Ashby Drive Park: Sponge soils and blue-green infrastructure

Cities and towns are consistently faced with more stormwater than they are able to manage. Flooding has become increasingly common, generating hundreds of thousands of dollars worth of damages to public and private property, limiting access to open spaces and in some cases, endangering the safety and well-being of residents and community members who live and work in vulnerable areas. Since 2019, Vineland Research and Innovation Centre has been working in collaboration with the Town of Lincoln, using science and innovation to pro-actively address flooding at a community level.

In order to understand what is unique about Ashby Drive Park, you have to look below the surface. Unlike your typical urban development - made up of highly compacted soils that are prone to run off and surface flooding - the soil underlying approximately 60% of Ashby Drive Park has been specifically designed to infiltrate and hold stormwater, acting like a giant sponge that soaks up rainfall and stores it below ground. The water stored in this absorbent landscape can then be used by the park's trees, shrubs and other planted vegetation. This system of stormwater management is commonly referred to as **blue-green infrastructure**, which uses natural vegetative systems and green technologies, such as bio-retention systems, green roofs and rain gardens to provide economic, environmental, health and social benefits.

Total Rainfall at Ashby Drive Park
November 2022 - July 2023

Total Rainfall Absorbed (L)
Total Rainfall (L)

Total Monthly Precipitation (L)

Months following completion of park enhancements

95% of total rainfall was captured through absorbent landscaping in the first 9 months post-construction
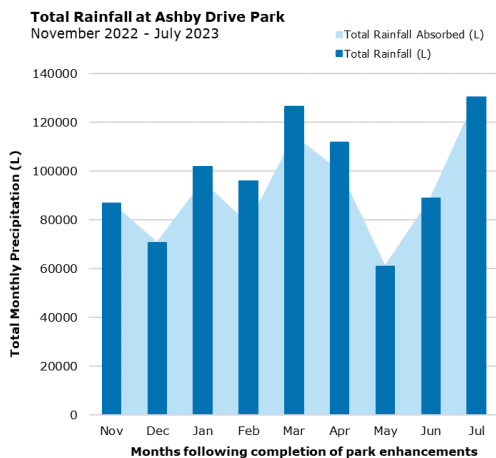
Absorption is expected to improve over time as soil settles and the landscape naturalizes with the establishment and growth of trees and other vegetation. By integrating **blue-green infrastructure** into our urban landscapes, we can build more resilient communities throughout the region.

On average, Ashby Drive Park has absorbed 91, 700 L of rainwater per month. That is up to 300 bathtubs of water every month that can now be used by trees on site!

X 100

* Based on rainfall and absorption data collected between November 2022 and July 2023.