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WATER AND WASTEWATER MASTER PLAN UPDATE FINAL REPORT

The Planning and Economic Development Committee recommends the adoption of the recommendations contained in the following report dated October 22, 2009, from the Commissioner of Planning and Development Services and the Commissioner of Environmental Services.

1. RECOMMENDATIONS

It is recommended that:

1. Regional Council endorse the Final Water and Wastewater Master Plan Update report and Executive Summary (*Council Attachments 1 and 2*).
2. The Regional Clerk forward a copy of this report to the Clerks of the local municipalities, Durham Region, Peel Region, Simcoe County, City of Toronto, and to the Lake Simcoe Region Conservation Authority, Toronto & Region Conservation Authority, Provincial Ministries of Environment, Municipal Affairs and Housing, Energy and Infrastructure, and Natural Resources.

2. PURPOSE

This report seeks Regional Council endorsement of the Water and Wastewater Master Plan Update final report. The Water and Wastewater Master Plan Update confirms the Region's water and wastewater servicing plan to the year 2031 and provides an outlook for sustainable servicing to the year 2051.

3. BACKGROUND

Extensive public consultation was completed for the Water and Wastewater Master Plan Update

In 2006 York Region commenced the Water and Wastewater Master Plan Update study in the context of changes in growth management and planning policies at the Provincial level. The study process has been completed with extensive coordination and collaboration among a number of Regional initiatives, including the Sustainability Strategy, Transportation Master Plan, 25-year Fiscal Analysis and the Official Plan Update. An extensive public consultation was conducted as part of the study process. It included:

- Three rounds of Public Consultation Centres (PCCs) with at least one located in each of the nine local municipalities.
- Three newsletters providing information on the PCCs and status of the study progress.
- PCCs in Durham Region to inform Durham residents of the York Region's Water and Wastewater Master Plan components that affect Durham Region. A joint PCC focusing on the York Durham Sewage System (YDSS) was held in collaboration with Durham Region on April 17, 2007 in Pickering. The project team also participated as a guest at two Durham Region PCCs within Pickering and Ajax in 2008. A final Public Information Centre was conducted on September 10, 2009 to appraise the Durham residents of the recommended YDSS projects in Durham.
- Issuing notices and information to First Nations as part of the consultation.
- Establishment of a Steering Committee consisting of Regional Senior Management and staff to provide guidance on the Master Plan Study.
- Establishment of a Technical Advisory Committee (TAC) consisting of representatives from local area municipalities, conservation authorities, Provincial Ministries and other key stakeholders.
- Presentations to local area municipal councils and stakeholders on the draft master plan update.
- A comprehensive website dedicated to the Water and Wastewater Master Plan to regularly inform the public and stakeholders of the ongoing study process and to provide them with all relevant background information including electronic access to various issue papers developed during the study.

The Master Plan Update recommended Lake Ontario based Servicing as the preferred alternative

The Water and Wastewater Master Plan recommended the Lake Ontario based servicing as the preferred solution for sustainable servicing of the future growth in Aurora, Newmarket and East Gwillimbury. This solution proposes to bring drinking water from Lake Ontario by expanding the York Water System and sending the wastewater back to Lake Ontario via the York Durham Sewage System.

A notice of study completion was issued and comments were received from stakeholders

At its Special Council Meeting on May 28, 2009, York Regional Council authorized staff to issue the draft study reports for a minimum 30 day public review period as mandated by the Municipal Class EA process for master plans. The draft reports included an executive summary, main study report, compendium of technical appendices, and a record of study consultation comments. The review period ended on September 30, 2009. A Notice of Study Completion was advertised in all local newspapers. The notices were also mailed or emailed to the individuals on the study mailing list.

Comments were received from various organizations including the Ministry of the Environment, Toronto & Region Conservation Authority, local municipalities and consulting engineers representing the development community.

4. ANALYSIS AND OPTIONS

All comments received on the draft report have been considered in finalizing the study report

Comments received from the Technical Advisory Committee (TAC), stakeholders, and public were reviewed and incorporated into the final report. A Consultation Record was compiled as part of the study and all correspondence received from the agencies, stakeholders, and general public was documented and addressed.

Comments received were generally supportive

The comments were generally supportive of the approach, process and recommendations of the Master Plan Update. For example, they:

- support the choice of Lake Ontario water supply to northern parts of the Region.
- support the efforts made towards water conservation.
- concur that the Master Plan addresses the long-term water and wastewater infrastructure needs of the local municipalities.

Comments included suggestions for clarification on the Master Plan recommendations such as infrastructure needs and timing, programs and policies around sustainability and the implementation strategy.

Significant comments from stakeholders were documented and addressed in the final report and are listed in *Council Attachment 3*

Significant comments received were documented in *Council Attachment 3*. Some of them were addressed as follows:

Comment: Ensure that there is availability of water supply system capacities from Toronto and Peel to meet demands of individual municipalities, and the supply of wastewater infrastructure is in step with the water supply capacity

Response: The current agreements with Toronto and Peel ensure adequate supply to meet the forecasted growth in the York Water System to the year 2037. Demands to 2051 are anticipated to be managed by more aggressive water efficiency and conservation measures in addition to additional lake-based supply. Text in the report (Section 3.2.1 and 3.2.3) addresses this issue.

Comment: Ensure that the recommended water and wastewater infrastructure implementation strategy matches proposed development staging in various parts of the Region.

Response: The recommended phasing is based on the Region's current growth forecasts as part of the growth management plan. There is a recommendation to develop and update implementation schedules through the Master Plan process (Recommendation 41).

Comment: The Master Plan assumes that Lake Ontario can handle wastewater up to 2051 projections. This assumption should be updated to reflect the results of the Lake Ontario Near Shore Research Program.

Response: The assimilative capacity of Lake Ontario will be examined in detail as part of a separate environmental assessment study to address the Duffin Creek Water Pollution Control Plant.

Comment: The policies in the Lake Simcoe Protection Plan that came into effect on June 2, 2009 will not only limit wastewater pollution control plants' discharges in the Lake Simcoe watershed but may also place limitations on other servicing plans and projects recommended in the Master Plan.

Response: The project team has considered the impact of the policies in the Draft Lake Simcoe Protection Plan in selecting the preferred alternative of Lake Ontario-based servicing. The text in Section 2.4 of the Master Plan Report has been updated to reflect the enactment of the final Plan.

Comment: Concerned that the entire increased employment numbers due to the re-development of the Buttonville Airport lands has not been considered.

