Executive Summary

Impervious surfaces are an undeniable component of development. asphalt, roofs and other materials cover the earth's surface, preventing the natural infiltration of water. As the urban fabric extends, cities must manage massive quantities of displaced stormwater. Conventional stormwater management (SWM) and high levels of imperviousness lead to degraded streams and watersheds. New approaches to SWM include addressing it at multiple scales, requiring change in regulations and distance from conventional approaches. This study sets out to answer. **What are the primary determinants of residential imperviousness? What planning tools or exercises best implement its reduction for improved watershed health?**

This study details impervious surface coverage in three neighbourhood types in the City of Peterborough, Ontario, using a geospatial analysis in a GIS. This alongside review of literature and pertinent policy will form meaningful and progressive recommendations for the City of Peterborough to reduce impervious surface coverage at the lot level to mitigate impacts on water resources.

This report is structured into four chapters, each of which works towards answering the