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WATER AND WASTEWATER CAPITAL INFRASTRUCTURE STATUS UPDATE REPORT

The Environmental Services Committee recommends:

- 1. Receipt of the presentation by Daniel Kostopoulos, Director, Capital Planning and Delivery; and**
- 2. Adoption of the recommendation contained in the following report dated July 26, 2011, 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 key 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 serviced by York Durham Sewage System totaling 1,078,328 people to facilitate growth to the end of 2013

In 2003, delays with key infrastructure projects were impacting the Region's ability to allocate sewage capacity to local municipalities. Between 2003 and 2005, staff completed extensive investigations to determine the allowable increase in allocation capacity in the York Durham Sewage System triggered by completion of planned infrastructure projects. Regional Council, at its meeting on June 23, 2005, granted the release of additional servicing capacity to accommodate up to 970,000 people within the York Durham Sewage System and Peel diversion service areas, subject to the completion of a number of trigger projects including Duffin Creek Water Pollution Control Plant Stage 3 Liquid Process Expansion and the Southeast Collector Trunk Sewer. This capacity assignment was intended to facilitate growth to the end of 2010.

In 2007, it was recognized that the completion date of Southeast Collector Trunk Sewer will be at least two years later than the Duffin Creek Water Pollution Control Plant Stage 3 Liquid Process Expansion which was on schedule for completion in 2010. To bridge the capacity gap, three flow control gates were proposed in selected locations in the York Durham Sewage System to attenuate peak flows and provide the interim capacity needed to service growth between 2011 and 2012. Regional Council, at its meeting on November 15, 2007 and December 18, 2008, assigned a combined additional capacity of 72,000 people to local municipalities. The flow control gates were subsequently installed in 2010.

On February 18, 2010, Regional Council assigned an additional capacity assignment of 36,328 people. This assignment is intended to facilitate growth to the end of 2013, and together with previous assignments will permit a total serviced population up to 1,078,328 within the York Durham Sewage System and Peel diversion service areas.

The major constraint to permit growth beyond 2013 is conveyance capacity limitations in the existing Southeast Collector Trunk Sewer. With growth in the Region being slower than projected in 2009 and 2010, local municipalities will have an ability to maintain their forecast growth rates beyond 2013 into 2014 which is in line with the current targeted commissioning date for the new Southeast Collector Trunk Sewer.

Outside the York Durham Sewage System service area, most communities are either in the process of completing or have completed major water and wastewater system upgrades within the last six years. Upon completion of all the works currently under construction in these communities, as identified in Table 2 of this report, a total servicing capacity of over 70,000 people exists in Schomberg, Mount Albert, Nobleton, Kleinburg and Keswick.

The last update to Council on trigger projects was provided on April 21, 2011. The next update is scheduled for January 2012.

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

Monitoring the progress of trigger projects assists the Region in better controlling two key steps in the planning approvals process:

- Pre-sale of homes
- Final plan approvals

Capacity trigger control is required to avoid premature occupancy of new dwellings in advance of required availability of 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. At the discretion of the local municipality, high-density development may move to final approval within eighteen months of completion of required infrastructure and complex high-rise developments within thirty six months of completion of required infrastructure.

Projects identified to service assigned capacity of 1,078,328 people

Most trigger projects required to service up to 1,078,328 people have been completed. Remaining projects include:

- Queensville/Holland Landing/Sharon York Durham Sewage System connection
- Queensville Elevated Tank No. 1

Major projects required to service growth beyond 1,078,328 people for the ten-year period between 2011 and 2021 include:

- Southeast Collector Trunk Sewer
- Duffin Creek Water Pollution Control Plant Stages 1 and 2 Upgrades
- Duffin Creek Water Pollution Control Plant outfall
- Upper York Sewage Solutions
- Toronto East Water Supply
- West Richmond Hill Pumping Station
- West Vaughan Sewage Servicing
- Leslie Street Pumping Station Upgrades
- Primary Trunk Sewer

KEY PROJECT STATUS HIGHLIGHTS – YORK DURHAM SEWAGE SYSTEM SERVICE AREA

Most Trigger projects associated with 1,078,328 people capacity assignment completed or near completion

Except for Queensville/Holland Landing/Sharon servicing projects, all remaining projects required to service up to 1,078,328 people are completed. Of the 1,078,328 people capacity assigned by Regional Council, capacity for 1,042,000 was assigned prior to February 2010. With trigger conditions met for assignments prior to February 2010, the Region advised local municipalities that final plan approval can proceed for all service areas with the exception of Queensville/Holland Landing/Sharon.

The February 2010 capacity assignment of 36,328 people was conditional upon Ministry of the Environment approval of the Southeast Collector Trunk Sewer Individual

Environmental Assessment and commitments of local municipalities to partner with the Region to implement local and regional inflow and infiltration reduction and water conservation and efficiency programs. All nine local municipalities have passed resolutions in support of the inflow and infiltration reduction and water conservation and efficiency programs. With both conditions met for the 36,328 persons capacity assigned for 2013, the Region advised local municipalities that issuance of building permits for complex high-rise developments can proceed. Subject to Southeast Collector Trunk Sewer completion date and at the discretion of local municipalities, December 2011 is the projected date for permitting building permit issuance for high-rise units and June 2012 for permitting pre-sales for low-rise residential units.

The status of remaining projects required to service 1,078,328 people are summarized below and in *Attachment 1*. Project locations are illustrated in *Attachment 3*.

Duffin Creek Water Pollution Control Plant Stage 3 Solid Process Expansion on track for commissioning in second quarter of 2012

The Duffin Creek Water Pollution Control Plant Stage 3 Liquid Process Expansion was commissioned. The Enhanced Phosphorous Removal contract is approximately 95% complete (last reported 60%) and the main construction contract for Stage 3 Solids Process Expansion awarded in November 2009 is approximately 75% complete (last reported 65%). Commissioning of Solids Process Expansion is scheduled to commence in the second quarter of 2012 (last reported: second quarter of 2012) for a period of approximately six months to ensure that all deficiencies during the commissioning period are detected and rectified. As the solids process expansion is not a trigger in the release of capacity assignment, timing of final plan approval will not be affected by its schedule and this project will not be included in the next report update.

King City Water Supply works commissioned in July 2011

The King City Water Supply project is comprised of a new elevated tank and watermain connection to the York Water System. Both the elevated tank and watermain were commissioned in July 2011 (last reported: summer 2011). While the new water supply system is in service, construction work for installing two additional pressure sustaining valve chambers on King-Vaughan Road and on Bathurst Street will continue until Q4 2011.

Richmond Hill Elevated Tank No. 2 commissioned on schedule

The new elevated tank in Oak Ridges is now in service. Decommissioning of the existing water standpipe, included as part of the construction contract, has also been completed (last reported: October 2011). This project will not be included in the next report update.

Leslie Street Watermain scheduled for completion in late September 2011

The Leslie Street watermain is required to service the Aurora East pressure district including lands east of Leslie Street in Aurora with a small portion in Newmarket immediately north of the Aurora/Newmarket municipal boundary. Watermain construction commenced in September 2010 and the work is expected to be completed by the end of September 2011.

Queensville/Holland Landing/Sharon servicing strategy moving forward

Both the Queensville/Holland Landing/Sharon York Durham Sewage System connection and Queensville water storage tank No. 1 contracts were tendered and closed in December 2010. Given that the tendered project cost is significantly higher than the original budget, on June 23, 2011, Regional Council adopted the recommendations of the Finance and Administration Committee report of June 9, 2011 to cancel the current procurement process for the York Durham Sewage System connection and proceed with negotiating the terms of a prepaid development charge amending agreement with revised principles. The current project cost is estimated at \$150 million. Execution of the amended agreement is projected to occur in late Q3 or Q4 2011.

Award of Queensville water storage tank No. 1 will be subject to execution of the amended prepaid development agreement for Queensville/Holland Landing/Sharon York Durham Sewage System connection.