Response: The level of re-development for the Buttonville Airport lands is determined through York Region's growth management initiative as part of the Regional Official Plan (ROP) review. Future development applications for the lands must be coordinated with available water and wastewater servicing capacity.

Comment: Master Plan should recognize that all feasible alternatives to discharge to Lake Ontario or Lake Simcoe will be examined. Master Plan should address 'ultimate' discharge locations so as not to predetermine the outcome of future EAs.

Response: The Master Plan Update is intended to address the initial steps of the class EA process by identifying the need for the individual projects. Each of the projects identified will be subjected to the municipal class EA process at the time of project implementation.

Comment: The sustainability strategies presented in the Master Plan cannot be reasonably extrapolated to 2051 without the appropriate science in place. A qualification to this effect should be added.

Response: Noted in Section 4.5 of the Master Plan Report.

There were comments seeking clarification and changes have been made in the final main report. These comments are included in *Council Attachment 3*.

All other comments received from the public as well as stakeholders throughout the consultation process have been documented as part of the study's Consultation Record in an Appendix to the main report. The final report documents the recommended infrastructure for long-term water and wastewater servicing and the supporting policies and programs to ensure the proposed servicing is sustainable and protects the natural environment.

Approval of the Region's Intra-basin transfer application is key to servicing the northern parts of the Region

The recommended Master Plan solution involves bringing water from Lake Ontario to service the northern parts of the Region and sending the wastewater back to Lake Ontario via the YDSS. At present this provision is subject to fulfilling the requirements of the *Great Lakes Charter* with respect to moving water across Great Lakes watersheds above a threshold of 19 million litres per day and needs approval under the Charter.

The Region has made an application under the 1985 *Great Lakes Charter*, for the Intra-basin Transfer of Lake Ontario-based drinking water to meet the 2031 drinking water requirements for the Towns of Aurora, Newmarket and the communities of Queensville, Holland Landing and Sharon in East Gwillimbury.

The application frames the Region's approach to servicing future growth in terms of good planning, water conservation and efficiency, sustainability, and legacy environmental benefits. Further to this, the application addresses the "Exception Criteria" currently being contemplated under the *Safeguarding and Sustaining Ontario's Water Act, 2007* to fulfill commitments made under the 2005 *Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement* (2005 Agreement). This information was provided to demonstrate that the application accords with the principles established by the 2005 Agreement.

The Ministry of the Environment has not yet provided a formal response to York Region's application. Staff remain involved in consultations with the Province to further define future requirements pertaining to intra-basin transfers, and will update Regional Council regarding any implications for York Region. It is expected that a regulatory framework on Intra-basin Transfer will be made available for public comment in January 2010.

The Master Plan is a blueprint for the Region's future water and wastewater capital and operational programs

As part of the Master Plan Update study, the project team developed a priority setting framework to ensure that construction of water and wastewater infrastructure projects and implementation of supportive programs and policies is carried out as effectively and efficiently as possible. To this end, the Master Plan has recommended over 80 capital works projects to be initiated in the period to 2016 in conjunction with the ongoing Water

for Tomorrow program and water and wastewater infrastructure asset management. The '2016 Action Plan' includes improvements, expansions and priority strengthening of water and wastewater assets.

The recommended policies and programs support sustainable servicing by ensuring effective water and wastewater demand management, energy use efficiency, limiting green house gas emissions and minimizing potential impacts on the Region's natural heritage areas. In addition, in keeping with the adaptive management approach, the Master Plan has recommended the Region to continuously monitor and respond to changes in the assumptions used for the current update, including assumptions related to socio-economic factors, regulatory requirements and environmental conditions.

Staff recommends endorsement of the Final Water and Wastewater Master Plan Update

All comments have been addressed and changes have been made to the reports where appropriate. Water and Wastewater Master Plan Update reports encompassing the Executive Summary (*Council Attachment 1*), the Water and Wastewater Master Plan Update Main Report (*Council Attachment 2*), Study Appendices, and the Consultation Record have been finalized and are ready to be endorsed.

5. FINANCIAL IMPLICATIONS

Total gross cost estimate for the Water and Wastewater Master Plan Update recommendation is approximately \$6.6 billion

The Master Plan has identified a number of capital projects and supporting programs to provide sustainable water and wastewater servicing to York Region residents and businesses to the year 2051. The total estimated cost of recommended new water capital projects as well as supporting programs and initiatives is \$2.4 billion. Similarly the cost of wastewater projects and programs is estimated at \$4.2 billion. These estimates do not include the annual operation and maintenance costs. The bulk of the capital cost will be spent in the period to 2031 with approximately 28% being estimated for the post 2031 period.

The cost estimates of the water and wastewater projects in the master plan will be provided as input to the 25 – Year Fiscal Impact Study and the next Development Charges By-law update.

6. LOCAL MUNICIPAL IMPACT

Local municipal councils and stakeholders were engaged and consulted

As part of the consultation process, the Regional staff presented the draft Master Plan Update to York Region local municipalities during the period of June to October 2009. Comments and input from staff at local area municipalities and other stakeholders were incorporated into the reports throughout the study. Regional staff extends their appreciation to local municipal staff and stakeholders for their valuable contribution in reviewing and commenting on the reports, and participating in the study.

7. CONCLUSION

The draft Water and Wastewater Master Plan Report was presented to Regional Council on May 28, 2009 which authorized staff to place on public record the Draft Water and Wastewater Master Plan Update reports for a minimum 30-day public review period. The draft Report was also circulated to the local municipalities and other stakeholders for review and comment by September 30, 2009. The comments received from the public and stakeholders on the draft Report during this review period have been considered and incorporated into the final Report where appropriate. The comments were generally supportive of the approach, process and conclusions of the Master Plan Update study.

The Master Plan is a blueprint for meeting the Region's long-term water and wastewater servicing needs in a sustainable manner. The recommended Lake Ontario based water and wastewater servicing solution ensures an efficient utilization of the Region's existing infrastructure while protecting the natural environment. While building new infrastructure is important to support the future growth, implementing the recommended programs and policies is vital to ensure that the long-term water and wastewater servicing is sustainable.

Staff recommends that Regional Council endorse the Water and Wastewater Master Plan Update Final Report.

For more information on this report, please contact Jhapendra Pokhrel, Water and Wastewater Planning Engineer at 905-830-4444, Ext. 1597, or Jonathan P'ng, Manager, Water and Wastewater Planning, at Ext. 1573.

The Senior Management Group has reviewed this report.

(The three attachments referred to in this clause are attached to this report).



