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WATER AND WASTEWATER INFRASTRUCTURE STATUS REPORT

The Environmental Services Committee recommends the adoption of the recommendation contained in the following report dated October 28, 2009, from the Commissioner of Environmental Services.

1. RECOMMENDATION

It is recommended that:

1. The Regional Clerk circulate this report to the Clerks of the local municipalities.

2. PURPOSE

This report updates Regional Council on the status of priority water and wastewater infrastructure projects required to meet system demands identified as triggers for release of additional capacity and approvals under the *Planning Act*.

3. BACKGROUND

Capacity assigned to local municipalities subject to completion of key infrastructure projects

Regional Council, at its meeting on June 23, 2005, granted release of additional servicing capacity to accommodate up to 970,000 people to local municipalities serviced by the York Durham Sewage System (YDSS). The 2005 allocation is subject to completion of certain infrastructure projects referred to as triggers and is expected to meet Regional growth target to 2010.

Subsequently, Regional Council, at its meetings on November 15, 2007 and December 18, 2008, assigned a combined additional 72,000 people to local municipalities serviced by the YDSS. The allocation is also subject to infrastructure triggers and is intended to meet the Regional growth target for 2011 and 2012.

This report is a regular update to Regional Council, with the last update on June 17, 2009. The next status report is scheduled for February 2010.

4. ANALYSIS AND OPTIONS

ALLOCATION TRIGGERS

Capacity triggers allow the Region to ensure occupancy of new homes timed to coincide with available water and wastewater services

Projects identified as triggers for servicing 970,000 people and an additional 72,000 people are summarized in *Attachments 1 and 2*. These triggers are used to assist the Region in better controlling two key steps in the planning approvals process:

- Pre-sales of homes
- Final plan approvals

Capacity trigger control is required to avoid premature occupancies of new dwellings in advance of availability of the required municipal water and wastewater services.

In general, pre-sales of homes are only permitted if the required infrastructure is expected to be in place within one year and final plan approvals are granted if the required infrastructure is expected to be in place within six months. High-density development may move to final approval if the required infrastructure is within eighteen months at the discretion of the local municipality in accordance with the Regional policy adopted in September 2008.

KEY HIGHLIGHTS OF PROJECTS STATUS

Highlights of key priority projects and implications to planning approvals are provided in this section. Status of these projects is summarized in *Attachments 1, 2, and 3*. Project location is illustrated in *Attachment 4*.

Projects required to service the 2005 allocation of 970,000 people are near completion

Projects required to service the 2005 allocation are complete with the exception of King City water supply and Queensville/Holland Landing/Sharon servicing as shown in *Attachment 1*.

King City Water Supply

The King City water supply project comprising a new elevated tank and connection to the York Water System is now being tendered and expected to be completed in the fourth quarter of 2010 (last update: Summer 2010). Completion of detailed design took more

time than initially anticipated to address issues regarding potential conflicts with future utilities planned on King Road and realignment of the watermain around a large culvert.

Queensville/Holland Landing/Sharon Servicing

The Region's application to the Federal and Provincial Infrastructure Stimulus Fund for Queensville/Holland Landing/Sharon YDSS connection project was not approved. Completion of this project is currently scheduled for December 2011, subject to execution of a development charge credit agreement (last update: March 2011 to accommodate stimulus funding). The Queensville water storage tank is planned to be completed at the same time as the Queensville/Holland Landing/Sharon YDSS connection project (last update: July 2010).

As mentioned in the last update, allocation trigger conditions for final plan approval related to the assigned capacity of 970,000 people have been met for Vaughan, Markham, Richmond Hill, Aurora, Newmarket and Green Lane West area in East Gwillimbury. Final plan approval for King City is projected to occur in the second quarter of 2010 and for Queensville/Holland Landing/Sharon will be subject to the timing of the prepaid development charge credit agreement. The agreement is now being finalized and is in executable form.

Works to service additional allocation of 72,000 people expected to be completed by 2010

Projects required to service an additional 72,000 people beyond the June 2005 allocation of 970,000 people are summarized in *Attachment 2*. Additional details on the status of these projects are presented below:

Duffin Creek Water Pollution Control Plant

Since the last report, the Duffin Creek Water Pollution Control Plant work has continued on the Stage 3 Liquid Process Expansion and it remains on schedule for substantial completion by December 2010. Two of the components, the liquids treatment facility contract is approximately 65% complete (last reported 55%) and the preliminary treatment facility contract is approximately 60% complete (last reported 50%). The third component, the Enhanced Phosphorous Removal contract is to be tendered, but cannot be awarded until notice of approval of both the Federal and Provincial funding, both in the amount of \$46.7 million for a total of \$93 million, is received. Also included in the funding is the main construction contract for Stage 3 Solid Process Expansion. This contract was tendered in May 2009 and cannot be awarded until funding approval is received. It is anticipated that the substantial completion of this contract will be delayed from the originally scheduled mid-2011 to spring/summer of 2012. The Solid Process Expansion delay will not affect committed allocations as the contract that will provide

additional capacity for growth, the Liquid Process Expansion, is still on track for completion by December 2010.

