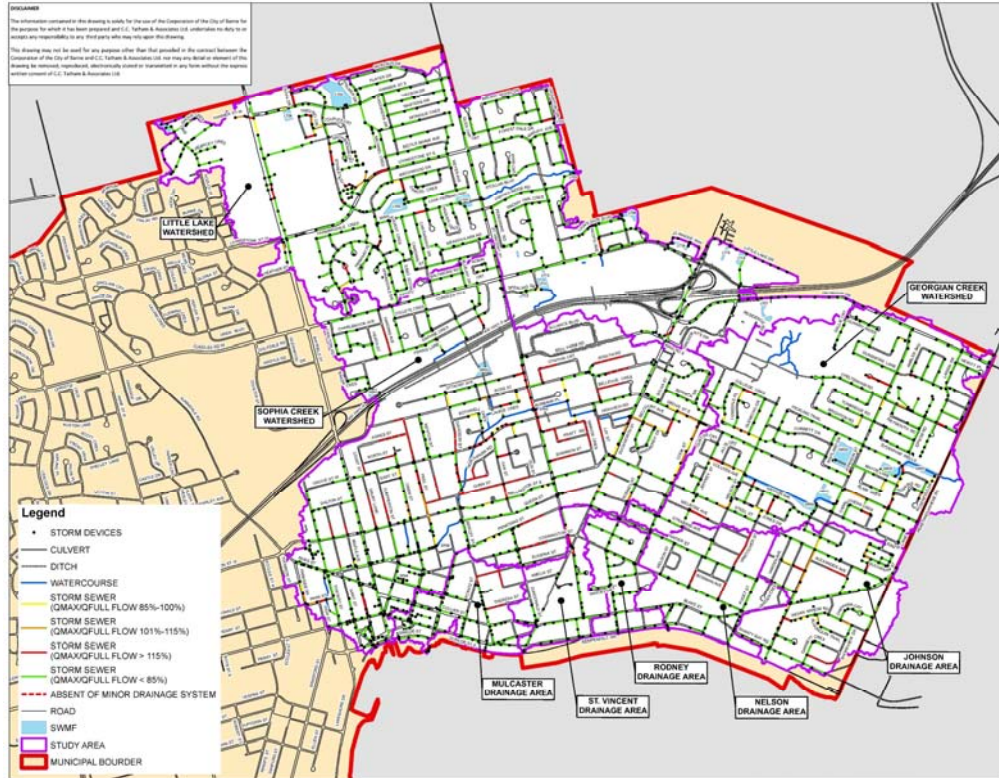


Barrie City-wide Minor Drainage System Model

Client: City of Barrie

Year: 2015 - 2016



SERVICES PROVIDED

CCTA was retained by the City of Barrie to prepare, calibrate and verify a PCSWMM hydrologic/hydraulic model of Barrie’s minor drainage systems for 11 watersheds and 12 drainage areas. The PCSWMM model was developed from the City’s GIS data (minor storm infrastructure) and includes 403 km of storm sewer and 7,400 storm devices. The model includes the SWM facilities, watercourses, road crossings and major overland flow routes (dual drainage system) city-wide.

Subcatchment delineation was completed across the city at each storm structure from the City’s 2007 Lidar data through PCSWMM. Subcatchment parameterization was completed utilizing the City’s GIS data (impervious, landuse, etc.) and Simcoe County soils maps. The hydrologic model was calibrated to streamflow monitoring data for eight creeks and verified against a six month continuous simulation using real-time rainfall/streamflow data.

The calibrated/verified model was used to identify deficiencies in the minor drainage systems and allows for the evaluation of proposed storm infrastructure improvements under a variety of actual and predicted storm events and future watershed conditions.

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