

2

WATER AND WASTEWATER MASTER PLAN UPDATE AND PUBLIC CONSULTATION CENTRES

(Regional Council at its meeting on January 22, 2009 amended this Clause as follows:

Recommendation 1 in the report (December 11, 2008) of the Commissioner of Planning and Development Services to read as follows:

- 1. The Regional Clerk forward copies of this report to the Clerks of the local municipalities in York Region and to the appropriate Provincial Ministries.)*

The Planning and Economic Development Committee recommends:

- 1. Receipt of the presentation by Paul May, Director, Infrastructure Planning; and**
- 2. Adoption of the recommendation contained in the following report dated December 11, 2008, from the Commissioner of Planning and Development Services and the Commissioner of Environmental Services.**

1. RECOMMENDATION

It is recommended that:

1. The Regional Clerk forward copies of this report to the Clerks of the local municipalities in York Region.

2. PURPOSE

The purpose of this report is to update Regional Council on the progress of the Water and Wastewater Master Plan Update and the public consultation centres for the study.

3. BACKGROUND

In 2006 York Region commenced the Water and Wastewater Master Plan Update in the context of changes in growth management and planning policies at the Provincial level.

Under the umbrella of the Region's Growth Management Plan (Planning for Tomorrow), this update will provide a "blueprint" for all major water and wastewater initiatives in the Region through to the year 2031 and beyond.

Throughout the Master Plan Update process, two rounds of integrated Water and Wastewater as well as Transportation public consultation centres were hosted in six municipalities. The first round of joint public consultation centres for the infrastructure master plans were held in November 2006 in the municipalities of Aurora, Georgina, and Vaughan. Comments received from the public and stakeholders identified key issues for the transportation, water and wastewater systems in the Region and resulted in the addition of over 190 more persons to the 1,700 name mailing list established by the Growth Management Initiative. The second round of joint public consultation centres were held in November 2007 in the municipalities of East Gwillimbury, Markham, and King City.

At the October 31, 2007 Committee meeting, Regional staff provided a progress update on the Master Plan studies. This report provides additional information on work carried out for the study since then and presents the conclusions and recommendations that will be presented to the public at the final round of public consultation centres in January and February 2009.

4. ANALYSIS AND OPTIONS

UPDATING THE MASTER PLAN

The approach to conduct the Water and Wastewater Master Plan Update study in an integrated and coordinated manner with the Transportation Master Plan Update has generally been favourably received by the public. The feedback from the first and second rounds of Public Consultation Centres have been incorporated in the studies. The following sections highlight the current status of the Water and Wastewater Master Plans and the approach taken for the next round of Public Consultation Centres, communications, and stakeholders' engagement for the studies.

Water and Wastewater Master Plan Update Progress

Since the last status report the Water and Wastewater Master Plan Update has achieved several milestones. These milestones include

1. Completion of the following Background Reports:
 - a. *Water and Wastewater Baseline*
 - b. *Water and Wastewater Sustainability Strategy*
 - c. *Water and Wastewater Unit Rates*
 - d. *Water and Wastewater Policy and Criteria*
2. Analyses of various growth scenarios (30%, 40%, and 50% intensification and the No Boundary Expansion).

3. Development of the water and wastewater demand for each pressure district or community and projecting the demand to 2031 and beyond to 2051.
4. Development of the Evaluation Criteria for Water and Wastewater Servicing Alternatives.
5. Development of servicing alternatives.
6. Development of Problem Statements for each community / pressure district.
7. Development of servicing alternative solutions.
8. Development of cost estimates associated with each servicing alternative solutions.
9. Recommendations for the servicing solution.

Water and Wastewater Background Reports

Four background reports have previously been presented to Council for endorsement.

Water and Wastewater Baseline - outlines existing Regional water and wastewater systems; establishes the starting point in the assessment of water and wastewater systems to service existing and projected development; it also establishes the base condition for infrastructure for hydraulic models for both systems.

Water and Wastewater Sustainability Strategy – develops the framework for the water and wastewater sustainability strategy.

Water and Wastewater Unit Rates – presents projected water consumption rates and wastewater generation rates for each community in York Region.

Water and Wastewater Policy and Criteria - documents the water and wastewater policies, responsibilities, jurisdictions and criteria for York Region Water and Wastewater systems.