YDSS Flow Control Structures are expected to be in place in May 2010

The implementation of flow control structures on the YDSS will attenuate peak wastewater flows allowing additional capacity for growth prior to completion of the Southeast Collector Sewer. The project has moved to the construction stage and is now expected to be completed in May 2010 (last update: March 2010). As the work will be completed before the Duffin Creek Water Pollution Control Plant Liquid Process Expansion, the revised completion date will not affect available capacity or timing of presales and plan registration.

Leslie Street Watermain is expected to be completed in October 2010

The expected completion date for Leslie Street watermain from Aurora East pumping station to just north of Mulock Drive has been revised to October 2010 due to additional time required to obtain necessary approvals for water crossings (last update: June 2010).

Richmond Hill Elevated Tank is scheduled for completion in December 2010

The Richmond Hill second elevated tank at Bloomington Road was tendered in August 2009 and remains on schedule for completion in December 2010.

With the Duffin Creek Water Pollution Control Plant Liquid Process Expansion, which will provide additional treatment capacity for growth and other trigger projects on schedule for completion by December 2010, allocation trigger conditions will be met in December 2009 for presales and June 2010 for final plan approval, except for Queensville/Holland Landing/Sharon where additional trigger infrastructure is required, as discussed above.

Major projects required to service beyond the current capacity assignment include Southeast Collector, Upper York Sewage Solutions, and West Richmond Hill Pumping Station

Major projects that will provide additional capacities beyond expected growth in 2012 include Southeast Collector Sewer, Upper York Sewage Solutions (UYSS) and West Richmond Hill Pumping Station. Status of these projects is summarized in *Attachment 3*.

Southeast Collector Trunk Sewer

Since the last report, the project team completed the review of the Odour Control Facility (OCF) locations and resubmitted the Individual Environmental Assessment (IEA) documents for the Southeast Collector to the Ministry of the Environment (MOE) in

August 2009. The revised documents consider alternative locations for siting the proposed OCF in York Region. The new recommended OCF location, on York-Durham Line approximately midway between Steeles Ave and the 4th Concession, was presented to the public and stakeholders in a number of meetings during the summer. The outcome of the public consultation process was incorporated in the revised IEA documentation.

In mid-October, 2009, staff received the MOE's "Blue Book" Government Review Report where MOE staff acknowledges that the recently submitted IEA Report and the EA consultation process:

- meet the requirements of the approved Terms of Reference and the *Environmental Assessment Act*
- satisfies the requirements of the Minister's October 1, 2004 letter

In addition, the review confirms that MOE staff is satisfied that:

- potential impacts to the environment can be managed
- responses provided by Regions address concerns raised by stakeholders
- First Nations consultation requirements have been met
- issues related to the proposed odour control facility have been addressed

Following a five-week public review period, the MOE will review and consider stakeholder feedback and is expected to provide a final approval decision on the IEA within thirteen weeks (i.e. by February 19, 2010).

Design work is approaching the 100% review stage on all components of the sewer. Tenders for the tunnel contract will be issued upon design approval. At this time, the following activities are being advanced to allow construction start up upon receipt of IEA approval and all other necessary local and provincial approvals:

- A contract has been awarded for the procurement of four tunnel boring machines (TBMs).
- A contract was awarded for the supply of segmental liner materials for the tunnel construction. This provides sufficient time for the successful company to assemble a precast plant with the necessary production volume to meet the needs of the four TBMs.
- Tenders were called for rehabilitation; improvement and resurfacing of haul roads to move materials from the tunneling operation to a suitable disposal site. Road works will be completed in spring 2010 after approval of the IEA.
- Pre-qualification process was completed to identify general contractors for works related to the tunnel and shaft construction using the machines and liner segments procured through the early procurement tenders discussed above.