Key infrastructure projects identified for servicing beyond 1,078,328 people

Status of key projects required to service beyond 1,078,328 people is summarized below and in *Attachment 2*. Project locations are illustrated in *Attachment 3*.

Southeast Collector Trunk Sewer contract awarded and sewer works are scheduled to be commissioned in late 2014

The Southeast Collector Trunk Sewer Individual Environmental Assessment was approved by Ministry of the Environment on March 31, 2010, subject to a number of stringent conditions to be met within stipulated timelines. As part of the conditions to be addressed, the Southeast Collector Advisory Committee was formed and the inflow and infiltration reduction and water conservation and efficiency strategies were submitted to the Ministry of the Environment in March 2011.

The tender for sewer construction was awarded in July 2011 to Strabag Inc., the successful low bidder. Construction has commenced and the commissioning date for the Southeast Collector Trunk Sewer is forecast to occur in late 2014 (last reported: late 2014). Work already underway or completed includes:

- Manufacturing of four tunnel boring machines is complete

- Rehabilitation, improvement and resurfacing of haul roads to move materials from the tunnel operation to a suitable site is complete
- Phase 1 of Bob Hunter Memorial Park/Rouge Park enhancements is complete and Phase 2 is underway
- Archaeological investigations for First Nation commitments is complete
- Manufacturing of the segmental liner materials for the tunnel construction is 60% complete
- Property acquisition of lands required for the project is near completion
- Sewer and watermain relocation at the intersection of Valley Farm Road and Finch Avenue in Pickering are underway
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Duffin Creek Stages 1 and 2 Upgrade in detailed design stage

Regional Council, at its meeting dated April 22, 2010, approved funding to proceed with the Duffin Creek Water Pollution Control Plant Stages 1 and 2 Upgrade. This work is required as a condition of the Ministry of the Environment Certificate of Approval (Air) for Duffin Creek Water Pollution Control Plant Stage 3 Expansion.

Duffin Creek Stages 1 and 2 Upgrade is currently in detailed design. One pre-purchase request for proposal for Raw Influent Pumps has been issued and pre-purchase documents for Electrical Substation Equipment and Emergency Power Generators are currently being prepared for release in Q4 2011. Construction is scheduled to start in 2012 with substantial performance expected in 2016 (last reported: 2016).

To comply with the Ministry of the Environment Certificate of Approval (Air) Conditions, reports were submitted to the Ministry of the Environment on the ambient odour monitoring program conducted in summer of 2010 and the Best-in-Class Technology Review to guide the odour mitigation measures for the Stages 1 and 2 Upgrades. Comments from the Ministry of the Environment and the Town of Ajax were received and incorporated. Final versions of the Best-in-Class Technology Review and the 2011 Odour Impacts Program and Test Plans have been submitted to the Ministry of the Environment. Emissions testing, ambient odour monitoring, odour dispersion modeling and updating the odour management plan continues and is scheduled for completion in 2017.

Environmental assessment underway for Duffin Creek Plant effluent outfall

York Region and Durham Region have jointly initiated a Schedule C Class Environmental Assessment study to identify the preferred solution of addressing limitations of the existing outfall and diffuser system at the Duffin Creek Water Pollution Control Plant. The present flow capacity limit is 520 ML/day, capable of accommodating growth to 2017. The preferred solution will permit the Duffin Creek Water Pollution Control Plant to operate at a capacity of at least 630 ML/day to meet growth to around 2031. The Environmental Assessment will satisfy the requirements of the Municipal

Class Environmental Assessment and if required the Canadian Environmental Assessment process will be added as one harmonized study.

Notice of study commencement was issued in December 2010. Work to collect offshore geotechnical information was carried out. A Stakeholder Advisory Committee was formed and the first public meeting under the Class Environmental Assessment process was held on March 9, 2011. Two Public Information Forums were held in May, one in Pickering and one in Ajax. The Environmental Assessment study is expected to be completed in 2012 and construction is expected to be completed in 2016 (last reported: 2016).

Tentatively Recommended Alternative for Upper York Sewage Solutions Identified

The Terms of Reference for the Upper York Sewage Solutions was approved by the Minister of the Environment on March 11, 2010 with the amendment of “Innovative Wastewater Treatment Technologies” as a fourth Alternative to the Undertaking. The project team met with Ministry staff to resolve issues around the Minister mandated alternative that were necessary to confirm the viability and approvability of the alternative for the Environmental Assessment. The Upper York Sewage Solutions Team identified the “Water Reclamation Centre with associated collection and conveyance infrastructure systems located in York Region” as a sustainable and environmentally sound alternative for the Upper York Sewage Solutions Environmental Assessment. This Water Reclamation Centre alternative involves discharge of treated water of a quality that will help to restore the Lake Simcoe watershed and provide reclaimed water for non-potable applications. This tentatively recommended alternative was presented to the public and other key stakeholders for input and comment on June 27 and 28, 2011 at Public Information Forums held in East Gwillimbury and Aurora. Subject to adequately addressing concerns raised by stakeholders and the public and resolving other risk issues associated with this alternative, the next step is to finalize the preferred alternative (fall 2011) and complete the alternative methods of carrying out the undertaking. Approval of the Individual Environmental Assessment by the Minister of the Environment is currently projected to occur in late 2013. Completion of the overall project is currently scheduled for late 2018 (last reported: late 2018). The completion date will be reviewed and updated once the environmental assessment is approved.

Toronto East Water Supply expected to be completed by June 2013

The Toronto East Water Supply project is required to provide additional water from Toronto to Markham pressure district six to meet long-term growth demands. A 1500 mm diameter watermain is proposed to be constructed along Kennedy Road from the Milliken Pumping Station on 14th Avenue to Major Mackenzie Drive. The work will be completed under two contracts. The first contract is for open cut construction from north of Highway 7 to Major Mackenzie Drive and the second contract is for tunnel construction from Milliken Pumping Station to north of Highway 7. The construction contract for the

open cut section was awarded in January 2011. Due to difficulties in securing required property from the Town of Markham to accommodate a revised tunnel launching shaft location, tendering of the tunnel section has been delayed. As a result, the watermain from Milliken Pumping Station to Major Mackenzie Drive is now expected to be commissioned by June 2013 (last reported: December 2012). Based on an analysis of recent flow data and water system capacity, it is determined that this delay will not affect the 2013 service capacity assignment committed to local municipalities.

Environmental Assessment study underway for West Richmond Hill Pumping Station

West Richmond Hill Pumping Station is a new pumping facility identified in the 2009 Water and Wastewater Master Plan Update to pump water from pressure district six to pressure districts seven and eight. The new pumping station will alleviate existing capacity constraint at the Pugsley pumping station. The Environmental Assessment study is currently underway and Notice of Study Commencement was issued in November 2010. The first public consultation meeting was held on August 11, 2011. The project is expected to be completed in the fourth quarter of 2014 (last reported: fourth quarter of 2014).

Environmental Assessment study underway for West Vaughan Sewage Servicing

West Vaughan Sewage Servicing is a new project identified in the 2009 Water and Wastewater Master Plan Update to provide sanitary sewage capacity to service growth in the West Vaughan area (the area west of Highway 27 including Kleinburg-Nashville) up to the year 2051. Notice of study commencement was issued in March 2011. The first public consultation meeting was held on April 27, 2011. Completion of the project is scheduled for 2016 (last reported: 2016).

Leslie Street Pumping Station Upgrades is in detailed design stage

The Leslie Street Pumping Station collects sewage flows from parts of Vaughan, Richmond Hill and Markham and pumps the flow to the Duffin Creek Water Pollution Control Plant. Upgrades to this facility including pump replacement, electrical and standby power improvements are required to increase the station capacity to meet growth needs. Currently, the project is at detailed design stage. The work is expected to be tendered in late 2011 for substantial completion by the end of 2013.

