



Town of
East Gwillimbury

C. Kalimootoo, P.Eng.

Director of Engineering & Environmental Services
Community Programs & Infrastructure
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July 20, 2010

Ms. Erin Mahoney
Commissioner
Environmental Services
York Region
17250 Yonge Street
Newmarket, Ontario
L3Y 6Z1

Dear Ms. Mahoney,

Re: CPI Report 2010-48 - Sustainable Development Program Component
Regional Inflow and Infiltration Task Force

Attached please find a copy of the report mentioned above, approved by our Committee of the Whole Council on July 12, 2010.

I am happy to participate in the Inflow and Infiltration Reduction Task Force Program and work in partnership with the Region of York and other local municipalities to move toward a sustainable future.

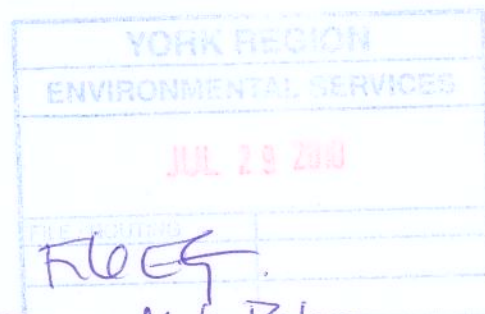
Sincerely,

Christopher Kalimootoo, P. Eng.
Director
Engineering & Environmental Services

CK/cs

Attach.

c.c. Daniel Kostopoulos, York Region, w/attach.
Tara Clayton, York Region, w/attach.



Copy - Mike Robson
- Tracy Corry

"Our town, Our future"



**COMMUNITY PROGRAMS & INFRASTRUCTURE
REPORT CPI-2010-48**

To: Committee of the Whole Council

Date: July 12, 2010

Subject: Sustainable Development Program Component
Regional Inflow and Infiltration Task Force

Origin: Community Programs & Infrastructure (CPI)
Engineering and Environmental Services Branch

RECOMMENDATIONS

1. THAT Community Programs & Infrastructure Report CPI-2010-48, dated July 12, 2010, regarding the Regional Inflow and Infiltration Task Force, be received; and,
2. THAT Town staff, in partnership with the Region of York and other local municipalities, actively participate in the Inflow and Infiltration Reduction Task Force to:
 - Continue to seek out sources of inflow and infiltration;
 - Adopt standards and guidelines intended to reduce inflow and infiltration in new developments and within existing systems; and,
 - Develop funding and cost sharing principles to address future remediation projects.

PURPOSE

This report provides an overview of the Regional Inflow & Infiltration (I & I) Reduction Task Force and works completed to date and also supports staff's participation in the Task Force (see attached) in response to a Regional request as well as in support of the Town's sustainability policies and principles. The report also highlights how the I & I reduction efforts supports the release of sewage allocation by the Region to area municipalities.

Inflow within a sanitary sewer system is defined by the entry of large quantities of water via improper storm connections to the sanitary systems or storm inflow entering manholes in low lying areas. **Infiltration** is usually smaller quantities of groundwater entering the system through pipe joints and cracks, etc.

BACKGROUND

Throughout the Region, there are a number of infrastructure projects scheduled for completion over the next few years which provide services for municipalities.

East Gwillimbury will rely on some of these specific wastewater collection infrastructure projects for growth. These projects include the York Durham Sewage System (YDSS), the Upper York Sewage Solution (UYSS) and the South East Collector (SEC). In addition, expansion/modifications to the Duffin Creek Water Pollution Control Plant is also a critical Regional piece of wastewater infrastructure.

As part of these projects (the YDSS Master Plan and the UYSS and SEC Individual Environmental Assessments) it was identified by the M.O.E. that Inflow and Infiltration (I&I) reduction efforts should be implemented as part of the design consideration. For example, one of the main stipulations from the Ministry of the Environment (MOE) for approval of the SEC, required the Region to develop and implement long term strategies to reduce I&I. This condition of approval requires that a 10% reduction of flow be achieved through I&I reduction within 20 years.

With respect to I & I reduction methodology, the Region has allocated \$23M towards this program, part of which will be used for remedial works across the Region on both the Regional and local wastewater systems.

ANALYSIS

Reduction of I & I Paves the Way to "Sustainability"

Reduction of I&I is not only required for the reduction of short term system overflow risk, but is also essential to ensure long term system security and to meet increasingly stringent regulatory requirements. In addition, the concept extends the life of infrastructure, hence reducing replacement and operating costs over the long term – "**Sustainability**".