OCTOBER 2009



water & wastewater
Master Plan Update

Servicing for a Safe and Healthy Environment

executive summary



Servicing for a Safe and Healthy Environment | Executive Summary

"Sustainable development is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

– United Nations Brundtland Commission

1.1 The Challenge

The need for York Region to plan for long term water and wastewater servicing is urgent. York Region is the fastest growing region in the Greater Toronto Area and one of the fastest growing municipalities in all of Canada.

- The provincial government has forecast York Region's population will grow to 1.5 million by 2031.
- Other forecasts have indicated a population of as much as 1.8 million by 2051.
- Economic growth is expected to double over the same period – increasing from 462,000 jobs in 2006 to 799,000 jobs by 2031, and potentially reaching over 950,000 jobs by 2051.

This growth will put enormous pressure on the Region's environment and its infrastructure. The demand for water and wastewater servicing resulting from the rapid population and economic growth will eventually exceed water and wastewater system capacities. Limitations on where this growth can occur have a direct impact on individual components of the existing water and wastewater systems serving York Region. Furthermore, recent changes to the regulatory framework in Ontario mean additional, more stringent conditions will likely be imposed on existing systems.

On June 22, 2006, Regional Council authorized the Water and Wastewater Master Plan Update study, with the goal of determining how best to continue to provide the highest quality servicing York Region residents and businesses have come to expect. Regional Council's authorization marked the first time Water and Wastewater Master Plans were updated together, combining the original 1997 master plans, the 2002 York-Durham Sewage System Master Plan Update, and the 2004 York Water System Master Plan Update.

York Region's commitment – *"To provide long-term water and wastewater services for the communities of York Region, that are safe, well-managed, and sustainable, ensuring in so doing that the natural heritage and environment of the Region are preserved and protected, that the projects, programs and policies supporting the servicing are delivered in a fiscally responsible manner, that the works and services are in compliance with applicable legislation, regulations and guidelines, and that the delivery of water and wastewater works and services is integrated with the Region's other infrastructure, planning, and growth management responsibilities."*

Planning for growth is a key municipal responsibility. York Region has established an award winning approach through the *York Region Sustainability Strategy – Towards a Sustainable Region*. The foundation of the strategy involves integration of economic, environmental, and community issues to facilitate decisions about growth management that are responsive, rational, and timely.



The same approach was used for planning long term water and wastewater servicing.

The *York Region Water and Wastewater Sustainability Strategy* emphasizes:

- Transparency
- Equity
- Accountability
- Community Involvement
- Monitoring
- Continuous Improvement

Current Servicing

York Region provides trunk distribution of treated **water** to the following distinct service areas:

- (1) the York Water System, which serves the larger urban municipalities of York Region; and
- (2) the individual systems, serving the smaller communities.

York Region currently provides trunk collection and treatment of **wastewater** for the following distinct service areas:

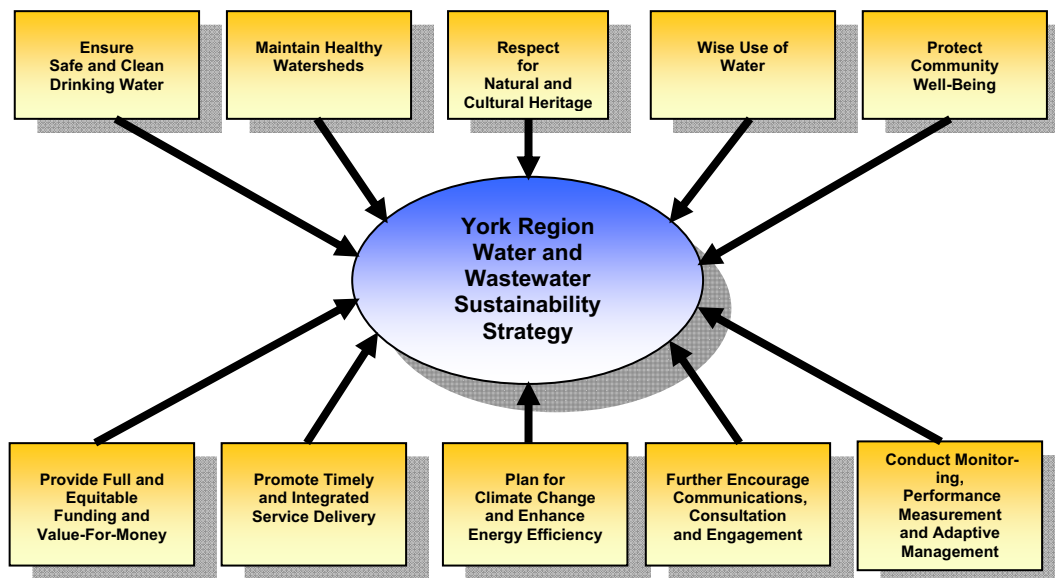
- (1) the York-Durham Sewage System (YDSS), which serves the larger urban municipalities of York Region; and
- (2) the individual systems serving the smaller communities.

Future Needs

Population and employment forecasts were used to determine future water and wastewater flows.

A comparison between existing water and wastewater system capabilities, regulatory and Regional requirements, and future flows allowed for the identification of future servicing needs.

Different approaches to servicing future needs were identified and evaluated using criteria based on the main themes contained in York Region's *Water and Wastewater Sustainability Strategy*.



A main feature of York Region is that it contains a watershed divide.

Streams and rivers in the upper portion of the Region drain to Lake Simcoe, which lies in the Lake Huron watershed, while streams and rivers in the lower portion of the Region drain to Lake Ontario.

This presents a challenge for York Region because provincial law and the Great Lakes Charter Agreement bans new or increased transfers of drinking water from one Great Lakes watershed to another (known as intra-basin transfers), unless specific conditions known as exception criteria are met.



Public and Agency Involvement

York Region actively engaged the public and agency stakeholders throughout the Master Plan Update study, using a combination of communications strategies, including newsletters, public consultation centres, and a web-portal.

Liaison with First Nations and the Metis was maintained throughout the study to ensure their interest and historical connections in the Region were understood and respected.

York Region also established a Technical Advisory Committee (TAC), with representatives from York Region, Provincial Government Ministries (including the Ministries of Environment, Municipal Affairs and Housing, and Natural Resources), conservation authorities, neighbouring regional and York Region local area municipalities, and the York Region study team. The TAC discussed issues,

provided input, and made recommendations about long term water and wastewater servicing for the Region.

The issues identified from the various consultation activities were used to guide the Master Plan Update study.

All comments were addressed and incorporated in the selection of the preferred alternative and in the development of recommendations for policies and programs to support sustainable, long term servicing.