Environmental Assessment study for Primary Trunk Sewer to commence in late 2011

The Primary Trunk Sewer project involves the construction of a new sewer along a yet to be determined route from the terminus of the Southeast Collector system to the Duffin

Creek Water Pollution Plant in the City of Pickering. The new Primary Trunk Sewer will provide additional conveyance capacity to the existing primary trunk sewer, which is expected to be at capacity sometime between 2021 and 2026. The Environmental Assessment study for the new Primary Trunk Sewer is expected to be initiated in late 2011. The project is scheduled for completion in 2021.

Staff continue 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 the City of Toronto and Peel Region are currently underway to provide capacity to service growth in the Region. Regional staff conduct regular meetings with Toronto and Peel staff to discuss issues regarding supply commitments including cost-shared project delivery schedules. City of Toronto and York Region have recently completed a Joint Optimization Study to review future infrastructure needs to service the two municipalities. Through this study, it was determined that a number of cost shared projects presently in the existing program can be deferred without compromising York and Toronto's servicing needs to 2031. Based on progress of Peel and Toronto's projects, it is expected that both partner municipalities will meet their long term water supply agreement commitments to the Region.

A breakdown of the water supply sources servicing York Region for the years 2011 and 2031 is provided in Table 1.

Table 1
Water Supply Capacity to York Region

Water Supply Sources	2011		2031	
	Capacity (ML/D)	% of Supply	Capacity (ML/D)	% of Supply
York Water System				
City of Toronto	501	65%	509	49%
Peel Region	134	17%	388	38%
Yonge Street Aquifer Wells	62	8%	62	6%
Stouffville Wells	12	2%	12	1%
Georgina	30	4%	45	4%
Stand-alone Groundwater Systems (e.g. Schomberg, Nobleton, Kleinburg, Ballantrae, Mount Albert, Ansnorveldt and King City)	27	4%*	20	2%*
Total	766	100%	1,036	100%

* Lake based supply to King City and Kleinburg will reduce the two communities' reliance on groundwater systems.

KEY PROJECTS – COMMUNITIES OUTSIDE YORK DURHAM SEWAGE SYSTEM SERVICE AREA

Most communities outside the York Durham Sewage System completed major system upgrades

In addition to major works pertaining to the York Durham Sewage System service area, most communities outside the York Durham Sewage System service area are either in the process of completing or have completed major water and wastewater system upgrades within the last six years. A summary of major capacity upgrades in these communities is presented in Table 2.

Table 2
Major Capacity Upgrades
Communities outside York Durham Sewage System Service Area

Community	Recent Water and Wastewater Upgrades	Total Capacity in Persons after Upgrades
Schomberg	• Completion of water supply system upgrade including a well, water treatment plant and reservoir in 2010 • Completion of a new water pollution control plant in 2009	3,450 (plus 28 hectares of industrial & commercial lands)
Mount Albert	• Completion of water supply system upgrade including watermain along Centre Street and one additional well in 2010 and 2011 respectively • Completion of water pollution control plant expansion in 2005	6,000
Nobleton	• Water supply system upgrade involving an elevated tank, and an additional well are scheduled for completion in 2011 and 2012 respectively • Completion of a new water pollution control plant in 2010	6,500
Kleinburg	• Water supply system upgrade involving extension of lake base supply via Huntington Road watermain, booster pumping station and watermain along Islington Avenue are scheduled for completion in 2012 • Water pollution control plant expansion scheduled for completion in 2011	7,500

Keswick	- Water supply system upgrade including Georgina Water Treatment Plant Phase 2 Expansion, and North Keswick Elevated Tank and associated watermain along Woodbine Avenue are scheduled for completion in 2011 and 2012 respectively - Water Pollution Control Plant Phase 2 Expansion and Joe Dales Pumping Station upgrade scheduled for completion in 2012	49,000
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5. FINANCIAL IMPLICATIONS

A summary of the costs of priority infrastructure projects in York Durham Sewage System service area is provided in Table 3. The total cost of projects included in this update is \$2.4 billion.

Table 3
Cost Estimates for Key Infrastructure Projects
York Durham Sewage System Service Area

Project	Project Cost Estimates (\$)	Related Financial and Servicing Implications
Queensville Elevated Tank No. 1	9,600,000	Of the \$9.6 million, \$1.9 million is not currently in the DC Bylaw.
Queensville/Holland Landing/Sharon York Durham Sewage System Connection	150,000,000	The current project cost estimate is \$150 million. Of the \$150 million, \$79.9 million is not currently in the DC Bylaw.
King City Water Supply	25,300,000	
Duffin Creek Water Pollution Control Plant	402,300,000	Durham share of \$91 million and Federal/Provincial funding of \$93.4 million not included.
Leslie St. Watermain (Wellington St. to Davis Dr.)	15,000,000	
Richmond Hill 2nd pressure district nine Elevated Tank	10,500,000	
Toronto East Water Supply	74,700,000	
Southeast Collector	546,100,000	Southeast Collector is designated as a critical project. Delay on this project will be monitored to ensure acceptable level of service and environmental protection.
Upper York Sewage Solutions	502,000,000	

West Richmond Hill Pumping Station	33,800,000	
Duffin Creek Water Pollution Control Plant Outfall	96,000,000	Durham share estimated at \$24 million not included (amount subject to ongoing cost share negotiation with Durham Region).
Duffin Creek Water Pollution Control Plant Stages 1 and 2 Upgrades	161,100,000	Durham share estimated at \$40 million not included.
West Vaughan Sewage Servicing	159,200,000	Project currently in Environmental Assessment phase.
Leslie Street Pumping Station Upgrades	30,000,000	
Primary Trunk Sewer	162,000,000	Durham share estimated at \$40 million not included (amount subject to ongoing cost share negotiation with Durham Region).
Total	\$2,377,600,000	

Table 4 provides a summary of the costs of infrastructure projects in communities outside York Durham Sewage System service area. The total cost of these works amounts to over \$250 million.

Table 4
Cost Estimates for Infrastructure Projects
Communities Outside York Durham Sewage System Service Area

Project	Project Cost Estimates (\$)	Related Financial and Servicing Implications
Schomberg Water Supply System Upgrade and New Water Pollution Control Plant	31,000,000	
Mount Albert Water Supply System Upgrade and Water Pollution Control Plant Expansion	16,000,000	Water and sewage works were carried out under a Development Charge Credit Agreement.
Nobleton Water Supply System Upgrade and New Water Pollution Control Plant	35,000,000	Sewage works were carried out under a Development Charge Credit Agreement.
Kleinburg Water Supply System Upgrade and Water Pollution Control Plant Expansion	45,000,000	

Keswick Water Supply and Sewage Systems Upgrade including Expansion of Georgina Water Treatment Plant and Keswick Water Pollution Control Plant	140,000,000	
Total	\$267,000,000	

Cost estimates shown in Tables 3 and 4 only include capital funding requirements. As part of the budget process, funding and resource requirements for operation and asset management are assessed and included in the annual Environmental Services operating budget.

6. LOCAL MUNICIPAL IMPACT

Staff continue 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 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 are continually monitored to ensure risk of delay is minimized and capacity will be available as planned. Staff continue to work closely with local municipalities affected by the infrastructure program to ensure impacts to planned community growth are minimized to the extent possible considering constraints created by these projects. Coordinated efforts with local municipalities continue on implementing the inflow and infiltration reduction and water conservation and efficiency programs to reduce flows to the York Durham Sewage System 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 capacity needed to service projected growth in the Region. Continuing to monitor these projects will ensure capacity allocation and granting of planning approvals are synchronized with project schedules.

For more information on this report, please contact Daniel Kostopoulos, Director, Capital Planning and Delivery, Environmental Services at (905) 830-4444 Ext. 5070.

The Senior Management Group has reviewed this report.

