

MEMORANDUM

TO: Members of the Environmental Services Committee

FROM: Erin Mahoney, M. Eng.
Commissioner, Environmental Services

DATE: September 15, 2010

RE: **2010 Water and Wastewater Supply and Demand Monitoring Report**

This memo is provided to inform Environmental Services Committee of Clause 9 - Report No. 6 of the Planning and Economic Development Committee. It refers to the Water and Wastewater Supply and Demand Monitoring Report received by the Planning and Economic Development Committee on September 8, 2010. (*Please see Attached report*).

This Monitoring Report tracks current water and wastewater system demands against available servicing capacity on a community or service area basis and identifies areas of potential constraints in the system for further evaluation.

Key findings of the 2010 Supply and Demand Monitoring Report are:

- The 2009 year-end residential populations relying on the York Water System (YWS), York-Durham Sewage System (YDSS) and stand-alone water and wastewater systems are within the corresponding planning forecasts used by the 2009 Water and Wastewater Master Plan Update.
- Residential populations in a few water pressure districts and sanitary service areas on the YWS and YDSS are building out faster than anticipated (for example, local areas in Vaughan, Stouffville, and Newmarket). These service areas will be further investigated by Regional staff in consultation with local municipal staff and will be reported on in the next monitoring report.
- The current progress in implementation of the Region's capital plan generally matches water and wastewater demands up to 2011.
- 2009 maximum day water demands and average day sanitary flows measured at the treatment plants are generally within allowable levels.

If you require more information on the Monitoring Report, please contact Jonathan P'ng, Manager, Water and Wastewater Planning, at ext. 1573 or via email at jonathan.p'ng@york.ca.

Erin Mahoney, M. Eng.
Commissioner, Environmental Services

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Copy: Bryan Tuckey, Commissioner, Planning and Development Services

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THE REGIONAL MUNICIPALITY OF YORK

Planning and Economic Development Committee

September 8, 2010

Report of the

Commissioner of Planning and Development Services

WATER AND WASTEWATER SUPPLY AND DEMAND MONITORING REPORT

1. RECOMMENDATION

It is recommended that:

1. The Regional Clerk forward a copy of this report and the Water and Wastewater Supply and Demand Monitoring Report (*Council Attachment 1*) to the Clerks of the local municipalities in York Region.

2. PURPOSE

This report informs Council about the 2010 Water and Wastewater Supply and Demand Monitoring Report. The Monitoring Report tracks the current water and wastewater system demands versus the available servicing capacity on a community/service area basis in York Region to 2011 and highlights areas of potential constraints in the systems for further evaluation. There are other reports to Council that address the related issues of population forecasts, servicing allocation and the delivery of water and wastewater infrastructure.

3. BACKGROUND

The 2010 Supply and Demand Monitoring Report has the same objectives as the previous two Supply and Demand Monitoring Reports

The first York Region Water and Wastewater Supply and Demand Monitoring Report was published in 2005 and the second was published in 2007. The 2010 Supply and Demand Monitoring Report has the same objectives as the previous two reports and utilizes a similar capacity monitoring approach. In addition, the 2010 version includes information on metered water and wastewater demands and takes a more comprehensive look at the progress of capital plan projects and the potential impact of delays.

The 2010 Supply and Demand Monitoring Report should be read in conjunction with other related Regional reports

The 2010 Water and Wastewater Supply and Demand Monitoring Report should be read in conjunction with a number of other related Regional reports. These include: (1) the Regional Official Plan; (2) the 2009 Water and Wastewater Master Plan Update; (3) the 10-year Capital Plan; (4) the Water and Wastewater Infrastructure Status Report (produced quarterly); (5) the Capacity and Servicing Assignment Protocol (June 2005); and (6) previous Regional Council Reports on servicing allocation dated November 2007, December 2008 and February 2010.

The above mentioned reports work together as follows. The Regional Official Plan sets population growth targets for each local municipality and the Water and Wastewater Master Plan Update recommends infrastructure based on these population growth targets. The quarterly Water and Wastewater Infrastructure Status Report from the Environmental Services Department tracks the implementation status of the critical new infrastructure that was recommended in the Master Plan and the 10-year Capital Plan. Other Council reports assign water and wastewater servicing allocation to the local municipalities to ensure that development occurs where servicing capacity will exist. The Water and Wastewater Supply and Demand Monitoring Report then tracks the water and wastewater system demands versus the available servicing capacity on a community/service area basis and highlights areas for further evaluation.

4. ANALYSIS AND OPTIONS

Monitoring was done by comparing 2009 populations with 2011 population forecasts and planned infrastructure. The capacity of the water and wastewater infrastructure was also compared with measured flow data

Water and wastewater capacity and infrastructure must be built ahead of development demand. This monitoring report is part of an overall process to ensure that demand does not exceed available capacity. To accomplish the goal of monitoring water and wastewater supply and demand, a comparison is made between the latest available demand data, measured 2009 water and wastewater demands and the projected 2011 demands. Since the 2009 Water and Wastewater Master Plan Update used the projected 2011 demands to size Regional infrastructure for 2011, any significant deviations between the measured 2009 and projected 2011 demands are noted and evaluated in this report. Also, any infrastructure projects that are not being built according to the schedule in the 2009 Water and Wastewater Master Plan Update are documented and evaluated, since these projects could affect available servicing capacity. Additionally, measured flow data, where available, is compared to water supply and wastewater treatment capacities.

