

Water Budget and Conservation Plan

A Water Budget and Conservation Plan is required to support new blocks of development or comprehensive new development within a secondary plan area.

A water budget quantifies elements of the hydrologic cycle within a watershed or subwatershed study area at an appropriate level of detail. These elements include precipitation, interception, evapotranspiration, infiltration, storage and surface runoff amounts on an annual average basis.

A water budget model can project the impacts of proposed land use or management changes on the water budget/water resource availability and to assess mitigation measures intended to maintain a given water budget state. A water budget can be used to assess if water use is sustainable, if resources are stressed, or likely to become stressed.

It is intended to support planning applications for development proposals and encourage sustainable and context sensitive design responses. The study will illustrate the proposed how it is consistent or conforms to applicable provincial, regional, municipal and/or Conservation Authority requirements.

Required by Legislation

The Ontario Planning Act and the Ontario Water Resources Act.

Who should prepare this plan?

A Water Budget and Conservation Plan must be completed by a registered professional engineer qualified in civil/water resources engineering. All drawings must be stamped, signed, and dated by a professional engineer, licensed in the Province of Ontario.

The study team should also include qualified professionals with expertise in hydrogeology, species identification, biological, ecological and/or environmental functions and processes.

Why do we need this plan?

Changes in hydrology can impact the quantity and quality of water reaching natural features, public and private property, habitats, water flows (flooding, drought), and erosion potential. Understanding how water moves within a water resource system is important to understanding the cumulative impacts of land use activities, such as development projects (proposed and existing). Water budgets are used to:

- › To set water allocation targets and recharge rates within local watersheds
- › As a decision-making tool to evaluate land and water uses such as restoration and rehabilitation
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- › Evaluate the cumulative effects of land and water uses within watersheds
- › To provide a watershed scale framework for site scale studies (e.g. evaluation of a sewage and water system plan)
- › To assist in setting targets for water conservation

Water Conservation Plans are required through provincial regulations plans and policies for water conservation purposes including water demand management and recycling of water.

The report will guide staff in the evaluation of the application.

How should this plan be prepared?

A Water Budget and Conservation Plan should at a minimum contain:

Introduction

- › Address of the property
 - › General site location of the subject property
 - › Project Name (if applicable)
 - › Applicant and owner's contact information
 - › Author name, title, qualifications, company name and appropriate stamp
 - › Brief description of the proposed development
 - › Overview of the study area
 - › Purpose of the study
 - › Location and context map.
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Proposal Description and Context

- › A description of the proposal, development stats (such as number of units, site area) type of development proposed, height, parking areas, access points, location of amenity areas, proposed phasing
 - › A description of the existing on-site conditions as well as surrounding areas, roads, natural areas, buildings, parking areas
 - › Process steps/approvals required (i.e., zoning, draft plan of subdivision)
 - › Identification of Provincial, Regional, municipal, Conservation Authority Plans, policies and guidelines that are relevant to the study area
 - › Other concurrent approvals being sought, planning applications, permits
 - › Concept Plan for the development including building location, parking, access, amenity areas, grading and natural features and any natural hazards.
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Investigation/Evaluation

Water Budget Analysis

- › Quantify the components of the water balance equation, including precipitation, evapotranspiration, groundwater inflow and outflow, surface water outflow, change in storage, water withdrawals and water returns
 - › Characterize the groundwater and surface water flow systems by means of modelling
 - › Identify:
 - › Targets to meet the water needs of the affected ecosystems
 - › The availability, quantity, and quality of water sources
 - › Goals for public education and for water conservation
 - › Develop a water-use profile and forecast
 - › Evaluate plans for water facilities such as pumping stations and reservoirs.
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Impacts and Mitigation Measures

- › Identify and evaluate:
 - › Water conservation measures such as public education, improved management practices, the use of flow-restricting devices and other hardware, water reuse and recycling, and practices and technologies associated with water reuse and recycling
 - › Water conservation incentives such as full cost pricing
 - › Ways of promoting water conservation measures and water conservation incentives
 - › Analyze the costs and benefits of the matters described.
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How should this plan be prepared? (continued)

Recommendations

- › Identify water conservation measures and incentives to be incorporated
 - › An implementation plan for those specified measures and incentives that reconciles the demand for water with the water supply
 - › Proposed monitoring of the water budget and conservation plan for effectiveness.
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Drawings and Supporting Information

- › Study Area - map of the area under study with property boundaries of participating and non-participating landowners identified.
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What else should we know?

The scope of the study should be discussed with the community planner and or other staff or agencies as part of the pre-consultation process. The planner and the local Conservation Authority will determine whether the Water Budget and Conservation Plan should be combined with the Environmental Servicing Study.

Additional Terms

To be identified by the local municipality where proposed development is located.

Study Submission Instructions

To be identified by the local municipality where proposed development is located.

What other resources are there?

Ontario Professional Planners Institute (OPPI) – [Hire an RPP](#)
[Professional Engineers of Ontario](#)
[Professional Geoscientists Ontario](#)
[Toronto Region Conservation Authority Permits](#)
[Lake Simcoe Region Conservation Authority Permits](#)

About these Terms of Reference

These Terms of Reference were developed as a joint effort with participation by representatives from all York Region municipalities and the Region. The Terms of Reference are in widespread use across the Region, with local requirements added as prescribed by each municipality at the pre-consultation stage.

The need and scope for this study will be decided by a municipality during initial pre-consultation process with input from partner agencies. This pre-consultation process may include:

- Determination if this study is applicable
- Confirmation of criteria within these Terms of Reference that are appropriate for your development project
- Identification of specific technical components that need to be addressed
- Identification of detailed standards to be met

Notes:

If the proposed development is revised, the study/report shall reflect the revisions by an updated report or letter from the author indicating the changes and whether or not the recommendations and conclusions are the same (Note: this is subject to the extent of the revisions).

A peer review may be required. The cost of the peer review will be borne by the applicant.

If the submitted study is incomplete, is authored by an unqualified individual or does not contain adequate analysis, the applications will be considered incomplete and returned to the applicant.