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

Status of Infrastructure Trigger Projects & Conditions

Required To Service 1,078,328 people in the YDSS and Peel diversion service areas as of August 2011

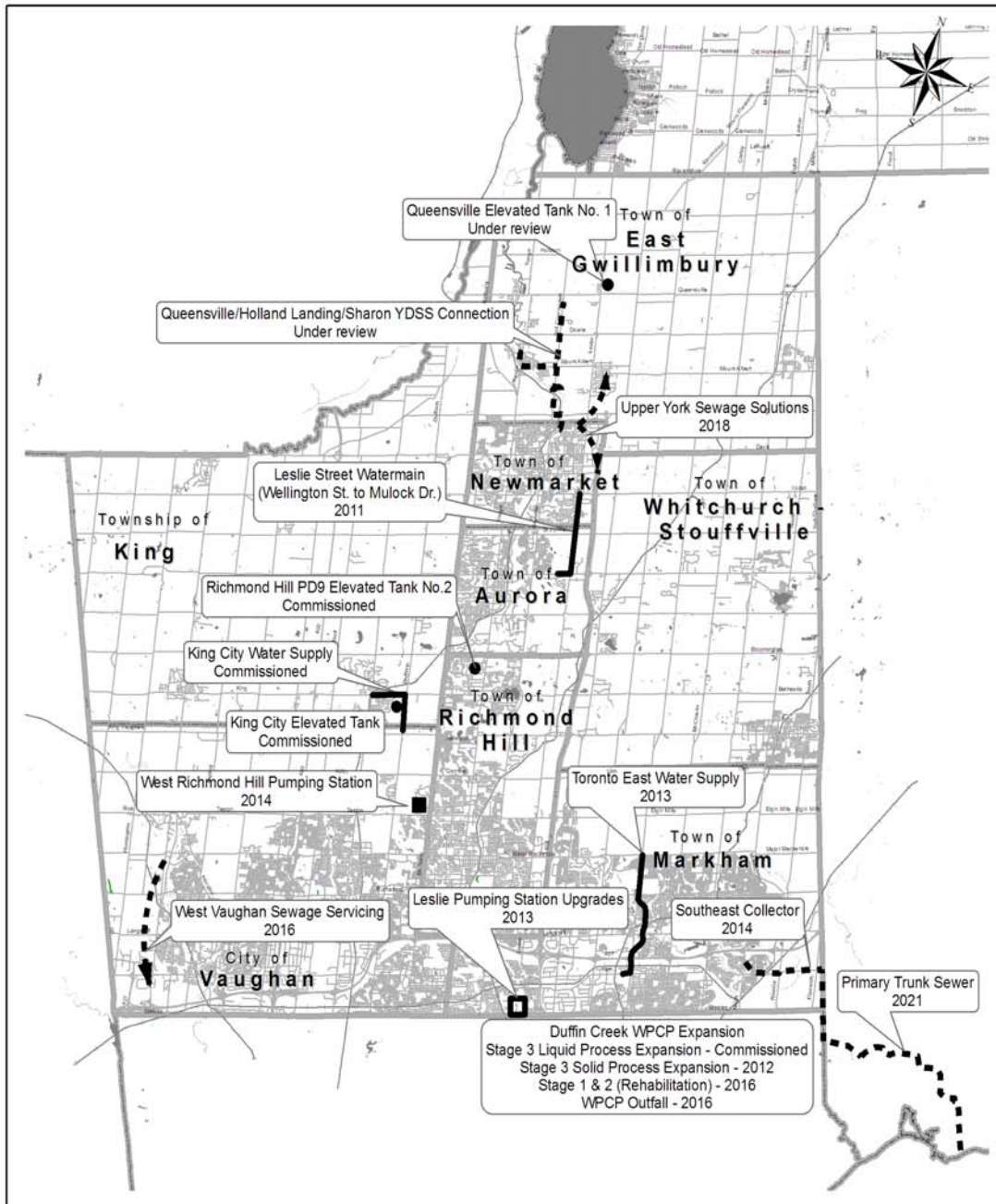
Municipality	Project Name / Trigger Conditions	Description	Current Status	Expected Completion Date	Anticipated Presales Timing	Anticipated Registration Timing
Aurora East Gwillimbury Markham Newmarket Richmond Hill King Vaughan Whitchurch/Stouffville	Duffin Creek WPCP (Liquid Process Expansion)	Expansion to increase plant capacity to 630 ML/day subject to completion of future outfall works	Complete	December 2010 (Liquid Process Expansion) (last reported: December 2010)	Permission for presales granted in December 2009 and June 2010 (Except EG where other infrastructure triggers are required, see below)	Permission for final plan registration granted in June and September 2010 (Except EG where other infrastructure triggers are required, see below)
Township of King	King City Water Supply	King City connection to York Water System	Complete	July 2011 (last reported: Summer 2011)	Permission for presales granted in June 2010	Permission for final plan registration granted in September 2010
	King City Elevated Tank	Construction of a 2.74 ML elevated tank	Complete	July 2011 (last reported: Summer 2011)		
Aurora, Newmarket (Aurora East pressure district only)	Leslie/Wellington Street Watermain	Watermain from Aurora East pumping station on Wellington St. to Leslie St., just north of Mulock Drive	Construction	September 2011 (last reported: August 2011)	Permission for presales granted in December 2009	Permission for final plan registration granted in February 2011
Richmond Hill (PD9 only)	PD9 Elevated Tank No. 2	Elevated Tank in the Richmond Hill Pressure District 9 service area	Complete	April 2011 (last reported: April 2011)	Permission for presales granted in June 2010	Permission for final plan registration granted in October 2010
East Gwillimbury	Queensville/Holland Landing/Sharon YDSS connection	Provision of sanitary servicing through extension of the YDSS	Agreement review	Subject to review (last reported: Subject to review)	Subject to review	Subject to review
	Queensville Elevated Tank No. 1	Construction of a 7.5 ML elevated tank	Agreement review	Subject to review (last reported: Subject to review)		
Aurora East Gwillimbury Markham Newmarket Richmond Hill King Vaughan Whitchurch/Stouffville	Regional conditions on 2013 allocation	MOE approval of the Southeast Collector Trunk Sewer IEA Commitments of local municipalities to partner with the Region on the I-I reduction program	Conditions met		June 2012* (last reported: December 2011) * Low rise residential	January 2013* (last reported: June 2012)

- 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 Key Infrastructure Projects

**Required within the next 10 years to service beyond 1,078,328 people
as of August 2011**

Project Name	Description	Current Status	Expected Project Completion Date
Southeast Collector Sewer	Twinning of existing trunk sewer to provide additional conveyance capacity	Construction	Late 2014 (last reported: Late 2014)
Duffin Creek Stages 1 and 2 Upgrades	Upgrade and refurbish existing Stages 1 and 2	Detailed Design	2016 (last reported: 2016)
Duffin Creek Water Pollution Control Plant Outfall	New outfall to address diffusion requirements and increase plant capacity to 630MLD	Class Environmental Assessment	2016 (last reported: 2016)
Upper York Sewage Solutions	Sanitary servicing solution to accommodate growth in Holland Landing, Queensville, Sharon and parts of Aurora and Newmarket	Individual Environmental Assessment	2018 (last reported: 2018)
Toronto East Water Supply	Watermain along Kennedy Road from Milliken Pumping Station to Major Mackenzie Drive	Open cut section - Construction Tunnel section - Tender	Q2 - 2013 (last reported: Q4 2012)
West Richmond Hill Pumping Station	New pumping station near Bathurst Street and Elgin Mills Road to pump water from Pressure District (PD) 6 to PD7 and PD8	Class Environmental Assessment	Q4 - 2014 (last reported: Q4 - 2014)
West Vaughan Sewage Servicing	Sanitary servicing solution to accommodate growth in West Vaughan area	Class Environmental Assessment	2016 (last reported: 2016)
Leslie Pumping Station Upgrades	Upgrades include pump replacement, electrical & standby power improvements	Detailed Design	Late 2013
Primary Trunk Sewer	New sewer to provide additional conveyance capacity	Project Initiation	2021



