for snowmobiles and ATV's that are more fun to ride.

THREATS TO OUR COAST

BEACH RAKING / ALGAE HARVESTER

Beach **raking** is often used as a way to maintain the aesthetics of a beach for tourism and waterfront properties. In Saugeen Shores, a mechanical beach rake is used to remove algae and debris on beaches from June to August. During high water level years, it may not be able to access certain areas of the beach. If you have algae on your property that is not accessible by the harvester, high wave activity will eventually wash it away. Beach grooming should only be done in times of need, such as algae wash-up or high densities of garbage wash-up.

WE DIDN'T START THE FIRE

Fires are not permitted on public beaches in the Town of Saugeen Shores. More information about recreational fires can be found by contacting the Town, or online at www.saugeenshores.ca/en/town-hall/burn-permits.aspx

CH-CH-CH-CHANGES

Climate change is impacting our coastal environments and landowners need to adapt to a new range of conditions.

Precipitation trends indicate increased frequency, intensity and quantity of wind, rain and snow. This often leads to flooding and property damage from storms and winter conditions. Gullies and bluffs have a higher risk of erosion under these conditions, making it important to ensure structures comply with the regulations of Saugeen Conservation.

Increasing temperatures make winter conditions shorter and increase winter thaw events with more open water through the winter. Increases in water temperature may cause more public health issues on beaches as water borne pathogens spread and algae blooms will become more frequent. Warmer water generates stronger wind conditions across the lake, which can increase wind erosion in beach and dune areas, increasing the need for more preventative conservation strategies.

RESILIENT PROPERTY CHECKLIST

- Become familiar with your local by-laws, policies, and regulations and ensure your shoreline adheres to these standards.
- Have a healthy buffer of beach and dune vegetation, including beach grass 15 to 30 metres wide minimum. Restore dunes using sand fencing and by planting dune grass.
- Many hands make light work! Do a beach clean-up on your morning walk. Keep your shoreline free of garbage that can be harmful to humans and wildlife.
- Create "S" shaped pathways from cottage to shore across dunes, a maximum of 1.2 metres wide.
- Say NO to sprays: use natural alternatives for fertilizers and pesticides, such as epsom salt, diatomaceous earth, and vinegar.
- Remove hardened shoreline structures to improve natural sediment flow and beach aesthetics.
- Contact Saugeen Conservation to find out about tree seedling, stream restoration, and wetland improvement programs.
- Ensure vehicles (ATV's, boats, sea doo's, kayaks, canoes) are properly stored and not impacting the beach or dunes. ATV's, machines, and heavy equipment should be kept off the beach and out of coastal wetlands and gullies at all times. Town by-laws support the enforcement of this tip.

- Minimize runoff across your property by using permeable pavements (gravel instead of asphalt or concrete) and rain-barrels on down-spouts. Letting water flow quickly over your property can increase erosion in some areas.
- Winterize your cottage AND beach: In the fall, install sand fencing parallel with your shoreline at the end of pathways and dunes to prevent sand erosion and improve beach quality until spring.
- Supporting each other and sharing solutions helps everyone down the line. Form an environmental committee or shoreline health committee in your cottage association or neighbourhood!
- Trees and shrubs present on beach and dunes are maintained through hand trimming only, and only on your property.
- Remove invasive species that can impact other sensitive coastal areas.
- Inspect your septic system regularly (every 3-5 years) and have it pumped out every 5 years, with holding tanks being pumped out multiple times per year depending on use.
- Shoreline structures should only be built in compliance with regulation limits on your property, reducing potential for destruction during storms.
- Structures on public property should be re-located to your own property. All structures on public property are subject to removal without warning and are subject to Municipal and Conservation Authority regulations.

*** Weren't able to check many items off the list and don't know where to start? We are here to help! Contact the Lake Huron Centre for Coastal Conservation for assistance.**

WHERE TO START

If you want to learn more about your shoreline, and what you can do to protect your investment, all you have to do is ask! There are lots of resources available through the Coastal Centre, the Conservation Authority and the Municipality.

CONTACTS

Town of Saugeen Shores
Tel: 519-832-2008
TTY: 1-866-832-2008
www.saugeenshores.ca

Saugeen Conservation
Tel: 519-367-3040
E: publicinfo@svca.on.ca
www.svca.on.ca

Lake Huron Centre for Coastal Conservation
Tel: 226-421-3029
E: coastalcentre@lakehuron.ca
www.lakehuron.ca

Grey Bruce Health Unit
Tel: 519-376-9420
E: publichealth@publichealthgreybruce.on.ca
www.publichealthgreybruce.on.ca

Ministry of Natural Resources and Forestry
Owen Sound Office
Tel: (519) 376-3860
www.ontario.ca/page/ministry-natural-resources-and-forestry

ADDITIONAL RESOURCES

Saugeen Shores Beach Maintenance Plan and Waterfront Master Plan

These two plans describe what activities the Town of Saugeen Shores undertakes to maintain the shoreline.
www.saugeenshores.ca/en/town-hall/town-hall-reports-studies-and-plans.aspx

Beach & Dune Guidance Manual for Saugeen Shores

A detailed guide for the stewardship of Saugeen Shores' beaches and dunes, created by the LHCCC in 2003.
www.lakehuron.ca/stewardship-plans-and-guides

Dune Planting Guide

A step-by-step guide on how to plan, implement and maintain a dune on your property.
www.lakehuron.ca/beaches-and-dunes

Lake Huron Coastal Dune Plants Guide

Information on both native and invasive species found along the Lake Huron shore. Use this guide to plan your native species garden.
www.lakehuron.ca/coastal-plant-guide

The Trouble with Beach Grooming

Outlines the reasons why removing beach debris is harmful to the beach-dune ecosystems and the species that use these areas as habitat.
www.lakehuron.ca/beaches-and-dunes

Dune Conservation Means Healthy Beaches

Factsheet describing the importance of dunes and American Beachgrass.
www.lakehuron.ca/dune-conservation

NOAA Great Lakes Water Level Dashboard

Check out the lake levels online and in real-time at:
www.glerl.noaa.gov/data/dashboard/GLWLD.html

the Coastal Centre

The Lake Huron Centre for Coastal Conservation

Was this helpful? Contact Us!

Lake Huron Centre for Coastal Conservation
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226.421.3029

www.lakehuron.ca