Analysis of Various growth scenarios (30%, 40%, and 50% intensification and the No Boundary Expansion) and selection of the Preferred Growth Scenario

A number of analyses were done for various growth scenarios. The scenarios were 30%, 40% and 50% intensification and No Boundary Expansion. The objective of the analysis was to determine which growth scenario will be the preferred growth scenario for further detailed analysis of infrastructure servicing solutions.

For the 30%, 40%, and 50% intensification scenarios, the respective percentage of growth is within the urban boundary with the remaining increased population to settle in the potential development lands; while in the No Boundary Expansion scenario all future population is considered to be located within the existing boundary.

Similar exercises were completed for the Transportation Master Plan Update, Natural Heritage Study, Human Services and Fiscal Impact Study. After a review of the results, it was concluded that a minimum of 40% intensification would be the preferred growth

scenario. This scenario has been used for more detailed Water and Wastewater servicing alternative analysis.

Development of the Problem Statement

The Problem Statement was presented by illustrating the needs and deficiencies of the water and wastewater facilities for each community. Demands based on the 40% intensification growth scenario were projected to 2031 and beyond to 2051; and compared to the existing and planned capacities of the water and wastewater facilities.

THE DRAFT WATER AND WASTEWATER MASTER PLAN

Water and Wastewater Servicing Alternatives

Based on the servicing deficiencies identified in the Problem Statement, a number of Water and Wastewater servicing alternatives were developed and evaluated. The two alternatives that best met the requirements of the analyses and will be presented to the public in January 2009 are as follows.

Alternative 1 – Lake Ontario Servicing

The following is a summary of the components of servicing for Alternative 1.

- Current groundwater well supply will be maintained.
- All additional water supply will come from Lake Ontario by way of the York Water System to service the communities of Aurora, Newmarket, East Gwillimbury, Kleinburg and King City.
- Lake Simcoe will supply water to Georgina.
- Small Urban Systems will remain on local systems.
- The York Durham Sewerage System (YDSS) will be extended to East Gwillimbury.

Alternative 2 – Lake Simcoe Servicing

The following is a summary of the components of servicing for Alternative 2:

- Current groundwater well supply will be maintained.
- Additional water supply for East Gwillimbury and Georgina will be supplied from Lake Simcoe.
- Additional water supply will come from Lake Ontario by way of the York Water System to service the communities of Aurora, Newmarket, Kleinburg and King City.
- Small Urban Systems remain on local systems.
- East Gwillimbury Wastewater will be directed to Lake Simcoe by way of discharging treated effluent into the Holland River or Cook's Bay or by extending the outfall further into Lake Simcoe.

- Georgina wastewater will continue to be serviced by the Keswick and Sutton Water Pollution Control Plants (WPCP).

Evaluation Criteria for Water and Wastewater Servicing Alternatives

Planning of Water and Wastewater facilities is based on the “Triple Bottom Line” long-term vision of sustainability in York Region consisting of protecting natural heritage, healthy communities and economic vitality. The Water and Wastewater Master Plan Update uses a sustainability approach that uses the Triple Bottom Line to evaluate different servicing alternatives. A comprehensive range of evaluation criteria has been developed and used to evaluate the servicing alternatives. The criteria are:

1. Healthy Watershed
2. Natural and Cultural Heritage
3. Climate Change and Energy Efficiency
4. Full and Equitable Funding and Value-For-Money
5. Timely and Integrated Service Delivery
6. Monitoring, Performance Measurement, and Adaptive Management
7. Community Well Being
8. Wise Use of Water
9. Communications, Consultation and Engagement
10. Safe and Clean Drinking Water

Evaluation of servicing alternative solutions using the criteria resulted in the identification of Alternative 1 (Lake Ontario Servicing) as the recommended water and wastewater servicing solution.

