

Clause 6 in Report No. 6 of Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting held on March 26, 2015.

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2015 Water and Wastewater Master Plan Update

Committee of the Whole recommends adoption of the following recommendation contained in the report dated March 12, 2015 from the Commissioner of Environmental Services:

1. Council receive this report for information.

1. Recommendations

It is recommended that Council receive this report for information.

2. Purpose

This report provides a progress update on the 2015 Water and Wastewater Master Plan Update (2015 Master Plan Update).

3. Background

The 2015 Master Plan Update is carried out in conjunction with the Region's Municipal Comprehensive Review (Official Plan Review and Update) and Transportation Master Plan Update

The Master Plan is a long term plan that identifies the preferred servicing strategy and infrastructure required to support the projected growth as envisioned in the Regional Official Plan. The last Master Plan Update was completed in 2009 and endorsed by Council on November 19, 2009.

In 2013, York Region commenced an update to the 2009 Master Plan. Notice of Commencement was issued on July 25, 2014. This 2015 Master Plan Update is carried out in conjunction with the Region's Municipal Comprehensive Review (Official Plan Review and Update) and the Transportation Master Plan Update and will identify the preferred servicing solution to accommodate the projected 2041 population of 1.79 million and employment of 900,000 in York Region as

set out in Amendment 2 to the Provincial Growth Plan for the Greater Golden Horseshoe.

The Region has been completing water and wastewater master plans for almost two decades with the first Water Master Plan and the first Wastewater Master Plan both completed in 1997.

The first round of Master Plan Public Open Houses was held in November 2014

In November 2014, York Region hosted the first round of joint Public Open Houses for the Regional Official Plan Review, Water and Wastewater Master Plan Update and Transportation Master Plan Update.

This first round of Public Open Houses was held to introduce the Master Plan Update Process, recent Regional water and wastewater initiatives and the key principles guiding the Master Plan Update. Open Houses were hosted in three locations across the Region and attendance at the open houses included a broad representation of residents, landowners, developer groups, consultants, and other stakeholders.

Close to 200 people attended. Responses collected from participants of these sessions indicated:

- The Open House content provided sufficient information to understand the Master Planning process. Some participants were interested in York Region's water and wastewater services, including sources of water supply, and where the wastewater goes and how it is being treated
- Participants support the 2015 Master Plan Update process and guiding principles
- York Region demographics were well represented. There is strong interest in future infrastructure including location information, implications to developments as well as the potential provision of municipal services to unserved lands

The feedback received will inform the next phases of the 2015 Master Plan Update.

4. Analysis and Options

Initiatives and studies since last Master Plan Update shape the servicing strategy for and provide new concepts to be considered in the 2015 Master Plan Update

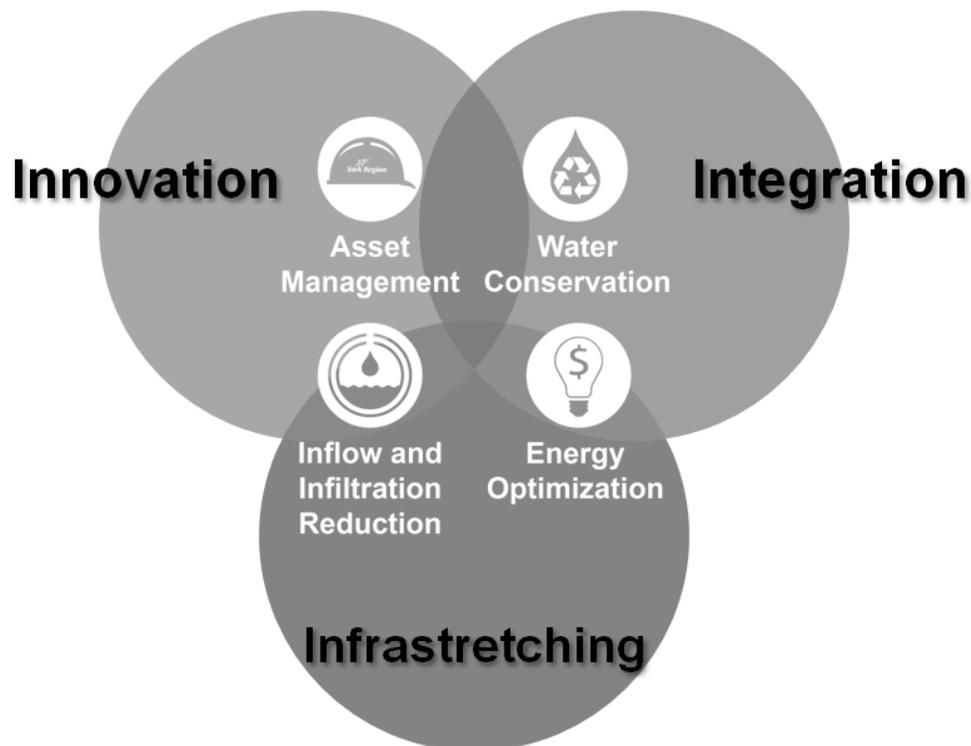
As part of the master plan process, guiding principles were developed to guide the 2015 Master Plan Update and future master plan updates. A number of key initiatives and studies described below that were undertaken since the last Master Plan Update in 2009 shape the servicing strategy for the 2015 Master Plan Update. More importantly, they provided new insight to the master plan:

