

E-Rode: The Link Between Shoreline Erosion, Public Education, and Land-use Policy

This article is part of the Ripple Article Series. Every other week, an article will be posted on the Engage Muskoka website that dives deeper into one of the twelve technical projects in the **Making Waves: Integrated Watershed Management initiative.**

Did you know that the Muskoka River Watershed is one of the wettest regions in Ontario? While a lot of this water evaporates, much of it travels through rivers and streams, flows through lakes, or seeps into wetlands and restores groundwater reserves.

The path that a raindrop takes after it reaches the ground is determined by landforms – as we know, water flows downhill.

In the Muskoka River Watershed, precipitation that falls in the headwaters will run through the rugged Algonquin Highlands, down to the rocky knolls and ridges through the middle and lower portions of the watershed, until it reaches its final destination, Georgian Bay. Through this 210 kilometer journey, the raindrop will likely brush against a shoreline or riverbank, taking some soil or sediment along for the ride. This process, called erosion, is described as the wearing away of earth materials like soil and rock by the force of water or wind.



Erosion is a slow and natural process, but human activities can speed it up, resulting in damage to shorelines and other features of the landscape. These human activities include shoreline alterations such as vegetation removal, changing the grade of the shoreline, and building structures. Shoreline erosion is currently an issue in the Muskoka River Watershed. With climate change bringing more precipitation, and as shoreline development continues, Muskoka's shorelines will likely experience even more erosion, resulting in habitat loss and degradation, decreased water quality, and property damage.

As part of the Making Waves: Integrated Watershed Management Initiative, the District of Muskoka has launched a project that focuses on creating a shoreline erosion survey through a new citizen science program. This program aims to educate the community on different types of erosion, how to identify erosion and the ecological impacts of shoreline erosion. This program will also encourage the watershed community to report shoreline erosion using the District's new and forthcoming Geographic Information System (GIS) app called E-Rode. E-Rode will allow members of the public to report erosion by submitting photos, descriptions, and locations.

The information from this program will support future efforts to reduce the effects of erosion within the Muskoka River Watershed. In addition, this survey could also provide recommendations on how to improve damaged shorelines through renaturalization projects and develop strategies and land-use policies to reduce or prevent future shoreline damage.

E-Rode will be available for the public later this year, so watch for information on the upcoming launch of the app as well as public education events through Engage Muskoka.
To learn more about Integrated Watershed Management and for updates on all projects, visit the Engage Muskoka "Making Waves" website.

The views expressed in this article are the views of the District and do not necessarily reflect those of the Province of Ontario.