Recommendations for the servicing alternative solution

Major Recommendations are as follows:

1. Continue to develop water supply and wastewater treatment systems based on Lake Ontario for the major urban areas in Vaughan, Richmond Hill, Markham, Aurora, Newmarket, and East Gwillimbury. (Alternative 1).
2. Seek approval for an increase under the Great Lakes Charter for an intra-basin transfer of water from Lake Ontario to the communities of Aurora, Newmarket, and East Gwillimbury on the basis of wastewater returned to Lake Ontario.
3. Future water and wastewater servicing should be based on the triple bottom line and supported by the water and wastewater sustainability principles including:
 - Development of a consolidated “wise use of water strategy” that consolidates and extends the currently evolving enhanced water efficiency and I/I reduction programs.
 - Implement energy and greenhouse gas reductions programs complete with targets

- Implement natural environment enhancements associated with each infrastructure project.
- Implement operational changes in water supply to Aurora and Newmarket to reduce the dependency on groundwater from the Yonge Street Aquifer.
- Limit treated wastewater discharge to Lake Simcoe to the bordering communities of Keswick and Sutton only.
- Monitor future changes in development, water use and wastewater generation to assess the impact on servicing and to assess progress in achieving sustainable servicing.
- Continue to communicate to York residents and other stakeholders the progress toward sustainable water and wastewater services.

COMPLETING THE CONSULTATION PROGRAM

Elements of Public Consultation

Recognizing the importance of public consultation, the project team has made an effort to communicate and engage the public and stakeholders at different stages. These efforts include workshops, newsletters, emails, and public consultation centres.

Distribution of Newsletters

A third newsletter (Attachment 1) on the Water and Wastewater Master Plan Update has been prepared and will be distributed by the end of December 2008. The newsletter expresses York Region's commitment towards creating a sustainable Region as well as provides the following information:

- Water and Wastewater Sustainable Principles.
- Information on the two previous rounds of Public Consultation Centres.
- Progress of the study.
- The recommended servicing alternative solution.

The newsletter will be distributed by email and regular mail to over 1,800 residents and stakeholders on the mailing list established through the Growth Management Initiative, Regional projects, and Public Consultation Centres. The newsletter will also be made available on the Master Plan website.

Third Round of Public Consultation Centres

The third round of Public Consultation Centres will not be held jointly with Transportation Master Plan update study because of the large amount of information to be presented to the public for the Water and Wastewater Master Plan study Meetings will be held during the evenings on the following dates and locations:

- Thursday, January 15, 2009 in Newmarket

- Tuesday, January 20, 2009 in Richmond Hill
- Wednesday, January 21, 2009 in Whitchurch-Stouffville
- Wednesday, February 4, 2009 in Aurora

In addition to these four locations in York Region, a fifth location will be added in Durham Region in the same time frame.

The objectives of this round of Public Consultation Centres are to:

- hear public comments on the projected demands for each community in York Region.
- receive public comments on the problem statements, Water and Wastewater capacity needs, for each community.
- receive public comments on the proposed Evaluation Criteria that are the results of the sustainability principles development exercise.
- share the Water and Wastewater servicing alternatives.
- receive public comments on proposed sustainable Water and Wastewater servicing alternative solutions.
- share the recommended servicing alternative solutions.

The results of the Public Consultation Centres will help refine the recommended servicing alternative solutions.

The results of the infrastructure implications of growth scenarios will be presented during the Public Consultation Centres with highlights for each of the Master Plans. They will include the following:

- Projected water and wastewater demands for each community to 2031 and the ultimate planning horizon of 2051.
- Identification of water supply and wastewater treatment upgrades based on projected growth in each community (Problem Statements).
- Major infrastructure requirements for water and wastewater servicing to meet or exceed established criteria.
- Alternative solutions for water and wastewater servicing for the various communities throughout the Region and the impact on existing external servicing agreements.
- Recommended servicing alternative solution.

The format of the Public Consultation Centres will include different stations and each station will have an interactive activity, plus information presented in different mediums. Facilitators, along with York Region staff and consultants, will be manning each station to encourage participation from the public. There will also be a presentation on the Water and Wastewater Master Plan update study followed by a question and answer period. The meetings will be advertised in the local newspapers and also will be e-mailed to the public who provided us with their e-mail addresses. The details will be available on the study website.

Technical Advisory Committee/ Area Municipal Staff Consultation

The fourth joint Technical Advisory Committee meeting involving the representatives from the local and neighbouring municipalities and stakeholder agencies including the Toronto Region Conservation Authority, Lake Simcoe Region Conservation Authority, Ontario Growth Secretariat, Ministries of the Environment, and Municipal Affairs and Housing was held on October 31, 2008. This Technical Advisory Committee meeting was the fourth such meeting for the Master Plan update study.

