

REPORT

COMMUNITY SERVICES COMMITTEE

MEETING DATE: DECEMBER 11, 2012

FROM: Environmental Policy Department
Engineering and Construction Department

DATE: November 22, 2012

SUBJECT: Water Sustainability Plan Framework

LOCATION: Town-wide

WARD: Town wide

Page 1

RECOMMENDATION:

That the report from the Environmental Policy and Engineering and Construction departments regarding the Water Sustainability Plan Framework Project, dated November 22, 2012, be received.

KEY FACTS:

The following are key points for consideration with respect to this report:

- The town was approached by the Ministry of the Environment (MOE), Region of Halton and the Great Lakes St. Lawrence Cities Initiative (GLSLCI) to participate in a study to inform the MOE's development of the requirements for a municipal water sustainability plan (WSP).
- The MOE through a grant funding agreement provided \$35,000 for the project with additional amounts of \$5,000 from the town and \$5,000 from the Region of Halton.
- The goal of this work is to more effectively manage municipal water, stormwater and wastewater services through integrated sustainability planning to protect and enhance our water resources.
- The scope of work focused on developing a framework for a municipal water sustainability plan.
- Key steps to develop the framework included goal setting; development of a project charter; baseline review of existing programs, policies and guidelines; identifying issues and opportunities; municipal consultation; prioritization of issues, and identification of key recommendations for tangible actions and a communications plan.
- Inter-departmental and inter-agency coordination were identified as paramount within this process and would be essential components to support successful water sustainability plan implementation.

From: Environmental Policy Department
Engineering and Construction Department
Date: November 22, 2012
Subject: **Water Sustainability Plan Framework**

BACKGROUND:

In 2010, the Ontario Ministry of the Environment (MOE) released the *Water Opportunities Act, 2010*. The Act sets the framework to assist municipalities to improve the efficiency of municipal infrastructure and services by:

- Identifying innovative, cost effective solutions for drinking water, sewage and stormwater system challenges
- Optimizing systems and improving water conservation
- Identifying opportunities to demonstrate and carry out new and emerging Ontario water technologies, services and practices

The Act enables the MOE to require municipalities and other water service providers to prepare Municipal Water Sustainability Plans (WSP). These plans, according to the Act, are intended to promote water efficiency as a cost effective way to generate additional water and wastewater capacity.

In Ontario, responsibility for municipal drinking water, wastewater and stormwater services are often split between the upper and lower tier municipalities so that integration of systems may be less than optimal. As well, different departments within the same municipality may be responsible for drinking water, stormwater and wastewater services, or will perform different functions such as planning, design and construction, operation and maintenance, permitting and inspection, financing, and community outreach or public engagement.

Unlike many municipalities, Oakville and Halton Region have completed or have initiated infrastructure planning for municipal drinking water, stormwater and wastewater services including:

- Master plans for infrastructure
- Wet weather master plans
- Environmental Assessment documents for specific infrastructure projects
- Design, operations and maintenance plans (including costs)
- Asset management plans (including costs)

This put the town in a good position to move forward when approached by the MOE, Region of Halton and the Great Lakes St. Lawrence Cities Initiative (GLSLCI) to participate in a study to inform the MOE's development of the requirements for a municipal water sustainability plan under the recently passed *Water Opportunities Act, 2010*. Based on consultation with MOE staff during this study process, it is understood that they are currently working on preparing the regulations that will accompany this Act. The regulations will set out the specific requirements for a Water Sustainability Plan.

From: Environmental Policy Department
Engineering and Construction Department
Date: November 22, 2012
Subject: **Water Sustainability Plan Framework**

A report was provided to Council at the March 22, 2012 Community Services Committee to receive approval for the town to enter into an agreement with the MOE to conduct this study.

COMMENT/OPTIONS:

This report provides a summary of the study undertaken to develop a framework for a water sustainability plan. The draft final report is attached as Appendix A.

Overall Scope of Work

Under the MOE's Grant Funding Agreement, the town was responsible for conducting a study to demonstrate an approach for the development of a long term water sustainability plan for the stormwater component of municipal water infrastructure and services. This was to include the collaboration of upper and lower tier municipal governments, their departments and other partners. The study considered both environmental and financial sustainability.