Preferred Alternative

Public input identified four top priorities for York Region's long term water and wastewater servicing and these were translated into evaluation criteria. The four top priorities were:

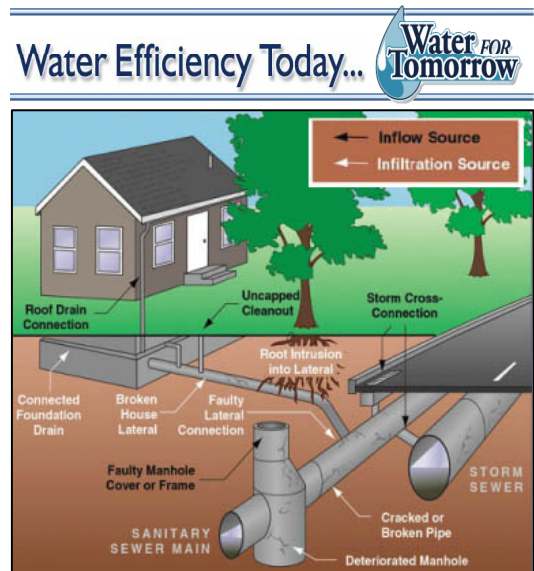
- Ensure certainty of supply
- Meet and exceed Ontario Drinking Water Standards
- Meet or exceed water quality and air quality requirements
- Ensure water and wastewater system reliability.

Assessment of various alternatives showed that enhancing and expanding existing water and wastewater systems would provide the most appropriate solution to effectively accommodate the Region's long term growth. Based on the physical, hydrological and topographical characteristics of the Region, as well as the locations of existing water and wastewater system components, this alternative was carried forward as two separate alternatives: (1) Lake Ontario-based servicing; and (2) Lake Simcoe-based servicing.

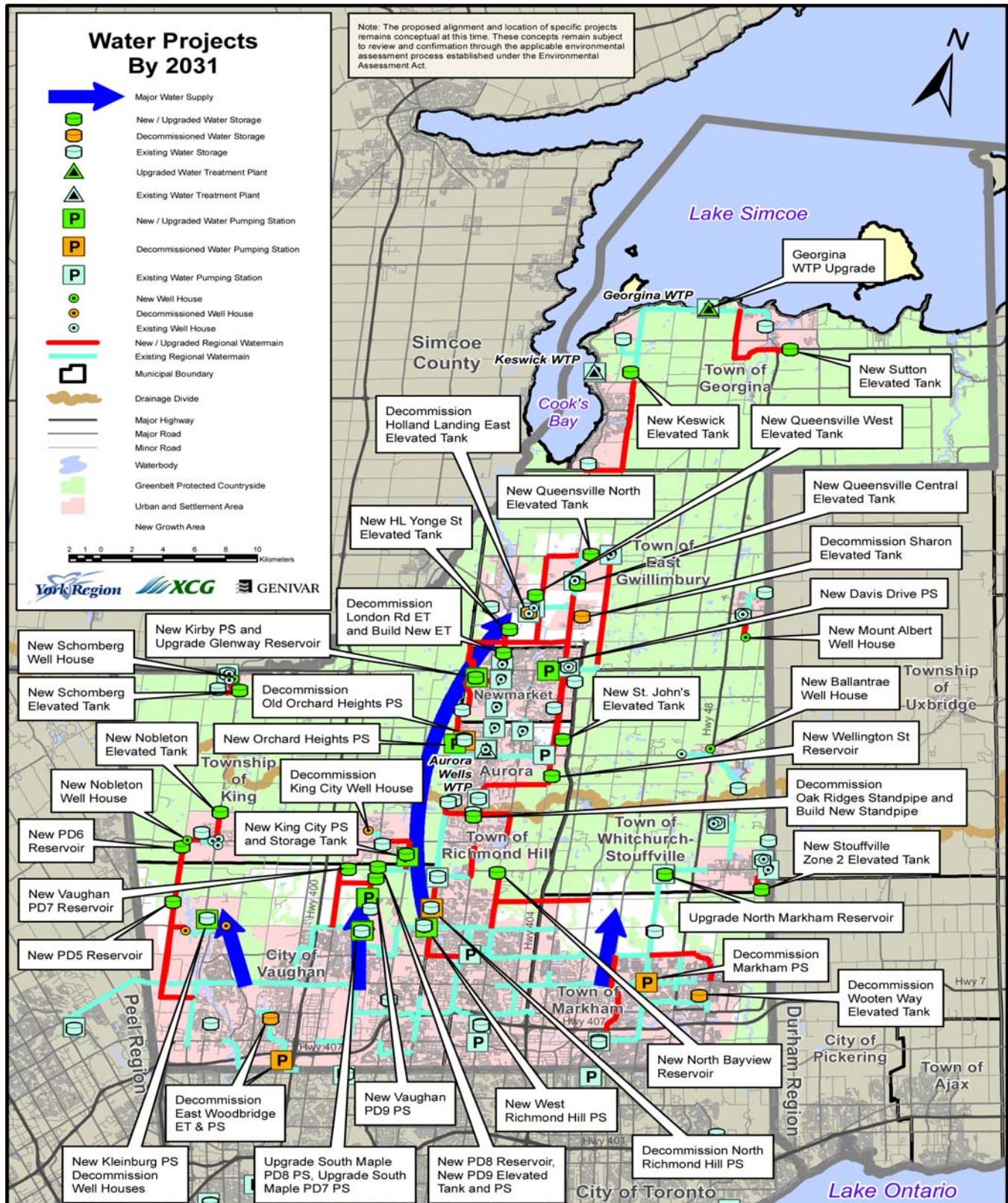
A comparative evaluation of the two alternatives was done and Lake Ontario-based servicing was identified as the preferred alternative because it:

- Best meets the Region's sustainability principles while supporting future growth within the Region
- Protects Lake Simcoe by reducing nutrient discharges
- Protects Lake Ontario through the advanced treatment afforded by the Duffin Creek WPCP in Durham Region and the Lakeview WPCP in Peel Region
- Supports the Great Lakes water balance by returning flow to Lake Ontario
- Supports the major investment in Lake Ontario oriented infrastructure already in place
- Supports water supply system security and operational flexibility.