Next Steps

Following the third round of Public Consultation Centres, the project teams will incorporate the public input in refining the recommended servicing alternative solutions. The project teams will then proceed with the preparation of the Phasing Plans and Master Plan document.

5. FINANCIAL IMPLICATIONS

This report does not have any direct financial impacts. The budget for this Master Plan Update Study was approved under the appropriate capital projects budget.

Preliminary Cost Estimates

Tables 1 and 2 show the estimated capital costs for the recommended servicing alternative for wastewater and water. Please note that:

- Sewer / Forcemain cost does not include Durham Region's share for Twin Primary Trunk Sewer. Durham's share is estimated at 20% and is subject to future agreement with Durham Region.
- Wastewater treatment cost does not include Durham Region's share for Phases 3 and 4 of Duffin Creek Expansion and new outfall sewer. Durham's share is estimated at 20% and is subject to future agreement with Durham Region.
- Total project costs do not include any allowance for annual O&M costs.
- Detailed cost estimates will be further refined and reviewed with Environmental Services and Finance departments.

Table 1
Recommended Alternative – Summary of Wastewater Capital Works to 2051

Facilities	York Durham Sewerage System	Small Urban Systems	Capital Cost - MP Update	Capital Cost - 2002 MP (1)
Sewers/Forcemains	\$1,698,989,000		\$1,698,989,000	\$501,071,000
Pumping Stations	\$9,612,000		\$9,612,000	\$73,850,000
Storage Facilities	\$60,648,000		\$60,648,000	\$21,528,000
Wastewater Treatment	\$1,119,843,000	\$200,388,000	\$1,320,231,000	\$404,632,000
Treatment Outfalls	\$76,156,000	\$0	\$76,156,000	\$0
Decommissioning	\$426,000		\$426,000	\$4,454,000
Major Rehabilitation and Replacement	\$1,192,760,000	\$0	\$1,192,760,000	\$32,293,000
Total	\$4,158,434,000	\$200,388,000	\$4,358,822,000	\$1,037,828,000

(1) Capital Works to 2036

(2) Includes estimated York share of the York Durham Sewerage System Primary System

Table 2
Recommended Alternative – Summary of Water Capital Works to 2051

Facilities	York Water System	Small Urban Systems	Capital Cost - MP Update	Capital Cost - 2004 MP (1)
Watermains	\$265,000,000	\$50,000,000	\$315,000,000	\$313,300,000
Pumping Stations	\$74,000,000	\$3,000,000	\$77,000,000	\$44,200,000
Storage Facilities	\$222,000,000	\$20,000,000	\$242,000,000	\$51,500,000
Supply & Treatment	\$29,000,000	\$50,000,000	\$79,000,000	\$62,300,000
Decommissioning	\$4,000,000	\$0	\$4,000,000	\$0
External Works	\$682,000,000	\$0	\$682,000,000	\$0
Major Rehabilitation and Replacement	\$273,000,000	\$27,000,000	\$300,000,000	\$0
Programs and Initiatives	\$182,000,000	\$18,000,000	\$200,000,000	\$0
Total	\$1,731,000,000	\$168,000,000	\$1,899,000,000	\$471,300,000

(1) Capital Works to 2036.

6. LOCAL MUNICIPAL IMPACT

The water and wastewater master plan update provides the framework to support long term growth and development across the local municipalities. Local municipal

representatives are part of each study's Technical Advisory Committee and their input and assistance in the development of the Master Plan is key to planning for sustainable future growth in our communities.

7. CONCLUSION

The Water and Wastewater Master Plan update study is being conducted under the umbrella of Growth Management Plan. It is progressing as scheduled with the next step being the release of:

- Problem Statements
- Servicing Alternatives
- Evaluation Criteria
- Recommended Servicing Alternative Solution
- Estimated Costs

This information will be provided at the third round of Public Consultation Centres in January and February 2009.

For more information on this report, please contact Paul May, Infrastructure Planning Branch at (905) 830-4444 at Ext. 5029.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause was included in the agenda for the January 7, 2009 meeting.)