

WHO WE ARE



We are students from Worcester Polytechnic Institute, a University in the United States. We have been working in collaboration with the VPUU in researching flooding conditions in Monwabisi Park, along the C-section road, and identified “hot spots” of flooding.

We recorded local interventions, cataloged them, and noted their pros and cons. The most efficient solutions are displayed in this brochure, for all residents of Monwabisi Park to use.

Worcester Polytechnic Institute



E-mail: ct10stormwater@wpi.edu

WORCESTER
POLYTECHNIC INSTITUTE &
VPUU

Flooding in Monwabisi Park: Causes, Prevention and Solutions



**ELIMINATING FLOODING,
ONE INTERVENTION AT A
TIME**



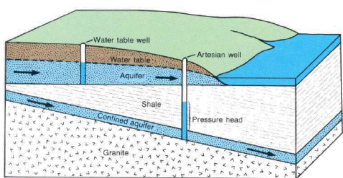
STORMWATER MANAGEMENT PLAN



Why do you get flooding?

The major reason for flooding in Monwabisi Park is due to its low-lying topography. Water will naturally flow downhill, and Monwabisi Park is located at the lowest point in its surrounding area.

The lack of proper drainage is also an issue, as the water that stagnates in Monwabisi Park cannot be channeled away without a proper drainage grid. This becomes especially challenging during winter, when the water capacity of the soil becomes easily saturated.



What are residents doing?

There are many simple techniques that residents are presently using to avoid flooding. You may have seen some of these methods and if you use them correctly, they can be efficient in preventing water from entering your house.

Fences

Fences act as a physical barrier for water runoff. Use a layer of cloth and some vegetation to effectively prevent flooding.



Vegetation

A patch of vegetation along the perimeter of a house acts as a physical barrier and absorbent for water runoff.



Tyres

Tyres are used to stabilize sand and they also act as barriers. If tyres are properly placed and secured, they can reduce flooding significantly.



Ditches

Artificial and temporary channels help redirect water away from houses, which work effectively to prevent flooding.



Community Co-op

Collaboration between neighbours results in better preventative methods, quicker implementation and increased social stability.

For example, at the end of C-section road, there is a small community that gathers with communal spades to build a ditch that helps prevent flooding for the stretch of 8 to 10 houses.



Further efforts

The local solutions displayed in this brochure are partially effective, but are not permanent. There are better ways to manage flooding issues, but will need city help to be created:

Swales: culverts with vegetation, that help control water runoff velocity and volume

Infiltration trenches: trenches filled with varying sized stones, that filter and redirect the water.

Soakaways: similar to trenches, but with a top layer of grass that helps filter the water.

Wetland: natural or artificial land depressions where water is redirected.