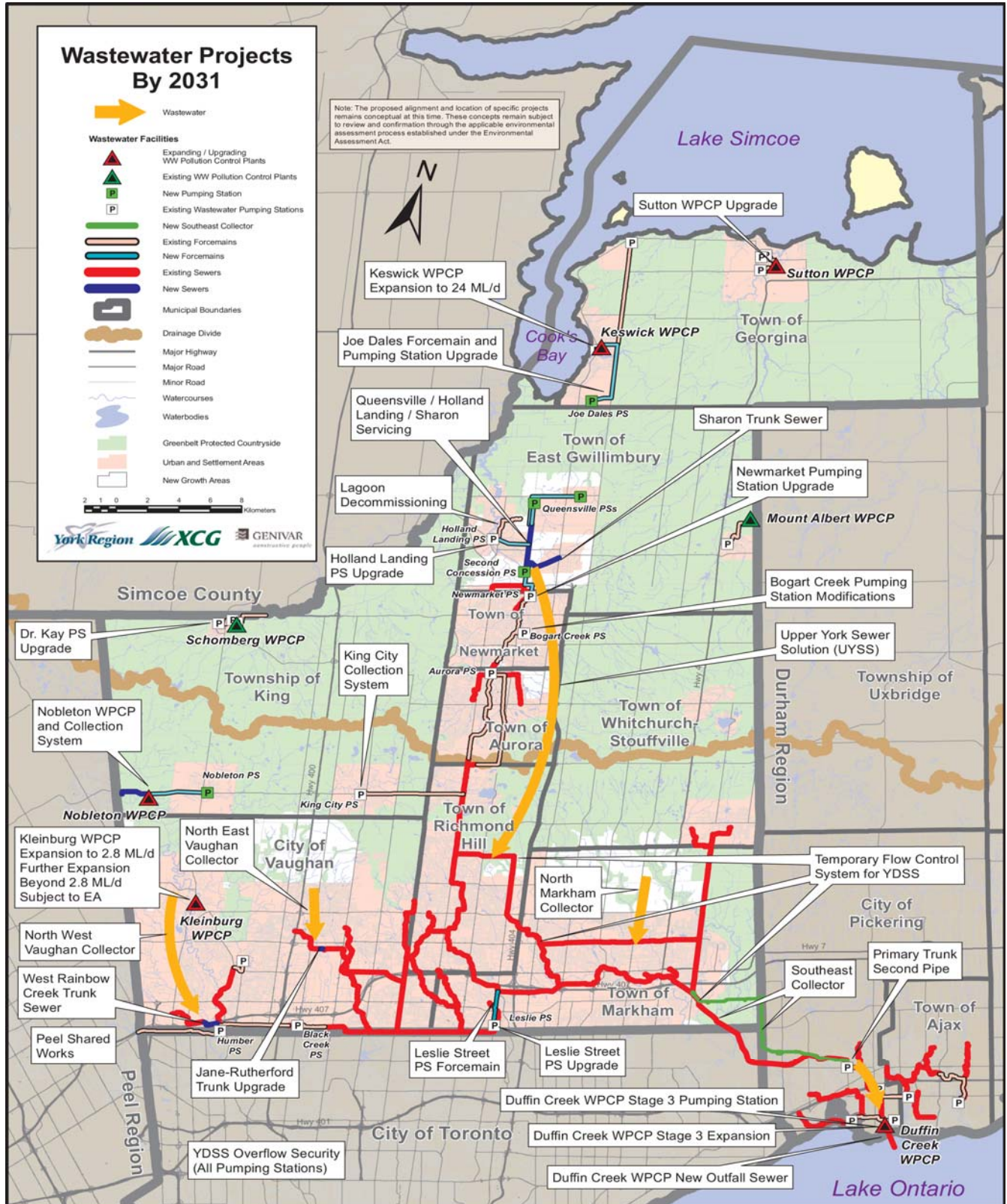
The public strongly supported York Region's preferred alternative, and acknowledged the need to continue with, and enhance, the Region's water efficiency and conservation efforts while at the same time strengthen efforts to reduce and prevent further inflow and infiltration to the wastewater collection system.



Draft Final 2031 Water Servicing



Draft Final 2031 Wastewater Servicing



Infrastructure Projects

The preferred alternative will involve the construction of major capital works projects.

Most of the projects were previously identified through past master planning efforts and Class Environmental Assessments. The Master Plan Update served to re-affirm these previously identified projects.

New infrastructure projects identified through the Master Plan Update are needed to service future growth in north Vaughan, north Markham, and East Gwillimbury. The single largest new project will be a Primary trunk sewer that will increase overall security of the wastewater system. Currently, the existing Primary trunk sewer conveys all wastewater generated in the York-Durham Sewage System service area to the Duffin Creek water pollution control plant. The new Primary trunk sewer will be designed to accommodate future growth.

Implementation of the preferred alternative involves:

- 160 km of trunk watermain
- 12 water pumping stations
- 22 water storage facilities
- 50 km of trunk sewers and forcemains
- 4 new wastewater pumping stations
- 8 wastewater treatment plant expansions / upgrades
- 1 new wastewater treatment plant
- 1 new wastewater storage facility

The estimated capital cost of the water and wastewater infrastructure projects comprising the Master Plan Update is expected to reach almost \$4.8 billion¹ in the period to 2031, and \$6.6 billion in the period to 2051. Approximately 60% of the capital costs are for wastewater projects.

Supportive Policies and Programs

Equally important will be the adoption and implementation of policies and programs that support sustainable servicing, as outlined in the Region's *Water and Wastewater Sustainability Strategy*.

The goal of these programs, which include the Region's highly successful *Water for Tomorrow* program, York's *Sustainable Housing Incentive Program*, and the York Region and Local Municipality *Inflow and Infiltration Reduction Program*, is to effectively manage the demands placed upon water and wastewater services.

In addition, the Region plans to continue efforts to protect its natural heritage, attract residents and businesses, and optimize asset performance – all vital elements important to the sustainability of the Region's water and wastewater systems.

¹ The capital costs are for the completion of the indicated projects and do not include previous project expenditures. The capital cost estimates are based on a conceptual level of design except in the case of some on-going projects. Cost estimates at the conceptual level of design are normally considered to be accurate to a range of -25% to +40%. Actual construction costs will depend on the site conditions, the design approach used, the construction environment at the time of tendering, and other factors.



There are additional costs for supportive programs which include the following:

- Continue the *Water for Tomorrow* program, including expansion of the program to new development
- Operate, maintain and manage the water and wastewater systems
- Implement environmental enhancements and improvements to natural heritage features
- Assess system capacity and continue on-going inflow and infiltration reduction programs
- Cover the costs associated with the inter-regional water and wastewater agreements that York Region has with the City of Toronto, Peel Region, and Durham Region.