The OCF issue has caused a year delay in the IEA process. Subject to receipt of IEA approval by MOE in Q1 2010, combined with the early procurement of materials and equipment, it is expected that the new Southeast Collector sewer will be commissioned by late 2013 (last update: December 2012). Staff is reviewing the impact of this delay and options to provide bridging capacity including additional pipe storage and additional diversion to Peel. A joint report on servicing allocation for 2013 will be brought by Planning and Development / Environmental Services to Regional Council in January 2010.

Upper York Sewage Solutions

Draft Terms of Reference for the Upper York Sewage Solutions (UYSS) were prepared and available for public review and comments from August 20th to September 21st. Terms of Reference are scheduled to be submitted to MOE in November 2009 and Individual Environmental Assessment (IEA) documents remain on schedule for completion in December 2012. Subject to the IEA outcome and approval, the project is anticipated to be completed in 2016.

Stringent environmental regulations and associated approval requirements continue to pose significant challenges to meeting scheduled completion dates for critical infrastructure. In particular, proposed Provincial regulation on intra-basin transfer will affect progress of the UYSS IEA if the matter is not resolved quickly as the IEA has to identify adequate water supply to complement the wastewater capacity. Staff from Environmental Services will bring forward a report to Regional Council in January, 2010 on progress with the Province in resolving the intra-basin transfer issue.

West Richmond Hill Pumping Station

West Richmond Hill Pumping Station is a facility identified by the recently completed Master Plan Update to service Pressure District 8. This pumping station is required to alleviate capacity constraints experienced by existing Pugsley Pumping Station. The project is planned to start in 2010 and is anticipated to be completed in 2014.

Staff continues to monitor status of Peel and Toronto cost shared projects

Provision of water and wastewater services through partnerships with Toronto and Peel Region is a key component of the Region's long-term servicing strategy. A number of projects in Toronto and Peel Region are currently underway to provide capacity to service growth in the Region. While these projects are essential to provide additional supply, a delay on these works does not necessarily compromise our partners' abilities to meet their supply commitments under the Agreements with the Region, as their systems are robust enough to compensate for reasonable delays. Regional staff has regular meetings with Toronto and Peel staff to discuss issues regarding supply commitments.

5. FINANCIAL IMPLICATIONS

A summary of the costs of priority infrastructure projects is provided in Table 1. The total cost of infrastructure projects included in this update is \$1.57 billion. Besides UYSS and West Richmond Hill Pumping Station projects, \$1.1 billion will be spent by 2013.

Table 1
Cost Estimates For Key Infrastructure Projects

Project	Project Cost Estimates (\$)
Queensville Elevated Tank	\$ 7,800,000
Queensville/Holland Landing/Sharon YDSS Connection	70,100,000
King City Water Supply	24,600,000
Langstaff Trunk Sewer	39,700,000
Duffin Creek Water Pollution Control Plant*	** 390,000,000
YDSS Flow Control*	4,000,000
Leslie St. Watermain (Wellington St. to Davis Dr.)	15,000,000
Richmond Hill 2 nd PD9 Elevated Tank	10,500,000
Toronto East Water Supply	36,700,000
Southeast Collector*	546,000,000
Upper York Sewage Solutions	397,000,000
West Richmond Hill Pumping Station	33,800,000
Total	\$1,575,200,000

* Critical project: Delay on these projects will need to be monitored to ensure acceptable level of service and environmental protection

**Durham share of \$91M and Federal/Provincial funding of \$93M not included

6. LOCAL MUNICIPAL IMPACT

Staff continues to work closely with municipalities affected by the infrastructure program to minimize impacts on planned community growth

Priority projects reviewed in this report are crucial to providing timely servicing capacity to the municipalities serviced by the York Durham Sewage System and the York Water System. The capacity is necessary to meet growth expectations while maintaining a desirable level of environmental and public health protection.

Release of additional capacity as well as granting of approvals in each phase of the plan approval process is contingent on all of these projects being completed as planned. Projects will be continually monitored to ensure that the risk of delay is minimized and capacity will be available as planned. Staff will continue to work closely with the local municipalities affected by this infrastructure program to ensure that impacts to planned community growth are minimized to the extent possible considering constraints created by these projects. Coordinated efforts with local municipalities continue on the implementation of the infiltration and inflow program to reduce extraneous flows to the YDSS and thereby increase system capacity.

7. CONCLUSION

This report provides Regional Council with a status of priority projects and their relationship to the timing of plan approvals. Projects identified in this report are essential to provide the additional capacity needed to service projected growth in the Region. Continuing to monitor these projects will ensure that capacity allocation and granting of planning approvals are synchronized with the project schedules.

