

Identifying structural possibilities and options to reduce flood risk in Muskoka

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.**

In previous articles, we explored what Integrated Watershed Management is and how it can help bring social, environmental, and economic factors together on a watershed basis to tackle issues like flooding and water quality. The District of Muskoka is working towards a future Integrated Watershed Management Plan by gathering information about the watershed through 12 projects. Two of these projects are related to identifying opportunities to reduce flood risk through the modification of existing infrastructure as well as exploring new structural options.

These projects take a closer look at existing grey (human-made) and green (natural) infrastructure within the Muskoka River Watershed and brainstorms ways they can be used to mitigate flooding. For example, although dams in Muskoka were originally built to help carry lumber down the Muskoka River during the spring freshet, today, they can be used to adjust water levels for recreational and navigational purposes. In the future, they could be repurposed again to help mitigate flooding. This project will focus on brainstorming if and how existing dams could be used to reduce the risk of floods, and what changes to the existing structures may be required to achieve this, while being protective of the ecosystem. Could raising the height of individual dams provide temporary flood storage capacity in preparation for flood events? Could water be diverted to temporary storage?

The options proposed will differ from those proposed as part of the Muskoka River Water Management Plan (MRWMP) Adjustment Study in that they will focus on physical alterations to existing infrastructure, whereas adjustments to the MRWMP will be more operational in nature, focusing on changing the operation of existing infrastructure (in its current form) mitigate flooding or improve resiliency.

These projects also involve identifying opportunities where new infrastructure could help mitigate the impacts of flooding. For example, building structures like dykes, dams, floodwalls, and berms could defend against a flood. Since wetlands act like giant sponges, green infrastructure, like a marshland, could possibly be introduced or expanded in low-lying areas that experience flooding to help absorb excess water.

It is important to note that the goal of these projects is to identify opportunities for existing structures and new infrastructure options to reduce the risk of flooding in Muskoka. After identifying potential mitigation measures at high-priority locations across the watershed, the impacts on the surrounding area will be investigated. The next steps will be to assess these possibilities in terms of cost, feasibility, and timelines. These two projects will be completed in Fall 2022, and the results will be published on the Engage Muskoka webpage.

To learn more about Integrated Watershed Management and the other projects under Making Waves, be sure to check out the Engage Muskoka page and consider subscribing for updates for projects of interest.



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