LOCATION PLAN

Key Infrastructure Projects



0 2 4 8 Kilometers

— Priority Water Projects & Expected Completion Date

- - - Priority Wastewater Projects & Expected Completion Date



Capital Infrastructure Status Update

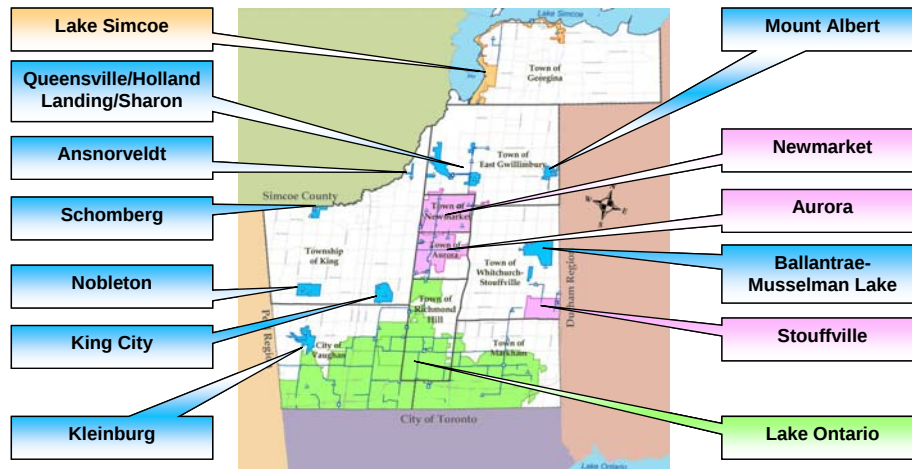
Daniel Kostopoulos
September 14, 2011

Overview

- ❑ Program overview
- ❑ What have we achieved in the last 6 months
- ❑ What will we achieve in the next 6 months
- ❑ Key Projects



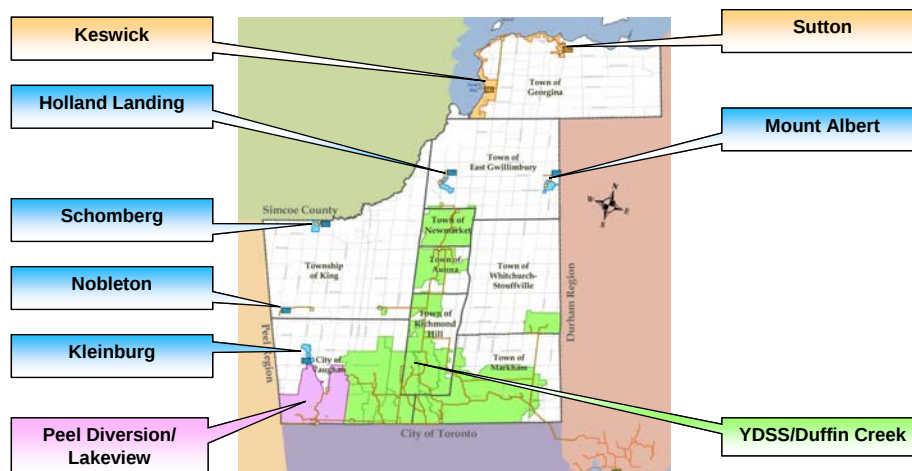
Drinking Water Supply Where does it come from...



Environmental Services Committee / September 14, 2011

Slide 3

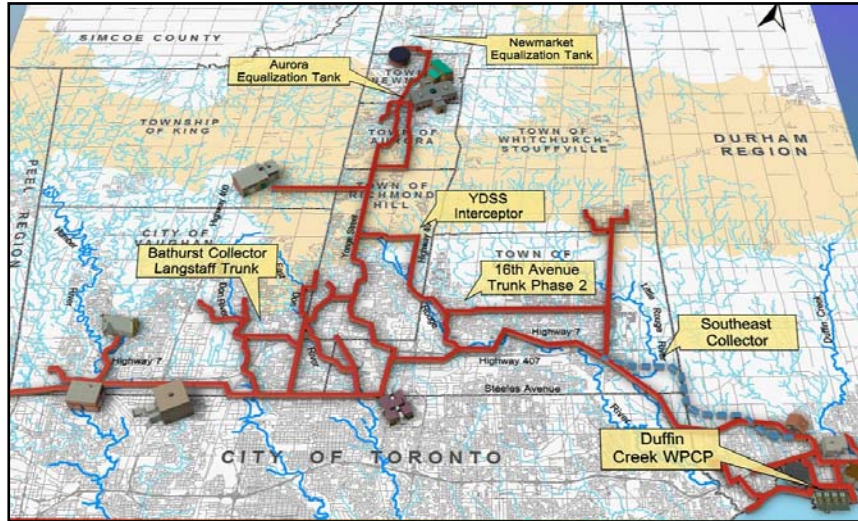
Sanitary Sewage Servicing Where does it all go...



Environmental Services Committee / September 14, 2011

Slide 4

York Durham Sanitary Sewer Overview



Environmental Services Committee / September 14, 2011

Slide 5

What have we achieved in the last 6 months...

Achieved key milestones on water projects:

- ✓ Filed class environmental assessment for Glenway Reservoir
- ✓ Tendered Ballantrae well #3
- ✓ Commenced construction of:
 - ✓ Keswick elevated tank
 - ✓ Kennedy Road watermain (Contract 1)
 - ✓ Kleinburg water supply works
- ✓ Completed the following capital projects:
 - ✓ Richmond Hill elevated tank #2 and decommissioning of Oak Ridges standpipe
 - ✓ Woodbine Avenue watermain in Keswick
 - ✓ King City water supply works
 - ✓ Mount Albert well #3
 - ✓ Islington watermain (Kleinburg water supply)



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Slide 6

What have we achieved in the last 6 months...

Achieved key milestones on wastewater projects:

- ✓ Commenced class environmental assessment for West Vaughan sewage servicing and design for Duffin Creek plant stages 1 & 2 upgrades
- ✓ Presented tentatively recommended Alternative for Upper York Sewage Solutions to public and key stakeholders
- ✓ Tendered Newmarket/Aurora/Richmond Hill regional sewer rehabilitation
- ✓ Awarded and commenced construction of the Southeast Collector
- ✓ Completed Keswick forcemain

Achieved key milestones on waste management infrastructure:

- ✓ Awarded Design-Build-Operate Contract for Durham-York energy centre
- ✓ Completed Garfield Wright material recovery facility upgrades
- ✓ Completed Elgin Mills community environmental centre

Advanced or completed over \$175 million of capital work in last six months



Environmental Services Committee / September 14, 2011

Slide 7

What we will achieve in the next 6 months...

Water

- Tender:
 - Kennedy Road watermain (contract 2)
 - Nobleton well and watermain
 - Bloomington Road watermain
- Commence construction of:
 - Queensville North elevated tank
 - Ballantrae well #3
- Complete the following projects:
 - Leslie Street watermain
 - Nobleton elevated tank
 - Georgina water treatment plant expansion
 - Markham PD6 watermain
 - Bathurst watermain
 - Maple PD7 pumping station capacity upgrade



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What we will achieve in the next 6 months...

