



Report to Council

Department: Infrastructure Services

Division: Infrastructure Services

Date: April 20, 2020

Prepared by: Kevin Girard, Director of Infrastructure Services

Report Number: Infrastructure Services-2020-02

Subject: Windsor/Essex Region Stormwater Management Standards Manual

Number of Pages: 129, including attachments

Recommendation(s)

That Infrastructure Services – 2020-02 entitled, "Windsor/Essex Region Stormwater Management Standards Manual" prepared by Kevin Girard dated April 6, 2020 be received, and

That Council adopt the Windsor/Essex Region Stormwater Management Standards Manual as the standard for the design and review of stormwater infrastructure within the Town of Essex.

Purpose

The purpose of this report is to inform Council of the recently completed Windsor/Essex Region Stormwater Standards Manual and have it adopted as the standard for design and review of development applications within the Town. The manual provides technical stormwater standards to ensure stormwater infrastructure is designed to meet a standard that is consistent with local conditions experienced within the Windsor-Essex Region.

Background and Discussion

Land development increases both the volume of stormwater runoff, and the rate at which runoff occurs. A principal purpose of stormwater management is to mitigate the potential for flooding to downstream landowners due to the hydrologic effects of development. Without stormwater management measures, the impacts of development can lead to increased flooding, damage to municipal infrastructure, degradation of water quality and aquatic ecosystems, stream erosion, and property damage. Left unmanaged, stormwater often leads to major public expenditures in infrastructure to solve flooding or erosion problems.

Why a Standards Manual is needed

Stormwater management requires a holistic approach on a watershed scale that considers both stormwater management constraints and opportunities. In the Windsor/Essex region, the prescribed standards for stormwater management systems vary considerably from municipality to municipality. This leads to a wide range of variation in stormwater management designs, which results in inconsistent stormwater management measures. There is a need for regional standards to:

- Provide a minimum standard and consistent level of service and protection of the environment throughout the region.
- Provide fair and equitable minimum standard for all.
- Address stormwater at the watershed scale without being limited by municipal boundaries.
- Streamline the review process to eliminate re-submissions and re-design efforts.

The New Stormwater Management Standards Manual

In 2015, the Essex Region Conservation Authority (ERCA) approached the City of Windsor, the County of Essex, and the local municipalities, including the Town of Essex, regarding the need for regional stormwater management standards. The lack of regional standards was resulting

in inconsistent requirements between local municipalities, varying levels of service for stormwater facilities, lack of clear guidance for developers and engineering consultants, significant review times, and the high potential for numerous review submissions.

Based on ERCA's request, the County of Essex and all local municipalities agreed to partner with ERCA to develop regional stormwater management standards. ERCA engaged the services of Stantec Consulting Ltd. as the principal consultant on the project. Engineering representatives from the Town, and from all partners, have worked collaboratively with ERCA and Stantec through an iterative process to develop the final stormwater management standards manual. This process included several meetings and draft reports leading to the attached final version of the manual.

Implementation of the stormwater management standards contained in the Manual will result in the following:

- Properly sized stormwater infrastructure based on up to date science and local conditions.
- Minimize the potential for future stormwater management storage issues at multi-phased developments by accounting for current development trends, local constraints and reviewing resiliency by stress testing the stormwater system for potential climate change impacts.
- Provide clear direction to developers and engineers on stormwater management requirements for new development within the Town.
- Create an even playing field for engineers providing proposals for stormwater management design.
- Provide a consistent watershed approach to stormwater management for all municipalities within the Windsor Essex Region.
- Reduce the number of reviews and re-submissions of plans. This should create efficiencies for municipal/agency reviews, expedite the approval process and reduce the proponent's design costs.

Since the manual's completion, the Town has been using this stormwater manual as its stormwater guidelines for infrastructure projects and new development. This is consistent with the practices of all municipalities in the Windsor/Essex region, ERCA, the City of Windsor, and the County of Essex. In addition, the approved 2020 capital budget includes the update to the Town's Development Standards Manual. The adoption of a stormwater standards manual will allow the Town to create a development manual that is consistent with regional guidelines, and provide clear direction to developers and engineers on stormwater management requirements for new and replacement infrastructure within the Town.

Financial Impact

There are no financial impacts as a result of this report.

Consultations

Lori Chadwick, Director of Development Services

Link to Strategic Priorities

- ☒ Manage, invest and plan for sustainable municipal infrastructure which meets current and future needs of the municipality and its citizens.
- ☐ Create a safe, friendly and inclusive community which encourages healthy, active living for people of all ages and abilities.
- ☐ Provide a fiscal stewardship and value for tax dollars to ensure long-term financial health to the municipality.
- ☒ Manage responsible and viable growth while preserving and enhancing the unique rural and small town character of the community.
- ☐ Improve the experiences of individuals, as both citizens and customers, in their interactions with the Town of Essex.

Report Approval Details

Document Title:	Windsor-Essex Region Stormwater Management Standards Manual.docx
Attachments:	- WE-Region-SWM-Standards-Manual.pdf
Final Approval Date:	Apr 14, 2020

This report and all of its attachments were approved and signed as outlined below:

A handwritten signature in black ink, appearing to read "Chris Nepszy". The signature is fluid and cursive, with a period at the end.

Chris Nepszy, Chief Administrative Officer - Apr 14, 2020 - 2:28 PM