1. **Asset Management** – In November 2013, Council approved the Corporate Asset Management Policy that outlines the principles for managing Regional assets. Sound asset management requires a systematic and innovative approach to maintain assets in a cost effective way. Master planning provides an opportunity to integrate timing of asset renewal with timing of building new infrastructure for growth. Asset management provides valuable lifecycle cost and asset performance data to assist the preferred servicing alternative evaluation process. The integration of asset management and master plan processes provide synergy for efficiency.
2. **Inflow and Infiltration Reduction Strategy** – In 2011, York Region developed the Inflow and Infiltration Reduction Strategy. The Strategy outlines the approach and action plan to reduce inflow and infiltration for the next twenty years. Implementation of the Strategy reduces inflow and infiltration, and to date approximately 8.0 MLD of inflow and infiltration have been reduced. As a result of restoring the lost capacity of built infrastructure, timing of new infrastructure can be deferred to minimize premature capital investment. This concept of “infrastructure stretching” plays an increasingly important role in infrastructure planning and will be a key driver in identifying servicing solutions in the 2015 Master Plan process.
3. **Long Term Water Conservation Strategy** – In conjunction with the Inflow and Infiltration Reduction Strategy, the Long Term Water Conservation Strategy was also developed in 2011. The Strategy leverages water conservation measures, public education, incentive programs and new technology to reduce water demand and improve the efficient use of built infrastructure. As a result of these efforts, York Region is able to amend the York-Peel Water Supply Agreement in 2014 to reduce its water supply capacity purchased from Region of Peel (from 388 MLD to 331MLD in 2031) and still satisfy long term water demand. Similar to inflow and infiltration reduction, this concept of “infrastructure stretching” through water conservation will be a key element in the infrastructure planning

process of the 2015 Master Plan, where every opportunity will be given to take advantage of this cost saving initiative.

- Innovative Projects** – The Upper York Sewage Solutions (UYSS) is a key example of an innovative project. The UYSS Individual Environmental Assessment was submitted to the Minister of the Environment and Climate Change in July 2014 and is currently under review. Departing from the originally proposed Leslie Street Trunk Sewer recommended by the 2009 Master Plan Update, the environmental assessment study proposed a Water Reclamation Centre, an innovative servicing solution by leveraging state-of-art reverse osmosis wastewater treatment technology. This servicing solution protects the environment by minimizing intra-basin transfer and achieving near potable quality in the effluent to the Lake Simcoe Basin. While this project shapes the long term servicing solution for East Gwillimbury, Aurora and Newmarket in the 2015 Master Plan Update, more importantly, this project inspires the need for innovative thinking in the Master Plan process.

Three key principles, Integration, Infrastrretching and Innovation, guide the 2015 Master Plan Update



The above mentioned concepts pave the way for a new concept in master planning. Solutions to servicing growth should be a holistic approach, through “integrating” with asset management, inflow and infiltration reduction and water

conservation programs, “infrastretching” built infrastructure, practicing “innovation” to ensure environmental and financial sustainability. The 2015 Master Plan Update will incorporate these concepts into a framework of three guiding principles for infrastructure planning.

A description of the guiding principles is listed below:

- **Integration** – Integrate master plan with sustainability and asset management initiatives to create synergy and increase efficiency
- **Infrastretching** – Maximize useful capacity and useful life of built infrastructure with the benefit of minimizing and/or deferring capital investment
- **Innovation** – Practice and explore new concepts and ideas in master plan and transpire the same throughout capital planning and delivery processes to promote cost efficiency and environmental sustainability in water and wastewater services and support adaptation to a changing environment

These guiding principles will be used to develop a systematic process to evaluate servicing alternatives in the 2015 Master Plan Update.