Implementation Strategy

York Region developed a priority setting framework to ensure that construction of water and wastewater infrastructure projects and implementation of supportive policies and programs is carried out as effectively and efficiently as possible so that benefits are maximized. The framework served to identify the sequencing of water and wastewater infrastructure projects, as well as initiation and timing for policies and programs.

The conceptual designs for the preferred alternative infrastructure projects will

- *Effectively and efficiently manage energy usage*
- *Limit the production of greenhouse gas emissions*
- *Minimize potential impacts on the Region's natural heritage areas.*

The conceptual designs take into account the benefits that will be achieved from Regional programs, such as Water for Tomorrow.

The priority setting framework considered how individual preferred alternative projects would achieve Regional planning objectives, namely:

- Meet existing water and wastewater servicing demands
- Meet forecasted future needs
- Comply with regulations
- Contribute to Regional strategies and policies

- Affirm the York Region Sustainability Strategy
- Validate the Region's water and wastewater sustainability principles.

The projects, policies, and programs that make up the preferred alternative were assigned one of three levels of priority, depending on anticipated need. In all cases, York Region took a prudent approach and made allowance for infrastructure projects to accommodate new growth, in order to ensure the on-going sustainability of water and wastewater servicing over the long term.

2016 Action Plan

The Preferred Alternative identified through the Water and Wastewater Master Plan Update includes over 70 capital works projects that the Region plans to carry out in the period to 2016. The 2016 Action Plan includes improvements, expansions and priority strengthening of treatment facilities, and water distribution and wastewater collection infrastructure. Many of the projects follow on from projects that were approved as a result of previous master plan updates and individual Class EAs and are currently under construction. The estimated capital project cost of the 2016 Action Plan is \$2.4 billion exclusive of program costs and rehabilitation/replacement costs.

Next Steps

The Water and Wastewater Master Plan Update defines the broad framework for delivery of York Region's long term water and wastewater servicing and is intended to address the initial steps of the Class EA process. The infrastructure projects are still subject to the requirements of the Class EA process.

The Master Plan Update covers the period to 2031. But potential future needs to 2051 were also examined. This was done to ensure that recommended actions would align with eventual environmental, infrastructure, and land use development requirements, thus assuring the long term sustainability of York's water and wastewater systems.

York Region recognizes the importance of coordinating the actions identified in the Water and Wastewater Master Plan Update with other Regional initiatives, and is actively working toward seamless integration of this Master Plan Update with the Transportation Master Plan Update and the Region's *Planning for Tomorrow* growth management efforts.





Mayor
Frank Scarpitti
Town of Markham



Regional Councillor
Jack Heath
Town of Markham



Regional Councillor
Jim Jones
Town of Markham



Regional Councillor
Gordon Landon
Town of Markham



Regional Councillor
Joseph Virgilio
Town of Markham



Mayor
David Barrow
Town of Richmond Hill



Mayor
Linda D. Jackson
City of Vaughan



Chairman & CEO
Bill Fisch



Regional Councillor
Brenda Hogg
Town of Richmond Hill

A Message from York Regional Council

The Regional Municipality of York is a community undergoing progressive change. With the highest rate of population growth in Greater Toronto over the past few years, continuing to deliver world-class service to our residents is indeed a priority.

As we anticipate the arrival of another 500,000 residents over the next 20 years, expanding our water and wastewater services is imperative. To help manage our water and wastewater infrastructure needs, York Region initiated a Water and Wastewater Master Plan Update in 2006, in order to combine earlier master plans into a strategic plan for the next two decades.

This Water and Wastewater Master Plan Update Executive Summary, titled *Servicing for a Safe and Healthy Environment*, provides a succinct overview of the three years of study, planning and public consultation that went into the development of this update. It focuses on expanding the York Water System and York Durham Sewage System, while promoting water conservation through our award-winning *Water for Tomorrow* program.

It is a phenomenal undertaking that will take years to come to fruition, but one that will provide a comprehensive foundation upon which we can continue to enhance our safe, healthy and caring communities.



Regional Councillor
Joyce Frustaglio
City of Vaughan



Regional Councillor
Mario Ferri
City of Vaughan



Regional Councillor
Gino Rosati
City of Vaughan



Regional Councillor
Vito Spatafora
Town of Richmond Hill



Mayor
Tony Van Bynen
Town of Newmarket



Regional Councillor
John Taylor
Town of Newmarket



Mayor
Robert Grossi
Town of Georgina



Regional Councillor
Danny Wheeler
Town of Georgina



Mayor
Phyllis M. Morris
Town of Aurora



Mayor
Wayne Emmerson
Town of Whitchurch-Stouffville



Mayor
James Young
Town of East Gwillimbury



Mayor
Margaret Black
Township of King

Summary table of comments received on the WWW MP Update Draft Report and the responses

Stakeholders	Comment / Question	Response
Toronto & Region Conservation Authority, September 29, 2009	Master Plan assumes that Lake Ontario can handle wastewater up to 2051 projections. This assumption should be updated to reflect new data such as the Lake Ontario Near Shore Research Program	The assimilative capacity of Lake Ontario will be examined in detail as part of a separate environmental assessment study to address the Duffin Creek WPCP.
	Statement the Lake Ontario servicing is preferable because it "Protects Lake Simcoe by reducing nutrient discharges" cannot be technically justified at this time.	Future EA studies will be required for treatment infrastructure expansion.
	Master Plan should recognize that all feasible alternatives to discharge to Lake Ontario or Lake Simcoe will be examined. Master Plan should address 'ultimate' discharge locations so to not predetermine the outcome of future EAs	Noted.
	The sustainability of the strategies presented in the Master Plan cannot be reasonably extrapolated to 2051 without the appropriate science in place. A qualification to this effect should be added.	Noted.
	Advances in treatment technology may allow for intensification. Region should consider qualifications to references beyond 2031 to allow for sustainable alternatives	Noted.