For more information on this report, please contact Daniel Kostopoulos, Director, Capital Planning and Delivery, Environmental Services at extension 5070.

The Senior Management Group has reviewed this report.

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

Servicing Requirements by Municipality / Status of Infrastructure Trigger Projects

To Service up to 970,000 People in the YDSS System

As of October 2009

Municipality	Project Name	Description	Current Status	Expected Completion Date	Anticipated Presales Timing	Anticipated Registration Timing
East Gwillimbury (for areas requiring YDSS connection)	• Queensville/Holland Landing/Sharon YDSS Connection	Provision of sanitary servicing through extension of the YDSS	Detailed Design	End of 2011 (subject to development charge credit agreement)	subject to development charge credit agreement	subject to development charge credit agreement
	• Queensville Elevated Tank	Construction of a 7.5 ML elevated tank	Detailed Design	End of 2011 (last reported: July 2010)		
Township of King	• King City Water Supply	King City connection to York Water System	Tender	Q4 - 2010 (last reported: Summer 2010)	Q4-2009	Q2-2010
	• King City Elevated Tank	Construction of a 2.74 ML elevated tank	Tender			
Vaughan (for areas requiring Langstaff sewer)	• Langstaff Trunk Sewer	Sewer required to provide additional capacity to Vaughan	Completed	September 2009 (Last reported: September 2009)	Oct 2007	Sep 2008

1) This data will be updated and submitted to Regional Council quarterly

2) Projects completed and removed from the table since last report: Stouffville Water Supply

Servicing Requirements by Municipality / Status of Infrastructure Trigger Projects

To Service Additional Population of 72,000 beyond the June 2005 Allocation served by the YDSS
(in addition to all existing servicing requirements as outlined in the June 23, 2005
Council Report for servicing 970,000 persons)

As of October 2009

Municipality	Project Name	Description	Current Status	Expected Completion Date	Anticipated Presales Timing	Anticipated Registration Timing
Aurora, East Gwillimbury, Markham, Newmarket, Richmond Hill, King Vaughan, Stouffville	• Duffin Creek WPCP	Expansion to increase plant capacity to 630 ML/day subject to completion of future outfall works	Construction underway	December 2010 (Liquid Process Expansion) (last reported: December 2010)	Q4 – 2009	Q2 – 2010
	• YDSS Flow Control Structures	Attenuation of peak wastewater flows to allow additional capacity prior to completion of Southeast Collector Sewer	Construction	May 2010 (last reported: March 2010)		
Aurora (Aurora East. only)	• Leslie/Wellington Street Watermain	Watermain from Aurora East pumping station on Wellington St. to Leslie St., just north of Mullock Drive	Detailed Design	October 2010 (last reported: June 2010)	Q4 – 2009	Q2 – 2010
Richmond Hill (PD9 only)	• PD9 Elevated Tank No. 2	Elevated Tank in the Richmond Hill Pressure District 9 service area	Tendered (August 2009)	December 2010 (last reported: December 2010)	Q4 – 2009	Q2 – 2010
East Gwillimbury	• Queensville/Holland Landing/Sharon YDSS connection	Provision of sanitary servicing through extension of the YDSS	Detailed Design	End of 2011 (subject to development charge credit agreement)	subject to development charge credit agreement	subject to development charge credit agreement
	• Queensville Elevated Tank	Construction of a 7.5 ML elevated tank	Detailed Design	End of 2011 (last reported: July 2010)		

1) This data will be updated and submitted to Regional Council quarterly
2) Projects completed and removed from the table since last report: none

Status of Other Key Infrastructure Projects

As of October 2009

Project Name	Description	Current Status	Expected Completion Date
Southeast Collector Sewer	Twinning of existing trunk sewer to provide additional capacity	Individual Environmental Assessment. Re-submission of IEA documents in late August 09. MOE approval expected in spring 2010	Late 2013 (last reported: December 2012)
Upper York Sewage Solutions	Sanitary servicing solution to accommodate growth in Holland Landing, Queensville, Sharon and parts of Aurora and Newmarket	Draft Terms of Reference (TOR) available for review and comments by public and stakeholders from August 20 to September 21, 2009. TOR submission to MOE expected in November 2009.	2016 (last reported: 2016)
Toronto East Water Supply	Watermain along Kennedy Road from Milliken Pumping Station to Major Mackenzie Drive	Detailed Design	December 2010 (last reported: December 2010)
West Richmond Hill Pumping Station	New pumping station near Bathurst Street and Elgin Mills Road to service Pressure District 8.	Project expected to start in 2010	2014