Master Plan Update will align with Municipal Comprehensive Review

This Master Plan Update will identify the preferred servicing solution and associated infrastructure needs to support projected growth as set out in Amendment 2 to the Provincial Growth Plan, in conjunction with the Region’s Municipal Comprehensive Review (Official Plan Review and Update). Staged infrastructure needs will be identified in five-year intervals for the period between 2016 and 2051.

As part of the 2015 Master Plan Update process, capital and life cycle costs of water and wastewater infrastructure required to support the alternative growth scenarios contemplated under the Municipal Comprehensive Review (Official Plan Review and Update) will be identified. This work will be used to inform the proposed fiscal impact study to assess the overall cost implications of each growth scenario. Planned infrastructure for the next 10 years was identified in the 2015 ten-year capital program process. The Master Plan Update will review planned infrastructure in the ten year capital program to ensure capital projects continue to be in alignment with the growth scenario proposed under the Municipal Comprehensive Review process (Official Plan Review and Update).

Master Plan Update to be completed by Q2 2016

The 2015 Master Plan Update is scheduled for completion in Q2 2016. Major recommendations for new infrastructure will be finalized by Q1 2016 for timely input to the Development Charge Bylaw Update process. Key quarterly milestones for the project include:

- provide input to the Water Rate Study (Q1/Q2 2015)
- provide input to assist Planning in selecting a preferred growth scenario including identification of required water and wastewater infrastructure and associated cost implications for each growth scenario (Q2/Q3 2015)
- determine the preferred servicing alternative (Q3/Q4 2015)
- provide input to the development charge bylaw update process (Q1/Q2 2016)

To achieve the above, two additional Public Open House sessions are planned for spring 2015 and winter 2015 to receive public input on the servicing alternatives as shown in Table 2. These sessions will continue to be coordinated with Transportation Services and Long Range Planning.

**Table 2
Public Consultation Plan**

	Key Topic	Tentative Schedule	Tentative Location(s)
1	Master Plan Introduction	November 11, 2014	Novotel, City of Vaughan
		November 12, 2014	Newmarket Community Centre
		November 18, 2014	Thornhill Community Centre
2	Servicing Strategies & Evaluation Criteria	Spring 2015	To be determined
3	Draft Recommended Solution	Winter 2015	To be determined

Link to key Council-approved plans

The 2015 Master Plan Update aligns with 2015-2019 Strategic Plan Priority Areas – Manage Environmentally Sustainable Growth and Provide Responsible and Efficient Public Service. The three guiding principles adopted by the 2015 Master Plan Update will ensure the process for identifying and timing new infrastructure is carried out in a holistic and financially prudent way.

5. Financial Implications

The Master Plan will be carried out in conjunction with the Municipal Comprehensive Review (Official Plan Review and Update). As part of the process to identify the preferred growth scenario and the associated preferred servicing alternative, fiscal impact analysis will be carried out.

It is expected that the long-term infrastructure plan for the preferred servicing scenario will be finalized by Q1 2016. This will provide input to the background study work for the Development Charge Bylaw Update.

6. Local Municipal Impact

In addition to regular meetings, a special workshop was held in October 2014 to gather input from local municipal staff. Local municipal feedback at this workshop includes:

- Better alignment of the Region's master plan process and the local master plan process with respect to where growth will occur and timing of infrastructure
- More redundancy in the water system
- More emphasis on implication of proposed infrastructure to water quality

This engagement will continue throughout the process, and additional workshops will be organized to receive input on servicing alternatives.

7. Conclusion

The 2015 Master Plan Update supports the Region's Municipal Comprehensive Review process to update the Region's Official Plan in alignment with the new provincial growth target for York Region and provides input to the planned Development Charge Bylaw Update in 2017. The 2015 Master Plan Update will follow the principles of Integration, Infrostretching and Innovation to guide its decision making process. Completion of the York Region 2015 Water and Wastewater Master Plan Update is expected in Q2 2016.

For more information on this report, please contact Stephen Fung, Director, Infrastructure Asset Management at ext. 73025.

Water and Wastewater Master Plan Update

eDocs #5963592

Accessible formats or communication supports are available upon request