Wastewater

- ❑ Start class environmental assessment for Primary Trunk
- ❑ Finalize preferred alternative for Upper York Sewage Solutions
- ❑ Execute amended Agreement and commence detailed design for Queensville / Holland Landing / Sharon connection
- ❑ Tender Leslie Street pumping station upgrades
- ❑ Complete Kleinburg water pollution control plant expansion

Waste Management

- ❑ Tender Warden Avenue community environmental centre in Georgina
- ❑ Award Design-Build-Operate contract for York-Dufferin source separated organics facility

Over 50 construction contracts underway in 2011 with over \$1 billion in capital in construction



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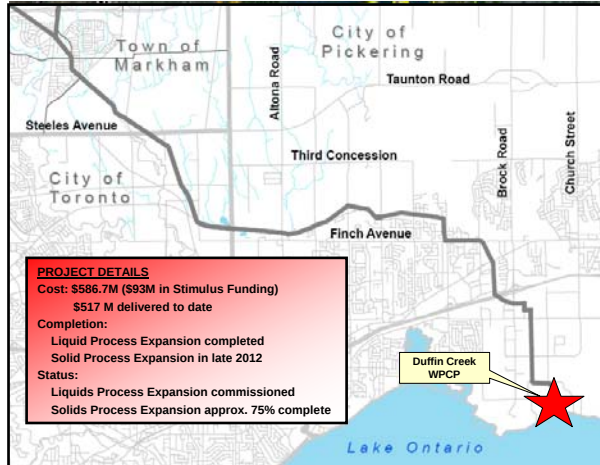
Key Water & Wastewater Capital Projects



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Duffin Creek Water Pollution Control Plant Stage 3 Expansion



PROJECT DETAILS

Cost: \$586.7M (\$93M in Stimulus Funding)
\$517 M delivered to date

Completion:

Liquid Process Expansion completed
Solid Process Expansion in late 2012

Status:

Liquids Process Expansion commissioned
Solids Process Expansion approx. 75% complete

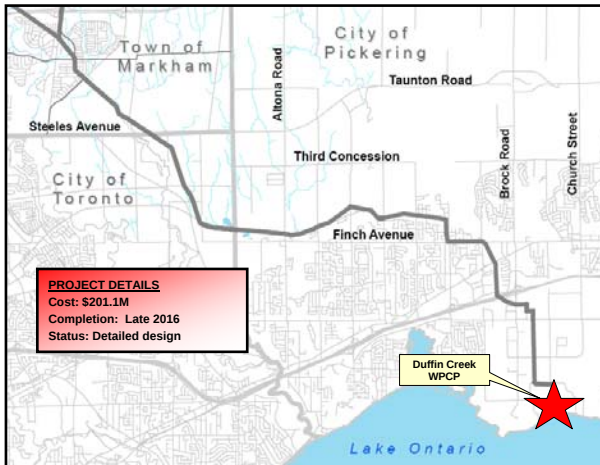
Commissioning of stage 3 solid process expansion scheduled to commence in Q2 2012.



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Duffin Creek Water Pollution Control Plant Stage 1 & 2 Upgrades/Refurbishment



PROJECT DETAILS

Cost: \$201.1M

Completion: Late 2016

Status: Detailed design

Award of two equipment prepurchase contracts by Q4-2011 / tender two construction contracts by Q1-2012



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Duffin Creek Water Pollution Control Plant Outfall



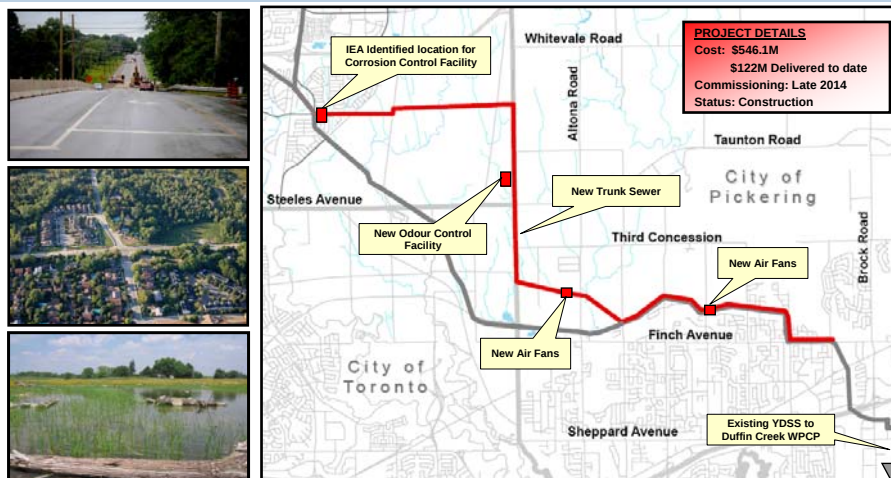
Duffin Creek WPCP Outfall is required for growth beyond 2017 – Class EA underway



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Southeast Collector Trunk Sewer



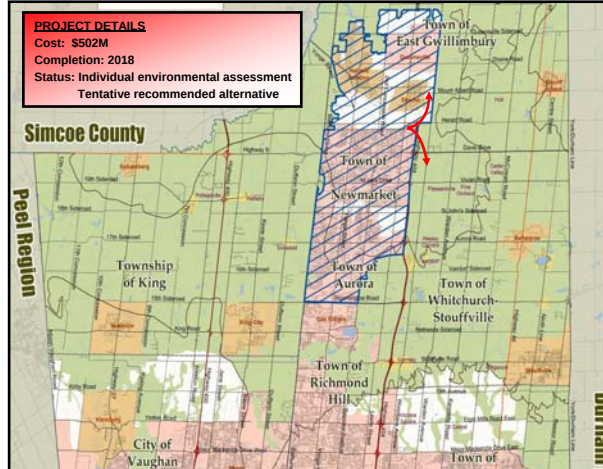
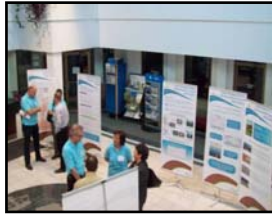
Construction commenced on tunnel contract (Strabag)



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Upper York Sewage Solutions



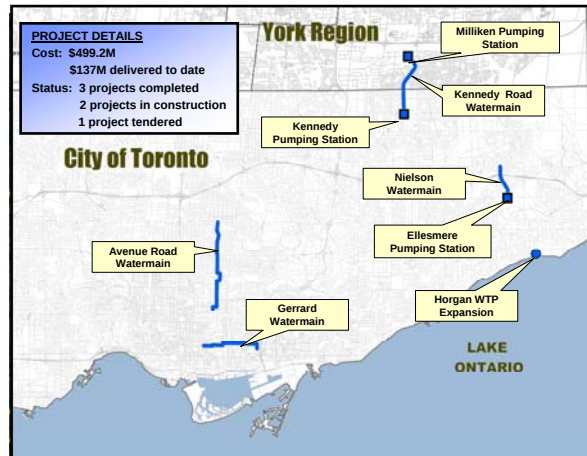
Tentatively Recommended Alternative – Water Reclamation Centre



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Toronto Cost Shared Works



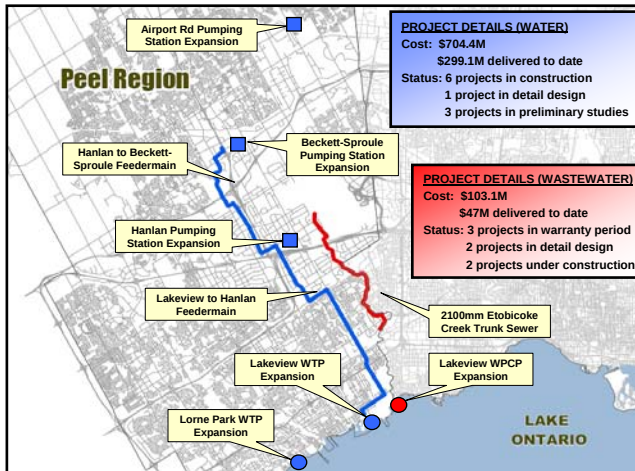
6 active projects – delivery on track to meet required water servicing capacity



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Peel Cost Shared Works



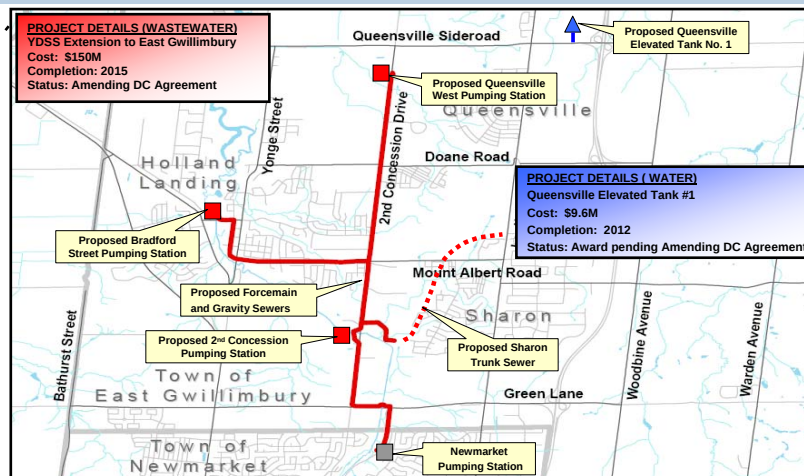
Seventeen active projects – delivery on track to meet required servicing capacity