Reduction of I & I is a Pre-requisite to Assignment of Sewage Allocation

Assignment for the 2011, 2012 and 2013 sewage allocation was provided by the Region on the condition that local municipalities agreed to fully participate in I & I reduction and water conservation programs, and endorse sustainable development incentive programs. Delivering on this commitment is essential for obtaining servicing allocation for the year 2013, prior to completion of the South East Collector Sewer.

In addition, the YDSS agreement between the Queensville, Sharon and Holland Landing developers' groups, the Region and the Town, requires I & I reduction initiatives. In fact, the

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Town should be able to replenish a portion of its sewage allocation reserve from conservation initiatives and sustainable development (the reduction of I & I is one such initiative).

At the Regional Council Meeting of February 18, 2010, the following recommendations were adopted:

THAT Prior to assigning the 2013 servicing allocation to individual developments, the eight YDSS serviced Local Municipalities will confirm through Council resolutions to:

- A. In partnership with the Region, agree to determine what constitutes adequate funding and resources to support the reduction of inflow and infiltration (I&I) into wastewater systems with the objective of generating I&I reduction within existing local and Regional systems by:*
 - I. Actively participating in a Regional I&I Task Force*
 - II. Continuing to seek out the sources of I&I*
 - III. Adopting standards and guidelines intended to reduce I&I in new developments and within existing systems, and*
 - IV. Developing funding and cost sharing principles to address future remediation projects*

Implementation

As previously reported and currently underway, in collaboration with the Region, Developers Groups and the Town, we are exploring ways to receive additional sewage allocation through water conservation methods including I & I reduction prior to the "Upper York Sewage Solution" being available (2016). By conserving sewage pipe capacity through the reduction of water consumption and the reduction of I & I, pipe capacity usage may be decreased up to an anticipated 40%± thereby allowing the potential of increased sewage allocation - a win win. This program is unique to East Gwillimbury as we are in consultation with the Region working on a pilot program towards sustainability policies that may be considered on a Regional level.

Reduction of I & I Has Already Begun in East Gwillimbury

The existing Sanitary Sewer Evaluation Study (SSES) Program jointly carried out between the Region and local municipalities will provide the tools necessary to achieve reduction of wastewater peak flows. The Town has already utilized Regional funds made available through the program which is dedicated to developing a pilot program for I & I reduction. Flow meters were strategically located in the wastewater systems in Holland Landing and Mount Albert to assess the areas with the highest I&I. This study resulted in a focused I&I pilot program in the

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south-east area of Holland Landing (see attached map) showing the highest incidents of increased flow due to I&I sources. During late 2009 and early 2010, smoke testing and CCTV camera programs proceeded to investigate the specific area. The data is currently being analyzed and recommendations from the program will be brought forward for the next round of funding for remedial pilot projects.

With the completion of these detailed studies and subsequent implementation of pilot remediation plans, a full suite of I&I reduction measures will be tested and available for East Gwillimbury and all local municipalities to utilize in the future. A timeline with identified milestones is attached to this report.

East Gwillimbury Has Been Pro-Active with Respect to the Grist Mill Road Reconstruction and the Repaving of Colony Trail Blvd. With Respect to the I & I Reduction Program

In order to avoid construction delays and/or post construction road excavations, during the reconstruction of Grist Mill Road and the repaving of Colony Trail Blvd., staff advanced the necessary I & I repairs on Grist Mill Road – they are now complete and advanced the investigative work on Colony Trail Blvd.

Principles of the I & I Reduction Task Force

There is an expectation that increased collaboration with the other municipal partners through this Task Force will benefit the management of the wastewater systems. The Region has hosted several collaborative workshops to discuss potential terms of reference and partnership models for I&I reduction. There is a strong commitment from all participants to proceed with this model due to funding and efficiency opportunities, as well as a more organized approach to addressing I&I issues in all areas. The Town's representatives on the I & I Reduction Task Force is the Director of Engineering & Environmental Services, and the Manager of Development Engineering under the direction of the General Manager of Community Programs & Infrastructure.

This effort will continue for many years and will become an extremely important program at both the Regional and local levels.

