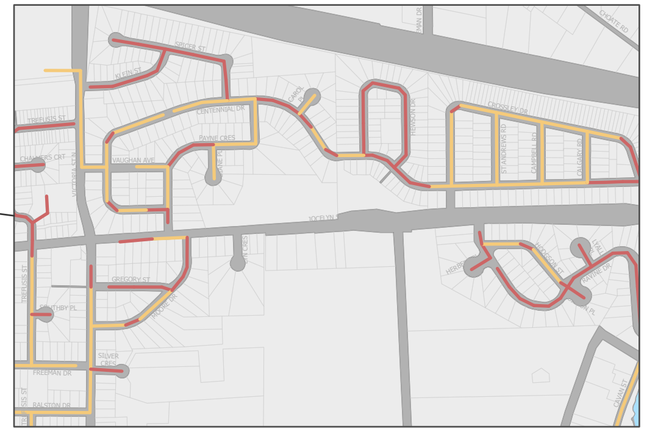
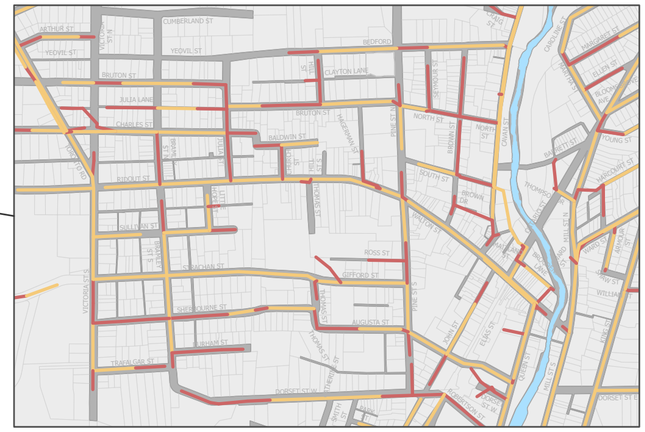
Risk Analysis of Port Hope's Storm Water Infrastructure For A 82mm Precipitation Event (50 year occurrence)

In recent years there has been an increase in severity and duration of rainfall events. This natural hazard is expected to increase as climate change persists. As a consequence, municipal wastewater systems are experiencing increased pressure due to increases of inflow and infiltration into sewer systems. This also results in increased risks of structural failures, pipe bursts, sanitary sewer overflows, and ultimately higher costs for municipalities and their citizens. This series of maps delineates areas in which rainfall amounts will impact the storm water system by exceeding specific maximum flow capacities of pipes. These risk assessment values were obtained by performing a series of hydrologic modelling including catchment delineations, dry flow capacities and inflow + infiltration calculations





Wastewater Pipe Network
- Areas Not At Risk
- Areas At Risk
- Wastewater Treatment Plant

0 0.28 0.55 1.1 1.65 Kilometers

Map designed and created by NBD Group at Sir Sandford Fleming College in June 2020 using ArcGIS Pro

Sources: Port Hope - Wastewater pipelines - 2019. Land usages - USGS Earth Explorer 2020

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