LAKE HURON CENTRE FOR COASTAL CONSERVATION

BLUFFS

Lake Huron's southeastern shores are home to vibrant coastal communities, some of which perch high a-top bluffs against the water's edge. Steep sediment bluffs, prone to erosion during high lake levels and heavy precipitation events, tower along sections of the lake shore. Some bluffs have natural protection including beaches and bedrock outcrops that expand and contract depending on lake water levels. The bluff's sediment erodes, entering nearshore waters, travelling down-drift, feeding beaches and shorelines that rely on bluff erosion to exist.

ECOLOGICAL SERVICES PROVIDED BY BLUFFS:

- Eroded material travels through nearshore waters, feeding beaches and shorelines down-drift, creating healthy coastal environments.
- Provide habitat for nesting bird species such as bank swallow and gulls.

STRESSORS AND THREATS AFFECTING ECOSYSTEM HEALTH:

- Invasive species (e.g. Emerald Ash Borer, Spotted Knapweed).
- Vehicular use (e.g. ATV's) cause erosion.
- Hardened shoreline at toe of slope may cause more erosion at the end of each structure.
- Vegetation removal compromises bluff stability.
- Structures erected to get down bluff (e.g. staircases) may disturb slope integrity causing erosion.
- Plastic pollution and garbage litter.
- Residential and infrastructure development too close to top edge.

WHAT CAN YOU DO?

- Owning property on an eroding slope can be worry-some. Unfortunately, when residential developments first started along Lake Huron, information about the hazards weren't readily available, allowing some high-risk areas to be developed upon.
- Relocate all structures away from bluff edge to reduce ground compaction and potential for structural failure.
- Plant native trees and shrubs to stabilize slope and absorb surface water.
- Maintain a vegetated, natural 30-metre buffer zone between the top of slope and any residential or recreational infrastructure; and abide by regulated development setbacks enforced by your local conservation authority.
- Slow down water moving across the landscape, use rain gardens, rain barrels, and permeable pavements.
- Inspect septic systems for leaks and pump them out every 3-5 years to reduce potential for erosion and nutrient leaks.
- Do not discard yard waste or garbage over the slope.

FUN FACTS

Bluffs on the southeastern shores are made of 86% silt and clay, and 14% sand, gravel and cobbles.

6-7 kilometers of bluffs exist between Sarnia and Tobermory.

OTHER RESOURCES:

The Lake Huron Centre for Coastal Conservation

www.lakehuron.ca

Social @coastalcentre

the Coastal Centre

The Lake Huron Centre for Coastal Conservation

Fact sheets produced as part of the Coastal Action Plan for the Southeastern Shores of Lake Huron

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SLIDING INTO LAKE HURON:

Extended storm events, rapid snowmelt, wave erosion, and development close to the top of the slope can increase bluff erosion.

KEEP THINGS NATURAL:

Hardened shorelines (groynes, sea walls, armour-stone, concrete sills) are less effective and more expensive than natural shorelines at protecting shoreline property.

NATIVE PLANTS GROWING STRONG:

Deep-rooting plants such as Eastern White Cedar, Red Osier Dogwood, Sugar Maple, Common Ninebark, and Bearberry will stabilize slopes in 30-metre vegetated buffer strips.

SLOW DOWN THAT H^2O

Stormwater and surface runoff from fields, roads, driveways and downspouts contribute to and accelerate erosion of bluffs. Slow water down and release it incrementally by using permeable pavements, rainwater catchment devices like rain barrels and rain gardens.