NEED FOR PUBLIC CONSULTATION

There is no requirement for public consultation at this time. However, prior to any remedial works being carried out, public notification will be implemented in the usual fashion as is presently being employed for any capital works program

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FINANCIAL IMPLICATIONS

The Region and local municipalities will need to consider allocating adequate additional funding and resources to implement I&I reduction programs for Regional and local systems. The I&I Task Force, comprised of both Regional and local Municipal senior staff, will develop efficient and fair funding and cost sharing principles to address future remediation projects required for implementation over a 20 year timeline.

As an example, it is estimated that remediation of I & I within the referenced study area in Holland Landing will cost \$860,000±. Through the ongoing SSES program, Town staff are negotiating funding availability from the Region to carry out the necessary repairs to the Town's sanitary sewer system and private lateral sewer connections in this area and will report back to Council on those initiatives. The Region has already provided funding to date for the works that have progressed thus far.

ALIGNMENT WITH STRATEGIC PLAN

The projects referenced in this report support the following Strategic Pillars:

1. Protecting and Enhancing the Environment
2. Providing and Advocating for Quality Programs & Services to the Community.
3. Investing in Municipal Infrastructure.

CONCLUSION

Servicing allocation for 2013 is important to ensure the Town's growth objectives can be met. In order for the Region to provide this servicing allocation to the Town, inflow and infiltration reduction is critical. Partnership between the Region and Local municipalities through this Task Force will ensure that together, a more efficient infrastructure is achieved that supports sustainable growth in keeping with Provincial legislation and both the Town and Region's Official Plan policies.

Reduction of I & I is a key component of the Town's "Sustainable Development Program" as it relates to sewage capacity and allocation.

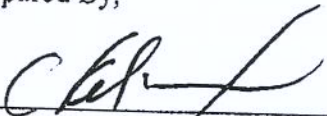
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This report has been reviewed by the Senior Management Team.

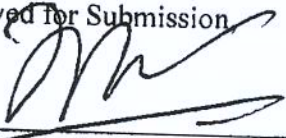
Prepared By,


Christopher Kalimootoo, P. Eng., BA, Director
Engineering & Environmental Services