Council Attachment 3

Stakeholders	Comment / Question	Response
	Suggests a statement should be added that the Region is committed to ensuring the natural heritage is protected through all project phases, from the Master Plan through the EA and detailed design and implementation	Please refer to Section 4.3.2 that addresses this comment
	Ensure that the TRCA receives a copy of the NoC, hard copy and digital copy of the final documents	The Region will forward when finalized
	Section 2.4, page 18, point 1 – please clarify the point about water conservation and the need for the Intra-basin transfer	See Table 3-7.
	Section 3.1.2 page 39 – add a note reflecting the need to consider the conservative projected usage in the UYSS IEA	All future studies, including UYSS IEA will use the recommended unit rates.
	Section 1.1 page 1 – Unclear if the growth forecasts are to 2031 or 2051. Please clarify	Provincial forecasts are available for 2031. The 2051 outlook is York Region's forecast.
	Section 2.5 page 20 – middle paragraph predetermines the UYSS IEA by stating the Upper Leslie Trunk is expected to connect to YDSS. Please revise.	The text on page 20 revised to address this comment
	Wastewater Projects by 2031 page 5 – Figure needs to be revised as to not predetermine the UYSS IEA as above.	The locations shown on the map are schematic only and the final location will be the subject of the project level EA/IEA. This is a common disclaimer applicable to all maps, which has been added on the maps
	Section 2.4 Table 2-2 – Suggest that reference be made to “Meeting the Requirements of the Oak Ridges Moraine Conservation Plan” by Ogilvie, Ogilvie & Company 2006	The suggested reference was added to the Table
	Master Plan should recognize the importance that groundwater concerns play in locating and installation of trunk sewers.	Project level EA/IEA evaluate the appropriate location for trunk sewers based on all relevant environmental issues including groundwater

Stakeholders	Comment / Question	Response
Ministry of the Environment, Central Region, September 30, 2009	The Lake Simcoe Protection Plan came into effect on June 2, 2009. Section 2.4 and Table 2-3 need to be updated	Relevant changes were made in the Report to reflect the new legislation.
	Hydrogeological studies are required to confirm adequate groundwater supply for the communities requiring supply expansion	All hydrogeological and dewatering issues will be addressed during subsequent studies or design of recommended infrastructure.
	Master Plan indicates the public supports reducing dependence on groundwater. Where there is a stable and suitable supply, there may not be a need to change sources. A mix of sources is considered appropriate.	All hydrogeological and dewatering issues will be addressed during subsequent studies or design of recommended infrastructure.
	Master Plan suggests iron removal treatment for groundwater. Treatment requirements should be considered in the evaluation of these options at the project planning stage.	All hydrogeological and dewatering issues will be addressed during subsequent studies or design of recommended infrastructure.
	There is an issue of the presence of artesian conditions in York (Markham, Richmond Hill, Vaughan) TSS advises that any deep construction below ground in artesian aquifer areas will require careful consideration of local hydrogeology. Discharge of water from dewatering may consume considerable capacity in the municipalities' storm system.	All hydrogeological and dewatering issues will be addressed during subsequent studies or design of recommended infrastructure.
	Aquifer recovery after the YDSS project is being confirmed. Rising water levels in the area could affect dewatering and construction projects in the area.	All hydrogeological and dewatering issues will be addressed during subsequent studies or design of recommended infrastructure.
	Water levels are recovering in the Aurora area. Extraction rates have been reduced and aquifer recovery observed.	Noted.

Stakeholders	Comment / Question	Response
	Hydrogeological studies done to support dewatering or supply plans should account for cumulative effects of other projects ongoing or recently finished that could affect local hydrogeological conditions.	All hydrogeological and dewatering issues will be addressed during subsequent studies or design of recommended infrastructure.
	Several lagoon decommissioning projects are mentioned. These projects should be carried out to prevent impacts to groundwater and surface water.	The lagoon decommissioning project is located in Holland Landing. The lagoon decommissioning project will address all surface water and groundwater
Ministry of Natural Resources, September 30, 2009	Additional approvals may be required under the Endangered Species Act for projects that may affect an endangered or threatened species or damage or destruct habitat of an endangered or threatened species.	Noted.
	MNR would appreciate the opportunity to review and comment on Environmental Assessments for the individual projects described in the Master Plan.	Noted.
Town of East Gwillimbury, September 29, 2009	2031 Wastewater Projects Figure 5.2 – Regional Queensville PS on Queensville Sdrd is not shown	Queensville PS will be added to Figure 5.2
	Suggest the wording in regards to the UYSS be revised as growth in Upper York is not limited to East Gwillimbury	The Master Plan does identify that the UYSS will provide servicing in the longer term for also to Aurora and Newmarket.
Town of Newmarket, October 6, 2009	On Page 76, the Master Plan Report notes installation of three boundary meters. Two on Yonge Street are correct, but the third one should refer to the existing on Woodspring Avenue	The suggested changes have been made on Page 76

Stakeholders	Comment / Question	Response
	We recommend that Region's timely and integrated service delivery approach also include a Communication Protocol and/or Service Level agreement for all operational changes to the Regional System potentially affecting our water distribution system	Changes made to Section 4.4.2 address this.
	The Water and Wastewater Master Plan does not address past staff level discussion with respect to local infiltration/inflow reduction allocation credits	This can be dealt with during the implementation of the Master Plan
Town of Markham, Emails from Allen Wu, October 9, 2009 and Brian Lee , september 25, 2009	It is our understanding that there is limited capacity in the existing Regional sanitary sub-trunk located along the Pomona Mills Creek to convey additional flow from any new developments. However, we have not been able to identify any proposal or recommendations of new or improve Regional infrastructure to serve the Langstaff developments in the Region's Water and Wastewater Master Plan.	The Consultants have assessed the capacity of key infrastructure such as Steeles Collector, Yonge Street Trunk and Leslie St. PS that these developments will drain to at a master plan level analysis. Depending on which Regional trunk sewers these developments will eventually connect to, more analysis will be required to confirm any capacity shortfalls in each trunk at that time.
	"Climate Change" is mentioned in a number of locations, please elaborate or explain what strategies are anticipated	There are recommendations in the MP to adopt an approach that accommodates the uncertainty associated with climate change in planning, design and operation of Regional water and wastewater infrastructure. A strategy will be developed to address this issue. More details will be available once the implementation plan is completed.

Stakeholders	Comment / Question	Response
	The location of the North Markham Collector should be flexible and may have to be relocated to better serve the development phasing of Markham's "White Belt".	It is intended that the specific routing of the North Markham Trunk would continue to be studied as changes in development plans proceed. We recognize that east/ west sewers would be required to service future growth in the white belt. At this point, these have not been identified as Regional trunks.
Town of Georgina, September 22, 2009	York Region has properly addressed the needs of Georgina.	Noted.
City of Vaughan, September 25, 2009	Alternative alignments for the proposed Northwest Vaughan Collector and Northeast Vaughan Collector shall be considered and co-ordinated with local trunk sewers	The Master Plan is intended to fulfil the requirements of Phases 1 and 2 of the Class Environmental Assessment process for facility requirements and meets the requirements of Phase 1 of Class Environmental Assessment process for new linear infrastructure. It is intended that specific routing for all recommended linear infrastructure projects will be examined through subsequent studies and assessments.
	Timing for the above sewers should be advanced from 2016 to 2011 as they will be required sooner to accommodate OPA 19 and OPA 637	The West Vaughan Enterprise Zone (Regional OPA 19) lands are located west of Highway 427. These lands have been included within the service area of the North West Vaughan Collector Sewer. Based on a review of planning projections, the timing of the North West Vaughan Collector will be amended to the 2011-2016 timeframe. The Highway 400 North Employment Lands are included in the service area of the Langstaff Collector.

