

Clause 9 in Report No. 8 of Committee of the Whole was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting held on May 19, 2016.

9

Environmental Services Water and Wastewater Capital
Infrastructure Status Update

Committee of the Whole recommends adoption of the following recommendation contained in the report dated April 21, 2016 from the Commissioner of Environmental Services:

1. The Regional Clerk circulate this report to the Clerks of the local municipalities.
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Report dated April 21, 2016 from the Commissioner of Environmental Services now follows:

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 Council on the status of key water and wastewater infrastructure projects required to meet system demands and identified as triggers for release of servicing capacity and associated approvals.

3. Background

Projects supporting capacity assignment to 1,250,000 people are complete

York Region capacity assignment to local municipalities to date totals 1,250,000 people. As part of the capacity assignment process, a number of projects were

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identified as “trigger projects” that are required to be completed to realize the capacity assigned. All works within trigger projects needed to make required capacity available are now complete, and all local municipalities have been advised of the removal of restrictions on registration accordingly.

Capital water and wastewater infrastructure required to support growth is reviewed and reported to Council regularly

The last update to Council on the status of delivering key Environmental Services infrastructure projects was provided in November 2015. The next capital water and wastewater infrastructure update is scheduled for Q4 2016.

In conjunction with the Municipal Comprehensive Review process, the Region is undertaking a Water and Wastewater Master Plan Update to confirm existing infrastructure projects and identify new projects required to support the Region's growth to 2041. The Master Plan is expected to be complete by the end of 2016 and will ultimately inform the 2017 Development Charge Bylaw update. The next Regional capacity assignment is planned in 2016 to identify multi-year, post-2017 capacity needed for each municipality.

4. Analysis and Options

Environmental Services represents approximately 40 per cent of the Regional 10 Year Capital Plan

The 10 Year Water and Wastewater Capital Plan remains focused on delivering capacity needed to service growth within current financial limits. The capital program has over 140 active projects, which are progressing well and focus on building the trunk system, sustaining infrastructure service levels and managing system risk and resiliency. While there are many complexities associated with infrastructure planning, design and construction, the program remains on schedule to deliver on commitments made through the capacity assignment process.

The 2016 approved budget identified a 10 Year Capital Plan totalling \$2.3 billion, 38 per cent of the Regional Capital Plan. The following provides an update on key Environmental Services projects within the 10 Year Capital Plan. A project summary and a location map are included in Attachments 1 and 2, respectively.

Queensville/Holland Landing/Sharon wastewater servicing infrastructure is ready for flows

Commissioning of the Holland Landing, Queensville West and 2nd Concession Sewage Pumping Stations are complete and site restoration and landscaping are

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to be completed in spring 2016. New wastewater infrastructure is ready to accept flows from new developments in East Gwillimbury. No units were registered in Q1 and registration is expected to start in Q2, meaning flows could be received as early as fall 2016.

A summary of the Queensville/Holland Landing/Sharon servicing projects is shown in Table 1.

Table 1
Queensville/Holland Landing/Sharon Project Status Summary

| Project | Status | Contractor |
|---|--------------|---------------------|
| Queensville Elevated Tank No. 1 | Commissioned | Landmark Structures |
| Holland Landing Sewage Pumping Station | Commissioned | Con-Drain Company |
| Queensville West Sewage Pumping Station | Commissioned | Mettko Construction |
| 2 nd Concession Sewage Pumping Station | Commissioned | Con-Drain Company |
| Holland Landing and Green Lane Forcemains | Commissioned | North Rock Group |
| Sharon Trunk Sewer | Commissioned | Con-Drain Company |
| 2 nd Concession Linear (Trigger for Development) | Commissioned | Aecon Group Inc. |

Southeast Collector Trunk Sewer project is totally performed and in warranty period

The Southeast Collector contract achieved Total Performance in September 2015 and is now in its two year warranty period. Completion of this project marks a significant achievement for York Region as it was initially subject to much public resistance and stringent approval conditions. To date, test results from the Odour Control Facility built as part of this project have readily met regulatory requirements. With this project complete, York Region has retained a consultant to provide engineering services necessary for rehabilitation of the existing York-Durham Sewage System between Markham and Pickering as part of the 10 Year Capital Plan.

Duffin Creek Plant Stages 1 and 2 Upgrades construction on schedule and Stage 2 is back online

The Duffin Creek Plant Stages 1 and 2 Upgrades include work that must be completed by 2017 as a condition of the Ministry of the Environment and Climate

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Change's Environmental Compliance Approval for the Duffin Creek Plant Stage 3 Expansion and other required refurbishments and upgrades.

Contracts listed in Table 2 constitute the bulk of work to be accomplished in the Stages 1 and 2 Upgrades project and include upgrades stipulated to be completed by December 31, 2017 in the Environmental Compliance Approval-Air conditions. Commissioning and overall substantial performance of the final contracts of the project are expected to occur in Q4 2017 (last reported: Q4 2017) in compliance with the Environmental Compliance Approval.