The scope of work included:

- Develop a project charter for collaboration in the development of a long term water sustainability plan
- Review the roles and responsibilities related to water infrastructure and services for the town, the Region and Conservation Halton. This effort concentrated on understanding the various agency mandates and their inter-relationships
- Determine what issues and opportunities exist with respect to the sustainable delivery of water services
- Consult with other municipalities to broaden the knowledge base related to other water service providers
- Provide preliminary cost estimates for developing a water sustainability plan.
- Develop a recommended approach for collaborating on a water sustainability plan for municipal infrastructure and services
- Develop an outline of key factors and steps for communicating the collaboration on a water sustainability plan

Study Components and Results

The following outlines the study components including a brief synopsis of results.

1. Define Roles and Responsibilities:

In order to identify the roles and responsibilities of the water service providers, background documents related to water services and specifically to stormwater were compiled. Policies, procedures and programs provided by the town, the Region and Conservation Halton were identified and summarized. Each of the water service providers then completed a scan of these policies, programs and procedures to cross reference those with linkages supporting the components of

From: Environmental Policy Department
Engineering and Construction Department
Date: November 22, 2012
Subject: **Water Sustainability Plan Framework**

a water sustainability plan. These scans revealed that there are both gaps and overlaps between service providers.

2. Identify Issues and Opportunities:

The individual service-based matrices developed as part of the 'scan' of water based services led to an identification of issues and opportunities, which start to define where there may be competing or complementary services and/or gaps. Due to the case study focus on the town, the issues and opportunities emphasize stormwater services but in the broader context for a regional WSP, the issues and opportunities analysis would apply more fully to drinking water and wastewater services as well.

Several opportunities were identified which could benefit from an integration of process or assessment, across various water services (storm, drinking water and wastewater). A prioritization of these issues and opportunities for further study is required and will form the next stage of this process for the town. From this preliminary work, the following lists items for further assessment:

- Integrated planning for water/wastewater/stormwater system master plans (including roadways)
- Potential to operationalize sustainability as an example to improve land use planning by applying more 'water sensitive' approaches
- Provide opportunities for more adaptive, innovative stormwater management technologies, recognizing that the more upstream or 'on-lot' the measures, the more effective and sustainable the measures will be in the long-term
- Recognize, consolidate and address climate change adaptation issues, challenges and opportunities in order to move forward on adaptation planning including emergency preparedness

3. Municipal Consultation Process:

A key component of this study has been consultation with other municipalities to discuss and brainstorm issues and opportunities related to the preparation of future water sustainability plans, as well as define the core objectives of a Water Sustainability Plan. Two focus group sessions were held; the first was with Halton municipalities and the second session was held with the Municipal Stormwater Discussion Group (representing southern Ontario municipalities and Conservation Authorities).

The intent of these sessions was to 1) identify problems and concerns associated with the delivery of a future Water Sustainability Plan and 2) provide input on the preliminary issues and opportunities. At the broader group meeting, the following additional items were considered:

- Input on potential future external stressors related to the delivery of water-based public services

From: Environmental Policy Department
Engineering and Construction Department
Date: November 22, 2012
Subject: **Water Sustainability Plan Framework**

- Insight into the potential application and/or benefit of new technologies and practices (focus on stormwater)

These sessions were found to be very informative and several concerns related to the impacts of upcoming regulation were identified.

4. Preliminary cost estimates:

It was identified that the cost associated with the development of a Water Sustainability Plan will be dependent on various factors including the size of the municipality, the water services provided, and the extent of existing staff and budget capacity. Costs will also be influenced by the municipality's commitment to sustainability and the number of integrated master planning elements already in place.

In order to prepare these plans, there will likely be a need to involve both external technical support services as well as internal staff resources. For the town the cost for external and internal support has been estimated at approximately \$200,000 and \$73,000, respectively. In addition, it is of paramount importance to recognize that the Water Sustainability Plan itself will generate additional effort through implementation which will draw on both internal and external resources.

The level of financial and human resources required for implementation of a Water Sustainability Plan is extremely difficult to estimate at this stage therefore it is estimated that the above cost estimates could fluctuate by +/- 30 percent. The town has taken many steps toward the preparation of various components of a Water Sustainability Plan and as such is considered to be in an advantageous position to deliver such a plan.

Overall Study Outcome - Recommended Approach

The following lists key process steps identified to develop a WSP:

- Form a project team with representatives from the public sector (both upper/lower tier if applicable), including municipal staff, council and the conservation authority
- Set clear goals and objectives at a high level and what anticipated outcomes will be and how they will be structured
- Develop a project charter to form a high level agreement amongst the project team
- Conduct a baseline review of existing programs, policies and guidelines related to water services that includes information internal to the organization as well as external (i.e. upper/lower tier municipality, the conservation authority, etc.)