Stakeholders	Comment / Question	Response
	Confirmation is required on the Black Creek PS and forcemain capacity. Developments tributary to this system may proceed in the 2011-2016 timeframe and adequate capacity will be required.	Flow projections were developed based on preferred Regional Growth Planning alternative. It is not anticipated that the Black Creek Pumping Station service area will increase. Instead, the Black Creek Pumping Station will service intensification growth located within its current service area.
	How will the timing and additional capacity to the Peel Diversion be addressed? How will this impact the proposed Northwest Vaughan Collector and timing of the West Vaughan Enterprise zone and other nearby intensification areas?	The Region of York has ongoing discussions with the Region of Peel with regard to the diversion of flows to Peel Region. The North West Vaughan Collector will proceed as required by new development.
	There appears to be inconsistencies in the projects/timing between Appendix 4 and the main body of the report.	Reviewed and corrected where appropriate.
	Would like mapping of the individual municipalities showing the water projects	This is available as part of the presentations made to local municipal councils
	Would like clarification on the current and proposed Toronto & Peel water supply capacities. Is the timing of the water supply in step with the wastewater system capacities?	The current agreements with Toronto and Peel ensure adequate supply to meet the forecasted growth in the York Water System to the year 2037. Demands to 2051 are anticipated to be managed by more aggressive water efficiency and conservation measures in addition to additional lake-based supply. Text in the report (Section 3.2.1 and 3.2.3) address this issue. The proposed wastewater system meets the future demands to 2051.

Stakeholders	Comment / Question	Response
	Improvements to the Region's 300 mm watermain in Kleinburg have not been addressed.	Proposed developments south of Nashville road will increase the supply connections to the PD6 system, reducing the flow through the existing 300 mm watermain. The existing watermain should be adequate to service the future demands but the system should be re-evaluated as the area is built out.
David Donnelly on behalf of Huron-Wendat First Nation (July 21, 09)	Request funding from York Region for consultation and review of study documents.	Response letter sent acknowledging First Nation consultation needs and the Region's position on not funding consultation to any stakeholder.
Malone Given Parsons Ltd, Sept. 30, 2009	Concerned that the entire increased employment numbers due to the re-development of the Buttonville Airport lands has not been considered.	The level of re-development for the Buttonville Airport lands is determined through York Region's growth management initiative as part of the Regional Official Plan (ROP) review. Future development applications for the lands must be coordinated with available water and wastewater servicing capacity.
MMM Group, September 24, 2009	Would like population or flow data for the North Markham area to confirm that the data is consistent with the values considered by the Town of Markham	Region Planning can provide projected flow data as requested

Stakeholders	Comment / Question	Response
	Requests the North Markham Collector be advanced to the 2011-2016 time period	A review of the traffic zones that will contribute flow to the North Markham Collector was completed. Traffic zones 1169 and 1191 will have some development prior to 2016. Traffic zone 1169 will have employment growth of 2,634 persons by 2016 while traffic zone 1191 will have residential growth of 2,570 persons by 2016. It is expected that this growth will occur in the southern portion of these traffic zones and will be serviced by local Markham sewers and discharged into the existing YDSS system.

Stakeholders	Comment / Question	Response
	Suggests the North Markham Collector should branch east and west to better serve North Markham. Suggests that several existing sewers be considered as Regional	North Markham Collector considered Regional and based on service to Whitchurch Stouffville. No east or west Regional trunks being considered.
	The Master Plan does not indicate how the area east of the Little Rouge River will be serviced. We believe that it should drain east to the Ninth Line Trunk Sewer. Please confirm that this is your intention and confirm where capacity exists in the Ninth Line Trunk Sewer.	The area east of the Little Rouge River will be serviced by the Ninth Line Trunk Sewer.
	In our review of the Water & Wastewater Master Plan, we notice there is no reference to the Vandorf Preston Lake Secondary Plan (OPA 120).	The Master Plan was developed using the Region's preferred growth scenario. Section 3.6.5 second last paragraph addresses this issue.
	Would like clarification on the implementation of the PD6/PD7 infrastructure to ensure the proposed timing matches the anticipated development staging	Timing provided in Master Plan based on the planning forecasts in the area
	Would like more information on the population triggers for the North Markham Reservoir as development is anticipated before the 2017-2021 time frame	Reservoir expansion based on overall system function and demands.
	Would like more information on PD7 reservoir capacity. Concerned that storage may not be adequate for the western portion of PD7 in Markham	PD7 Reservoir will be adequate for Markham and Richmond Hill
	Requests that some of the watermain for PD6/PD7 be included in the 2016 Action Plan	Timing of infrastructure based on planning data
	Requests additional information of the Toronto/Peel External projects	Can be provided separately

Stakeholders	Comment / Question	Response
iPLANcorp, September 30, 2009	Would like the OPA 120 (Vandorf-Preston Lake) be included in the Master Plan and the UYSS EA	The Region's preferred growth scenario includes the growth in OPA 120. Section 3.6.5 second last paragraph addresses this issue.
Delta Urban Inc, August 13, 2009 from Myron Pestaluky	Sharon Village is supportive of the Region's selection of Lake Ontario based servicing. Would like to be provided any updates regarding approval of this alternative.	Noted
	Sharon Village is fully committed to the water conservation efforts put forth by East Gwillimbury and York Region.	Noted
	Would like updates on the construction status of the Queensville ET #1	Noted
	Would like status updates on the Southeast Collector project.	Noted
	Figure 5.2 and 6.2 are missing the southern leg of the forcemain along 2 nd Concession to the Newmarket PS. Willing to provide drawings if required.	Maps revised
	Figure 5.2 and 6.2 shows an inaccurate alignment for the Sharon Trunk Sewer. Willing to provide drawings if required	The alignment shown is schematic only and is subject to project level EA
	Supports the position that the Sharon Trunk Sewer east of Leslie Street to Woodbine Ave be considered as Regional	Noted
	Willing to offer any assistance to facilitate the UYSS IEA	Noted