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Queensville/Holland Landing/Sharon Servicing



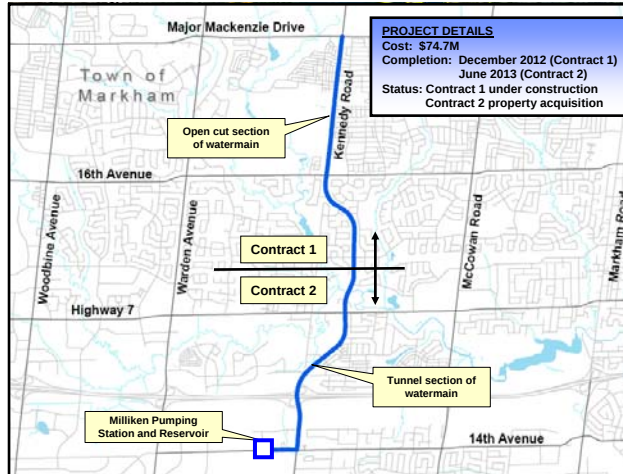
Detailed design of revised contract packages initiated – Anticipated release of tenders Q2 2012



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Kennedy Road Watermain – Markham



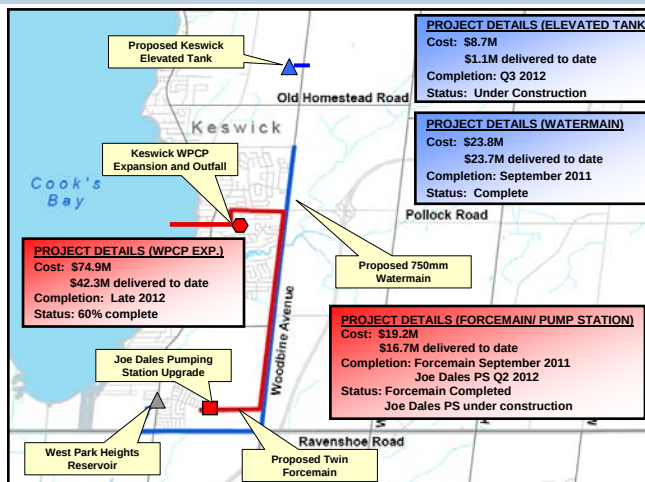
Construction underway for Contract 1, tender contract 2 late 2011



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Keswick Servicing



York investing over \$150M for Keswick servicing (\$128M for Water & Wastewater)



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Georgina Water Treatment Plant Expansion



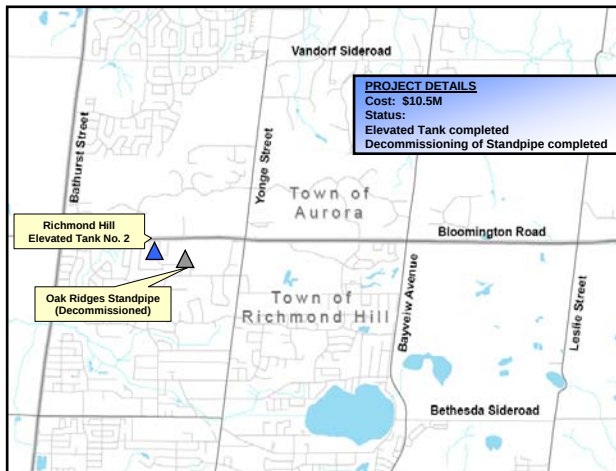
Georgina WTP Expansion on track for completion in October 2011



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Richmond Hill Elevated Tank No.2



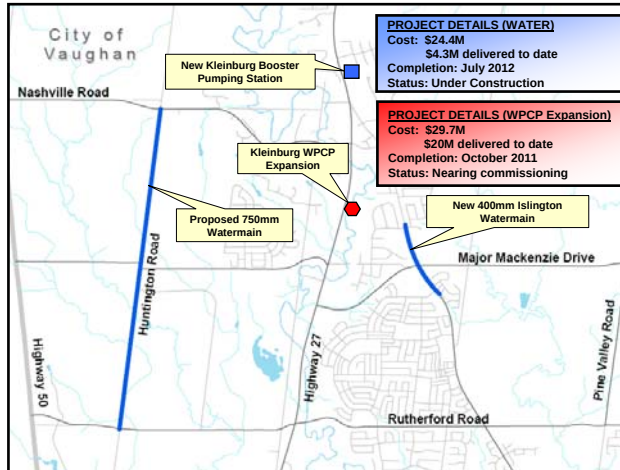
Richmond Hill Elevated Tank No. 2 & Standpipe decommissioning complete



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Kleinburg Servicing



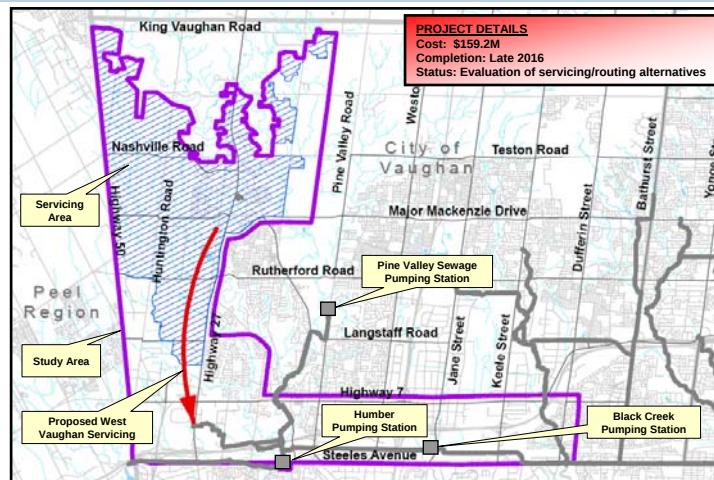
Commissioning of Water Pollution Control Plant Expansion starting in October 2011



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West Vaughan Sewage Servicing



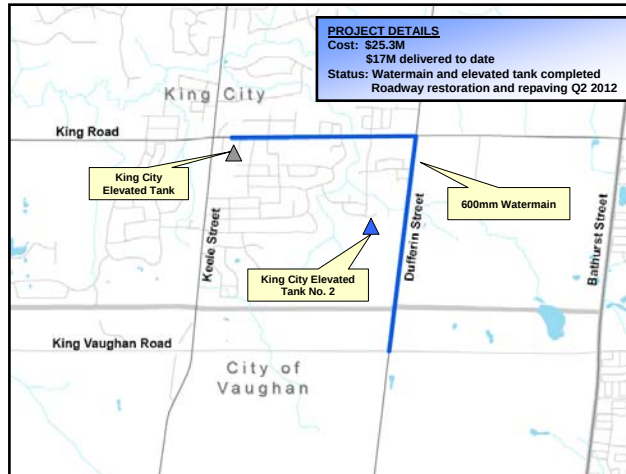
Class Environmental Assessment study underway



