

GULLIES

Lake Huron's southeastern shores are home to vibrant coastal communities, and unique geological features. 200 gullies have formed along the southeastern shores of Lake Huron, carved into the clay and sand bluffs by streams and rivers draining into the lake. Channelization of these streams further inland has accentuated erosion of the bluffs, causing deep valleys, or gullies, to form. Excessive groundwater and surface water runoff are the leading causes of gully erosion. Some structures built beside gullies were positioned to close, contributing to erosion of gully banks.

ECOLOGICAL SERVICES PROVIDED BY GULLIES:

- 💧 Wildlife corridors: animals use vegetated gullies to travel to-and-from the lake for food and water.
- 💧 Eroded material travels through nearshore waters, feeding beaches and shorelines down-drift, creating healthy coastal environments.
- 💧 Provides 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) unsettles gully slopes, causing erosion.
- 💧 Vegetation removal could cause more erosion on bare slopes with disturbed soil.
- 💧 Structures erected to get down gully slopes (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 gully edge to reduce ground compaction and potential for structural failure.
- Plant native trees and shrubs to stabilize slope and absorb surface water.
- Keep a 3-6-metre buffer of undisturbed, vegetated land from the top of the gully slope to reduce erosion.
- Keep any tilling at least 10-metres back from top of slope.
- Maintain a vegetated, 100-metre buffer zone from top of slope to encourage wildlife movement.
- Maintain a development buffer with no structures within 30 to 50-metres of top of slope, and abide by regulated development setbacks enforced by your local conservation authority.
- Slow down water moving across the landscape, using 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 of yard waste or garbage over the slope.

FUN FACT

72% of the sediment feeding beaches on the southeastern shores comes from gully erosion.

OTHER RESOURCES:

The Lake Huron Centre for Coastal Conservation

www.lakehuron.ca

Social @coastalcentre

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

Funded Generously by the Ontario Trillium Foundation



The Lake Huron Centre for Coastal Conservation

SLIDING INTO LAKE HURON:

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

DON'T DUMP IN THAT SLUMP:

Gullies often get treated as dumping-zones for yard waste and even household garbage. This practice smothers native plants and retains water, potentially increasing erosion.

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 H₂O

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.