From: Environmental Policy Department
Engineering and Construction Department
Date: November 22, 2012
Subject: **Water Sustainability Plan Framework**

- Identify issues and opportunities with a detailed review and analysis of the various baseline information gathered
- Conduct a prioritization exercise to rank the list of opportunities and issues
- Develop key recommendations from the assessment and stakeholder consultation process that connects the issues and opportunities to tangible actions
- Develop a Communications Plan including engagement with the general public and outside agencies modeled on the town's standard

Status of Water Sustainability Planning for the Town of Oakville

This exercise in developing a potential model WSP framework for the future MOE regulations provided a positive outcome for the town by showing the current Oakville/Halton structure matches well in delivering (or planning to deliver) the requirements prescribed within the *Water Opportunities Act*. An inter-departmental and inter-agency approach to matters related to water sustainability has been found to be effective.

There is a need to strengthen the partnerships with the Region of Halton and Conservation Halton as the town moves to a more integrated and sustainable water service delivery model for its citizens. Successful integration relies on regular communication and inter-departmental/agency 'steering or technical' teams for improvements for new and on-going programs/services.

Immediate next steps towards the development of a WSP:

- Continue to develop and refine the storm water management system components including:
 - Stormwater Master Plan Phase 1 – (\$140,000), funded and underway
 - Stormwater Master Plan Phase 2 – (\$150,000), beyond 2013
- Establish an inter-departmental team
- Establish an inter-agency stakeholder group
- Prioritize issues and opportunities with analysis to establish ways to address issues and opportunities
- Continue the development of the Climate Change Strategy now underway
- Work with Finance on sustainable asset management initiatives
- Continue to improve and encourage best management approaches for stormwater management

Future next steps for this process include the following:

- Work to address identified gaps
- Continue to work with an inter-departmental/agency approach along with the Region and Conservation Halton towards developing a plan
- Continue to work on programs, policies and strategies related to water services identified as in-progress or planned

From: Environmental Policy Department
Engineering and Construction Department
Date: November 22, 2012
Subject: **Water Sustainability Plan Framework**

Benefits to Preparing a Water Sustainability Plan

Water Sustainability Plans by their very nature are intended to assist municipalities and their citizens in:

- Protecting water resources
- Managing human impacts on resources
- Enhancing existing water resources
- Delivering services in a financially responsible manner
- Communicating benefits and actions to and by the public
- Maintaining water assets (operationally and fiscally)
- Minimizing risks from future stressors, known and unknown by building capacity
- Planning for future needs

The benefits derived to the town and its partners through this study will continue to lead to an overall improvement in water service delivery.

CONSIDERATIONS:

(A) PUBLIC

The outcome of the project will support integration of water infrastructure management for improved service to the public. Future work would involve community engagement in the development of a Water Sustainability Plan and project components.

(B) FINANCIAL

The town cost for the study was \$5,000 funded from the stormwater management operations budget. Future Water Sustainability Plan development and project components such as the Storm Sewer Master Plan phases will come forward at appropriate times within the town's budgetary process.

(C) IMPACT ON OTHER DEPARTMENTS & USERS

The departments of Engineering and Construction, Environmental Policy and Development Engineering were involved in the project to ensure cross-departmental integration of project inputs and learnings.

(D) CORPORATE AND/OR DEPARTMENT STRATEGIC GOALS

This report addresses the corporate strategic goal to:

- enhance our natural environment
- continuously improve our programs and services
- be innovative
- always act as a team

From: Environmental Policy Department
Engineering and Construction Department
Date: November 22, 2012
Subject: **Water Sustainability Plan Framework**

(E) COMMUNITY SUSTAINABILITY

The project supports the environmental and economic pillars of sustainability by advancing improvements in managing our water infrastructure more sustainably to better protect and enhance our water resources.

APPENDICES:

APPENDIX A: Final Draft Report on Water Sustainability Planning, Town of Oakville. Prepared by AMEC Environment and Infrastructure. November, 2012

Prepared by:
Kristina Parker, P.Eng.
Water Resources Engineer
Development Engineering
On behalf of Engineering and
Construction

Submitted by:
Cindy Toth
Director
Environmental Policy