SUMMARY OF FINDINGS: WATER

Generally no water supply constraints on the York Water System (YWS) although some areas require further investigation

The residential serviced population for the York Water System (YWS), including the Yonge Street Aquifer System, is approximately 937,000 by end of year 2009. This figure is within the projections utilized by the 2009 Water and Wastewater Master Plan Update. Generally, no future water supply issues are anticipated, although the populations in a few pressure districts are building out faster than anticipated. Two pressure districts have been flagged for further investigation by Regional staff in consultation with local municipal staff and will be reported on in the next monitoring report. Measured 2009 maximum day demand from the Toronto water supply system was within the agreement limits. Measured 2009 maximum day demand from the Peel water supply system was approximately 20% beyond the agreement limits. However, no issues are anticipated as York's water demands can be managed within the Toronto and Peel Region agreement limits. The current progress of the Region's capital plan generally matches the system demands on the YWS up to 2011. The 2009 Water and Wastewater Master Plan Update has examined the longer term demand situation and made appropriate recommendations regarding infrastructure requirements and timing.

No water supply constraints in the stand-alone water systems

The residential serviced population reached by the end of the year 2009 in the communities with stand-alone water systems (including the Town of Georgina) is approximately 56,000 and is within the corresponding planning forecasts used by the 2009 Water and Wastewater Master Plan Update. Measured 2009 maximum day demand in some of the stand-alone water supply systems was beyond the available firm capacity. However, upgrades in these communities will be completed this year to rectify the problems and a project to upgrade the water supply system in Ansnorveldt is expected to commence this year as part of the Region's rehabilitation program. The 2009 Water and Wastewater Master Plan Update has examined the longer term demand situation and made appropriate recommendations regarding infrastructure requirements and timing.

SUMMARY OF FINDINGS: WASTEWATER

Generally no wastewater servicing constraints on the York-Durham Sewage System (YDSS) although some areas require further investigation

The Region has committed to servicing 970,000 residential persons on the York-Durham Sewage System (YDSS) by the end of 2010. This figure is based on the capacity available at the Duffin Creek Water Pollution Control Plant (WPCP) for flows from York Region and the allowable flows to Peel Region. At end of year 2009, the residential population on the YDSS, including Peel diversion has reached approximately 926,000

persons. This figure is within the 2011 projections utilized by the 2009 Water and Wastewater Master Plan Update. Measured 2009 average day sanitary flow from York Region to the Duffin Creek treatment plant is within the plant's rated capacity. Measured 2009 average day sanitary flow from York Region to Peel Region is within the agreement limits. Generally no future sanitary capacity issues are anticipated, although the populations in a few service areas are building out faster than forecasted. The Newmarket and Thornhill service areas have been flagged for further investigation by Regional staff in consultation with local municipal staff and will be reported on in the next monitoring report. The current progress of the Region's capital plan generally matches the wastewater demands on the YDSS up to 2011. The 2009 Water and Wastewater Master Plan Update has examined the longer term demand situation and made appropriate recommendations regarding infrastructure requirements and timing.

No sanitary servicing constraints in the stand-alone wastewater systems

The residential serviced population reached by the end of the year 2009 in the communities with stand-alone wastewater systems (including the Town of Georgina) is approximately 45,000 and is within the corresponding planning forecasts used by the 2009 Water and Wastewater Master Plan Update. Measured 2009 average day sanitary flows from the stand-alone wastewater systems are within the rated capacities of the respective treatment plants. The current progress of the Region's capital plan generally matches the system demands up to 2011. The 2009 Water and Wastewater Master Plan Update has examined the longer term demand situation and made appropriate recommendations regarding infrastructure requirements and timing.

5. FINANCIAL IMPLICATIONS

This report does not have any direct financial impacts.

6. LOCAL MUNICIPAL IMPACT

The Supply and Demand Monitoring Report provides detailed information on the capacity of and demand on the Regional water and wastewater systems. The local municipalities benefit from this report by having additional information on system performance and the impact on growth in their respective municipality.

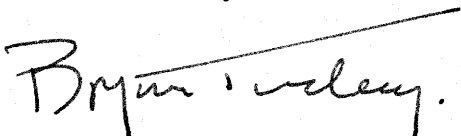
7. CONCLUSION

The 2010 Supply and Demand Monitoring Report has revealed that the 2009 year end residential populations relying on the York Water System (YWS), York-Durham Sewage System (YDSS) and the stand-alone water and wastewater systems (including the Town of Georgina) are within the corresponding 2011 planning forecasts used by the 2009 Water and Wastewater Master Plan Update. However, residential populations in a few water pressure districts and sanitary service areas on the YWS and YDSS are building out faster than anticipated. These service areas will be further investigated by Regional staff in consultation with local municipal staff and will be reported on in the next monitoring report. The information will assist the Environmental Services Department in the timing of their projects. The current progress of the Region's capital plan generally matches water and wastewater demands up to 2011. The 2009 maximum day water demands and average day sanitary flows measured at the treatment plants are generally within allowable levels.

For more information on this report, please contact Jonathan P'ng, Manager, Water and Wastewater Planning, at ext. 1573.

The Senior Management Group has reviewed this report.

Recommended by:



Bryan W. Tuckey, M.C.I.P., R.P.P.
Commissioner of Planning and
Development Services

Approved for Submission:



Bruce Macgregor, P.Eng.
Chief Administrative Officer

September 1, 2010

Attachment 1 - Water and Wastewater Supply and Demand Monitoring Report
RB/gr

IP:Policy/P07 - Planning Committee/2007/3rd Quarter/September 5: W & WW Supply and Demand Monitoring Report