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King City Water Supply



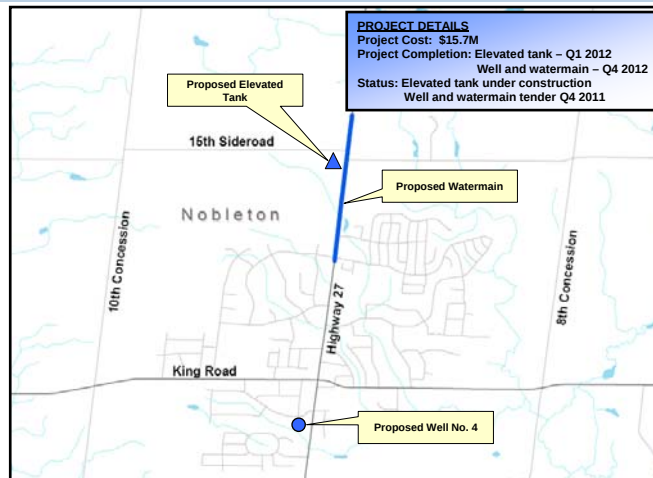
King City Water Supply works commissioned in July 2011



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Nobleton Water Servicing



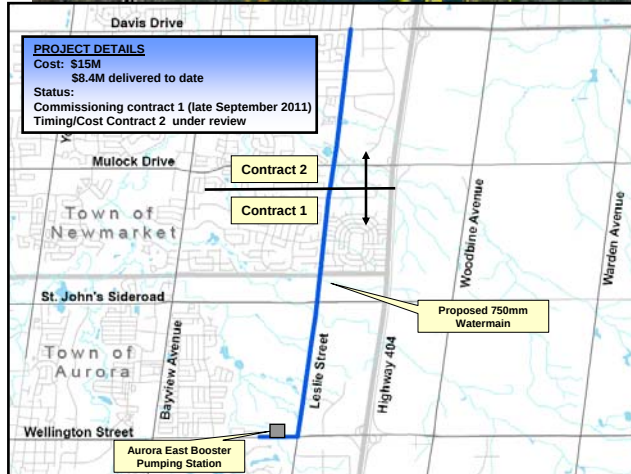
Elevated tank to be completed late 2011, new well and watermain to be tendered Q4 2011



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Leslie Street Watermain (Aurora/Newmarket)



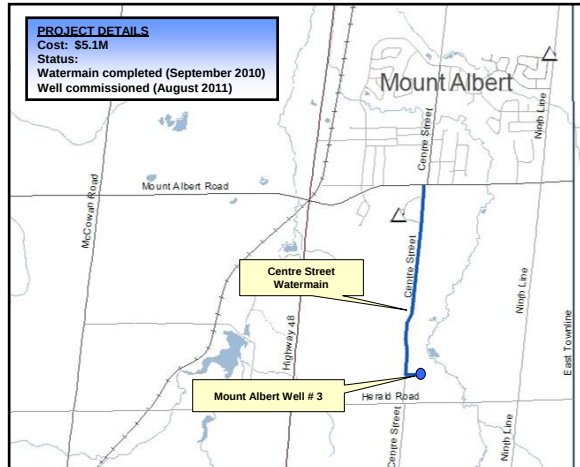
Contract 1 commissioning in late September 2011



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Mount Albert Well # 3 and Watermain



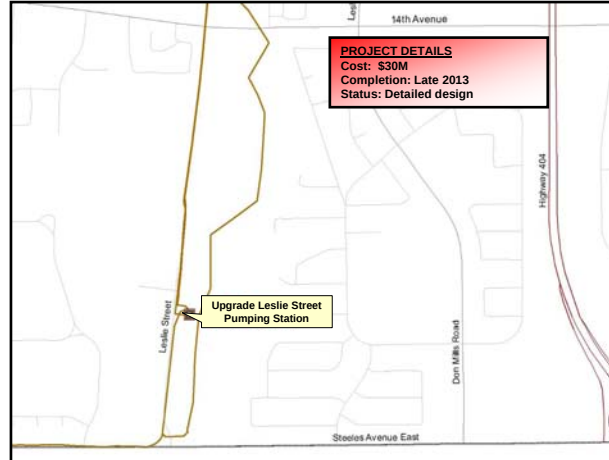
Mount Albert Water Supply works commissioned



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Leslie Street Pumping Station Upgrade



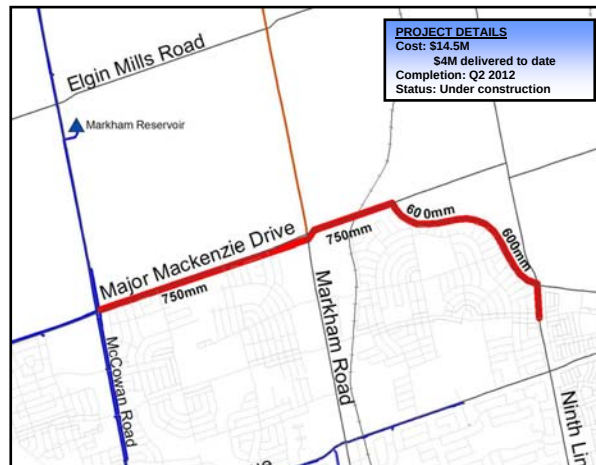
Increasing pumping station capacity to support growth – Tender Q1 2012



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Markham PD6 Watermain



On track for commissioning in spring 2012



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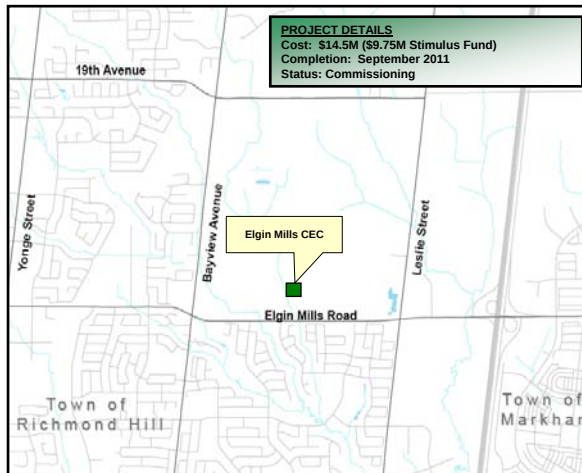
Waste Management Projects



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Elgin Mills Community Environmental Centre (CEC)



PROJECT DETAILS
Cost: \$14.5M (\$9.75M Stimulus Fund)
Completion: September 2011
Status: Commissioning

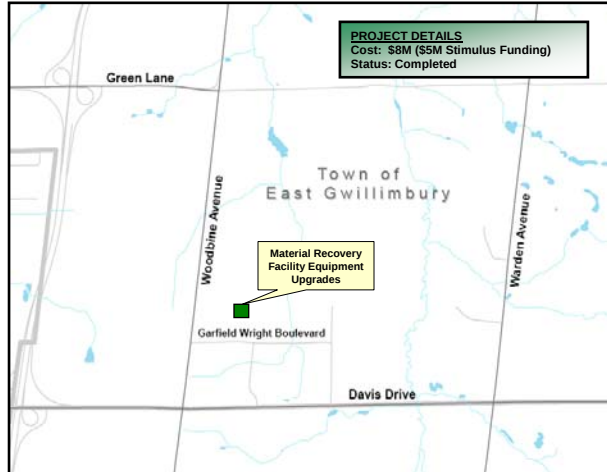
Community Environmental Centre to be opened in October 2011



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Material Recovery Facility (MRF) Equipment Upgrades



Upgrades completed to increase processing capacity to 125,000 tonnes/yr



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Durham-York Energy Centre



Energy From Waste Facility construction to start in 2012



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Bringing Certainty to Capital Delivery in 2011

- ❑ On track to deliver approximately \$0.5B in new Environmental Services Capital in 2011
- ❑ Key elements include moving forward with Duffin Creek Stage 3 solids expansion and continuing construction on Southeast Collector
- ❑ Maintain watch on funding the capital program and using advanced procurement and project delivery methods
- ❑ Addressing construction challenges given transformation from suburban/rural communities to large urban centres across Region
- ❑ Efficiently building Peel, Toronto, Durham and Dufferin Cost Shared Works
- ❑ Upper York Sewage Solutions Individual Environmental Assessment moving forward



Delivering critical infrastructure that provides phased servicing capacity for planned growth



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Questions



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