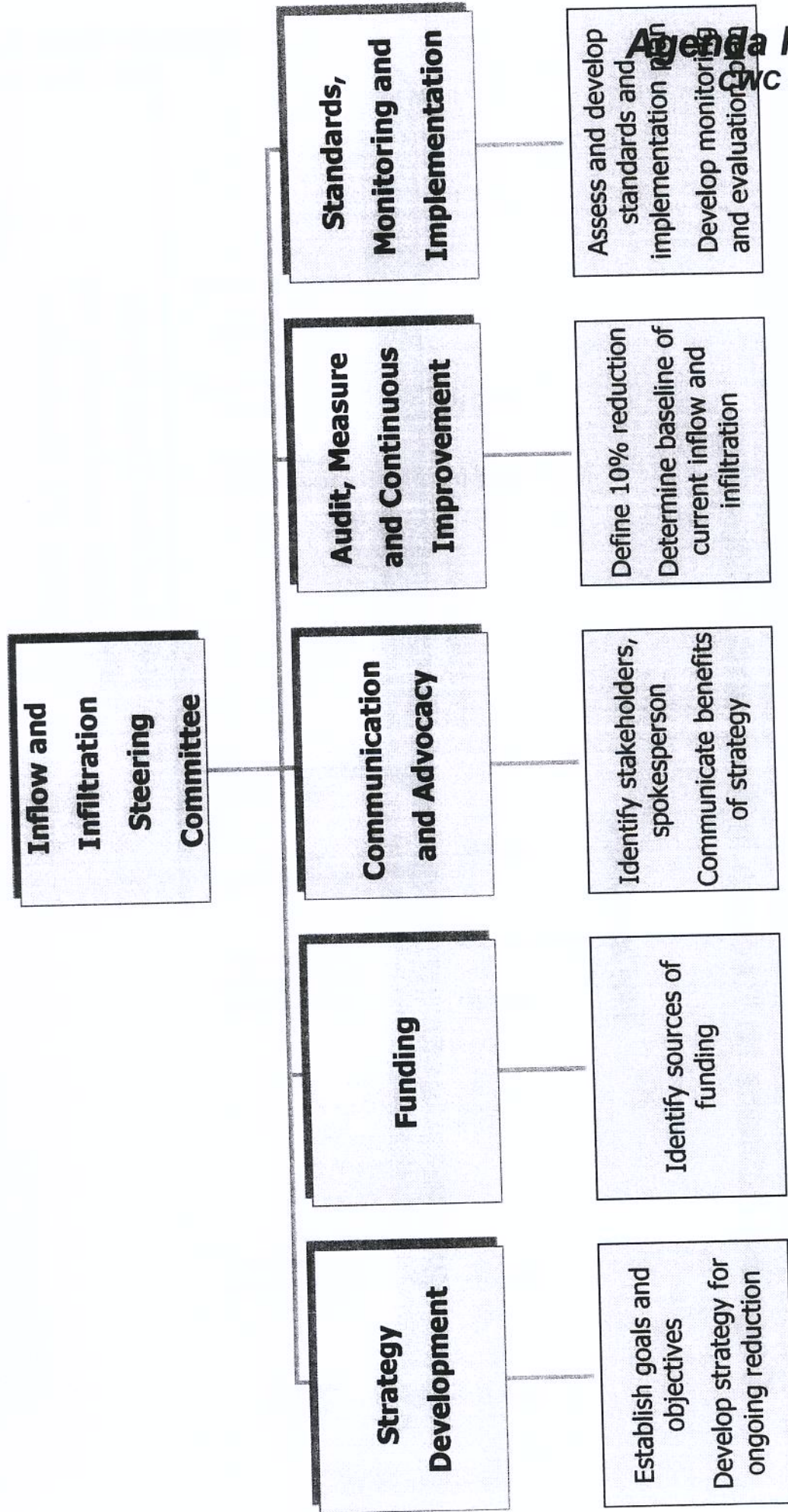
Approved and Recommended By,


B. W. Hunt, P. Eng., General Manager
Community Programs & Infrastructure

Approved for Submission


Thomas R. Webster
Chief Administrative Officer

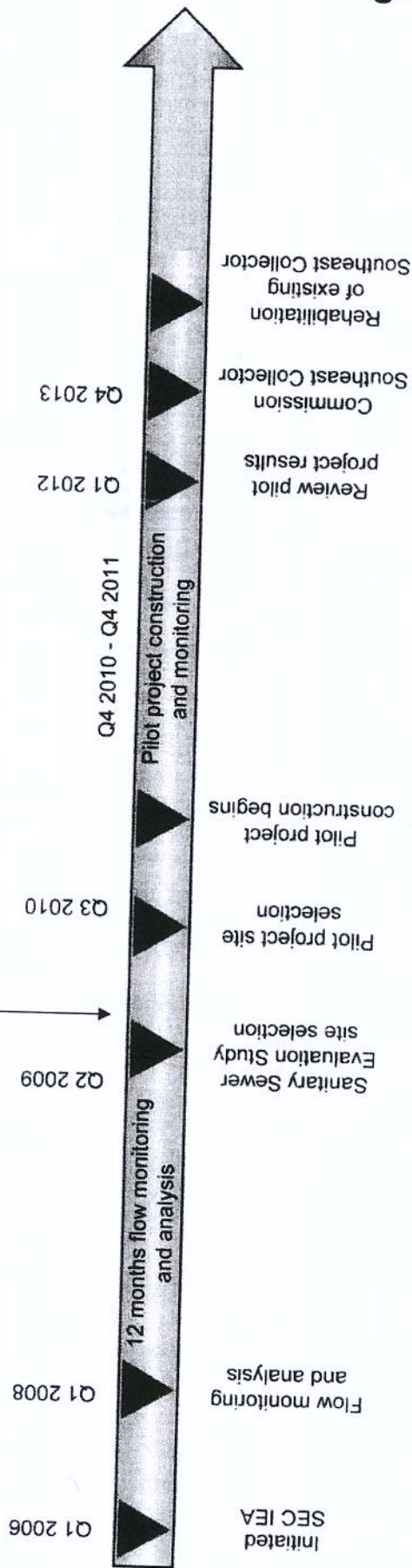
Inflow and Infiltration Reduction Task Force



York Region and Local Municipal Program

Ongoing Actions to Reduce Inflow and Infiltration

We are here



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**Role of the Task Force
Strategy and Action for
Ongoing I-I Reduction**



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I-I PROJECT AREA

Town of East Gwillimbury, in conjunction with The Regional Municipality of York, conducted "Smoke Testing Sewer Lines" and "CCTV Mainline & Lateral Inspections" in the south-east part of Holland Landing area (see the map below).

