

August 6, 2013

CL 10-2013, August 1, 2013

ICPC 11-2013, July 24, 2013

Report ICP 78-2013

LOCAL AREA MUNICIPALITIES

SENT ELECTRONICALLY

Watercourse Mapping Project

ICP 78-2013

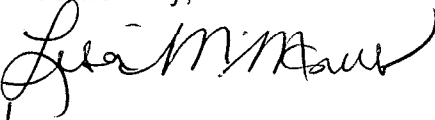
Regional Council, at its meeting of August 1, 2013, approved the following recommendations of its Integrated Community Planning Committee:

That Report ICP 78-2013, July 24, 2013, respecting Watercourse Mapping Project, **BE RECEIVED, as amended;** and

That a copy of this report **BE CIRCULATED** to Niagara municipalities, **and** the Niagara Peninsula Conservation Authority, **the City of Hamilton and Haldimand County.**

A copy of Report ICP 78-2013 is enclosed for your information.

Yours truly,


for Janet Pilon
Regional Clerk

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cc: Clerks of the Local Area Municipalities of Niagara Region
T. D'Amario, Niagara Peninsula Conservation Authority (NPCA)
G. Verkade, Supervisor, Geographic Information Services, NPCA
R. Caterini, City Clerk, City of Hamilton
E. Eichenbaum, Clerk, Haldimand County
P. Robson, Commissioner, Integrated Community Planning
K. Vaughan, Project Manager, Niagara Water Strategy
M. Tanner, Associate Director, Regional Policy Planning
S. McPetrie, Administrative Assistant, Integrated Community Planning
C. Heaslip, Administrative Assistant, Community & Corporate Planning

Niagara Region

REPORT TO: Integrated Community Planning Committee

SUBJECT: Watercourse Mapping Project

RECOMMENDATIONS

1. That this report **BE RECEIVED** for information.
2. That this report **BE CIRCULATED** to Niagara municipalities and the Niagara Peninsula Conservation Authority.

PURPOSE

The purpose of this report is to provide information on a joint Watercourse Mapping project between Niagara Region and the Niagara Peninsula Conservation Authority (NPCA).

The Watercourse Mapping project aligns with the Council Business Plan under Theme 1: Responsive Region and Theme 4: Environmentally Responsible.

BUSINESS IMPLICATIONS

The mapping project is important information that can be used by Niagara Region, the local area municipalities and the NPCA when managing matters related to surface water features in the Niagara Region. Niagara Region's WaterSmart program has funded the NPCA \$100,000 to hire a firm to update the existing Digital Terrain Model (DTM) vintages and to re-standardize them across the Niagara Watershed. In addition, WaterSmart is funding a temporary staff person to help complete the project in partnership with the NPCA. NPCA staff time is an "in-kind" contribution to the project.

This project has received the Silver Award for Innovation in GIS from the Urban and Regional Information Systems Association (URISA) for our Watercourse Mapping project and has been recognized in an article published in the Ontario Planning Journal.

REPORT

A pilot project, in partnership between Niagara Region and the Niagara Peninsula Conservation Authority (NPCA), has been initiated to develop a more up-to-date and comprehensive inventory of surface water features. Currently, all surface water features are classified in one category. This means creeks, rivers, streams, swales and agricultural drains are looked at the same way for planning purposes. There is a clear distinction in functions that must be delineated so that the right decisions are made

relative to matters such as zoning regulations and building permits. The mapping project is to assist in better outcomes.

Niagara-on-the-Lake (NOTL) was selected as the pilot area. This pilot area is to address Niagara Region appeals of the NOTL Zoning By-law concerning Agricultural Community Zoning. The Watercourse Mapping project will provide more up-to-date and accurate details about current surface water feature categories, including associations such as fish habitat. The project has been carried out in consultation with the local area municipalities, Ministry of Natural Resources and Ministry of Municipal Affairs and Housing. Once the mapping for the pilot has been completed, further consultation with the public and other relevant stakeholders will be carried out.

The first phase of the project was to update the existing local, large scale surface water feature mapping and classify the surface water features by type. The methodology used to classify and define surface water features is based on a guidance document published by the Ontario Ministry of Natural Resources' Water Resources Information Program (WRIP).¹ Important changes were made to refine these definitions and to address contextually significant features within the Niagara Region. For example, features like ditches have been further broken down into three different types (agricultural, roadside and other) in order to capture important differences between their functions and contributions to the broader hydrologic system, and role in the agricultural economy.

The second phase was to understand how surface water features function and provide value to the broader hydrologic system from an environmental or economic risk and management perspective. An extensive review of over 20 existing watercourse related mapping and data sources (e.g., Ministry of Natural Resources' local fish habitat classification mapping and methodology report, Department of Fisheries and Oceans' Species at Risk mapping, and the Ontario Ministry of Agriculture and Food's Tile Drainage Area and Connections mapping) was carried out in order to determine whether or not they can/should be incorporated into the project. The mapping and data sources were assessed for their currency, scale, accuracy and relevance. For NOTL, it was determined that the local irrigation system mapping and the local Ministry of Natural Resources' fish habitat mapping were important to include in order to support planning needs related to a local by-law.

Through the review, it was determined that many of the mapping sources are out of date and/or lack the detail that is required to support planning and management needs without presenting significant implementation challenges. Analyzing and integrating all of the information into a single suitable mapping inventory provides a comprehensive operational source of information for referencing water resource information for Niagara. This will allow for greater efficiencies in the planning and management processes. Additionally, large scale mapping helps to generate more credible mapping products

¹ WRIP, 2011 (http://www.conservation-ontario.on.ca/projects/pdf/Data_Capture_Specifications_for_Hydrographic_Features_-_Large_Scale_-_v1.3.pdf)

than traditional, aging base mapping, which helps to strengthen confidence when using mapping products for public consultation and other decision-making processes.

The pilot area is expected to be completed by end of summer 2013. Mapping for the remaining municipalities is expected to be completed by Fall 2014. Updates on the project will be provided to ICP Committee when appropriate and upon completion of the mapping for the Niagara watershed.

PREVIOUS REPORTS PERTINENT TO THIS MATTER

- ICP-C 47-2013 (June 12, 2013): Watercourse Mapping Project – Recognition
- ICP 44-2012 (April 25, 2012): CONFIDENTIAL
A Matter of Litigation Involving the Municipality
Appeal of Niagara-on-the-Lake Agricultural
Zoning By-law
- ICP 50-2009 (October 14, 2009): Appeal of Zoning By-law 4316A-09
Agricultural Community Zoning District
Town of Niagara-on-the-Lake

Submitted by:



for
Patrick Robson
Commissioner
Integrated Community Planning

Approved by:



Patrick Robson
Acting Chief Administrative Officer

This report was prepared by Katelyn Vaughan, Project Manager, Niagara Water Strategy with input from Niagara Peninsula Conservation Authority staff and reviewed by Mary Lou Tanner, MCIP, RPP, Associate Director, Regional Policy Planning.