

Development application guidelines

Stormwater management study

What is the purpose of this?

A *stormwater management study* is an evaluation of the effects of the proposed development on the natural environment and municipal storm and sewer infrastructure. The study provides mitigative measures to reduce the impacts of increased sediment erosion, higher and faster peak flows and pollutant contaminant loads on the receiving storm water network.

Who should prepare this?

The *stormwater management study* should be prepared by a qualified professional engineer with experience in water resources. The study may be a stand-alone document or combined with a *functional servicing study*.

When is this required?

A *stormwater management study* may be required as part of the following applications:

- Zoning By-law Amendment
- Draft Plan of Subdivision/Condominium
- Site Plan Control

Why do we need this?

The Town of Oakville adheres to the recommendations of the Province regarding the implementation of watershed management planning and the promotion of a comprehensive ecosystem approach. All new development proposals should conform to the recommendations of the applicable watershed/sub-watershed and/or Environmental Implementation study.

How should this be prepared?

The *stormwater management study* (SWM) for a subdivision plan should include the following:

- a map of existing contours and pre-development catchments including external contributing areas
- identification of flood plain limits of all watercourses
- a plan with post-development catchments including area and runoff coefficients
- a plan of the sewer system, SWM facilities and overland flow routes
- a description of methodology and existing watershed criteria
- a summary of the Town's applicable criteria to be met
- detail input parameters to the hydrologic model
- complete computer output/input printouts (computer files)
- electronic data files of input and output for pre and post development conditions
- summary of computer output results in a simplified tabular format
- comparison of sewer sized by Rational Method to hydrologic output
- identification of revised pipes and proposed catchbasin inlet controls
- verification that major overland flow routes do not impact properties and that road gutter flows are within Town parameters
- 1:100 year hydraulic grade lines to be calculated for all pipes and basement elevations evaluated for surcharge potential
- summary of how all Town and Watershed SWM criteria has been satisfied
- outline of the maintenance and monitoring program for the SWM facilities, including Oil Grit Separators (OGS)

What else should we know?

A *stormwater management study* supports the intent of the subwatershed study recommendations (where they exist) and provides staff with a basis on which to assess the environmental implications of the proposed development. It also provides staff with a basis on which to assess the increased demands on municipal infrastructure posed by the development, and the need for future study requirements, such as detailed designs. The study recommends improvements to municipal infrastructure and mitigative measures to reduce erosion, risk of flooding and maintain water quality in receiving stormwater systems.

What other resources are there?

Town of Oakville - The Development Engineering Procedures and Guidelines Manual:
<http://www.oakville.ca/assets/general%20-%20business/DevelopmentEngProceduresManual.pdf>

Halton Region - Service Permits and Drawing Requirements:
<http://www.halton.ca/cms/One.aspx?portalId=8310&pageId=8570>

Halton Region - Development Agreements:
<http://www.halton.ca/cms/One.aspx?portalId=8310&pageId=26663>

Ministry of the Environment – Stormwater Management Planning and Design Manual:
<http://www.ene.gov.on.ca/environment/en/category/index.htm>