Table 2
Contract Status for Duffin Creek Plant Stages 1 and 2 Upgrades

| Contract / Progress | Progress Update |
|---|--|
| New Stages 1 and 2 Electrical Substation Construction and associated pre-purchase contracts for generators, switchgears and transformers (\$32 Million / 99% complete) | Construction contract and two associated pre-purchase contracts awarded 2012. Construction contract substantially performed December 2014 and now in warranty period. |
| Disinfection Facility Construction (\$9 Million / 99% complete) | Construction contract awarded June 2013. Substantially performed June 2, 2015 and now in warranty period. |
| Preliminary Treatment and Influent Pumping Station Facility construction and associated pre-purchase contracts; biofilter and sewage pumps (\$85 Million / 50% complete) | Construction contract awarded March 2014 and on schedule for Q4 2017 completion. Sewage pump pre-purchase contract awarded and pumps received. Wet well structural concrete works advanced to 50%. Major concrete pressure pipe works complete. Head works and other facilities construction advancing on schedule. Major mechanical and electrical installations underway in new buildings. |
| Refurbishment and Upgrade Construction contract and associated pre-purchase contract; Clarifier Bridge Mechanisms (\$29 Million / 60% complete) | Construction contract awarded June 2014. Clarifier Bridge Mechanisms pre-purchase contract awarded and on schedule with Stage 2 bridges in commissioning. Stage 2 is back online and turned over to Operations staff in Q4 2015. Stage 1 now offline, turned over to contractor and rehabilitation works underway and on schedule. |

Awaiting Minister's decision on the Duffin Creek Plant Outfall Class Environmental Assessment

A Schedule "C" Class Environmental Assessment to address limitations in the Duffin Creek Outfall commenced in December 2010 and was undertaken as a joint study with Durham Region. The Notice of Completion of the Schedule "C" Class Environmental Study Report was issued for public review and comment on November 19, 2013. Over the review period, 90 Part II Order Requests were submitted to the Minister, all of which included the general allegation that the Duffin Creek Plant was responsible for a resurgence of algae (*Cladophora*) growth, creating odour problems and loss of waterfront enjoyment. Many of the issues raised in the Part II Order Requests were outside the scope of the Class Environmental Study. Notwithstanding, the Regions retained subject matter experts and responded to all of the Part II Order issues on September 30, 2014.

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The Ministry continues to review the Schedule “C” Class Environmental Study Report submission as well as the response to the Part II Order issues. The Ministry has not advised of any deficiencies in these submissions.

Work underway on Ministerial Order to study plant performance

Key stakeholders including the Town of Ajax continue to communicate to the Ministry that the Duffin Creek Plant is the sole cause of nutrients entering Lake Ontario and stimulating the growth of algae (*Cladophora*). Ajax’s preferred solution to address outfall limitations is construction of a new outfall into the lake extending up to three kilometres off shore and/or addition of tertiary treatment at the Duffin Creek Plant. Neither of these solutions is warranted at this time nor will they solve the algae (*Cladophora*) problem along the Ajax/Pickering shoreline. On April 4, 2016, the Regions of York and Durham received an Order from the Minister of Environment and Climate Change to perform further study to support a decision on Part II Order Requests. The Regions are undertaking a comprehensive review of the Duffin Creek Plant treatment processes with a focus on phosphorus removal. Results of this review are expected in Q1 2017 and will be provided to the Ministry to assist making a decision on the Schedule “C” Outfall Class EA and Part II Order Requests.

Sewage servicing commitments have been achieved with commissioning of new pumps at Leslie Street Sewage Pumping Station and completion of the Southeast Collector Project

Leslie Street Sewage Pumping Station collects wastewater flow from Vaughan, Richmond Hill and Markham. This facility pumps wastewater to the Duffin Creek Plant. This upgrade project will increase the station’s pumping capacity to meet growth requirements and includes major electrical, Supervisory Control and Data Acquisition (SCADA) system, standby power and building envelope upgrades.

An alternative sequence of construction has been developed to address issues with the existing facility’s power quality identified in August 2015, during construction. Work continues with overall construction expected to be complete in Q2 2017 (last reported: end of 2016).

Upper York Sewage Solutions project progressing through key stages of detailed design

The Upper York Sewage Solutions project will provide additional servicing capacity of over 80,000 persons (40 MLD) to support growth in the Towns of Aurora, Newmarket and East Gwillimbury, and includes the following three key design elements:

- Lake Simcoe Water Reclamation Centre and associated linear conveyance infrastructure (Anticipated completion 2024)

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- Modifications to the existing York-Durham Sewage System between the existing Newmarket, Aurora and Bogart Creek Pumping Stations (Anticipated completion 2019)
- Project-specific phosphorus off-setting program (Anticipated completion 2024)

All three key design elements are progressing through key stages of detailed design on varying timelines, in accordance with the approved 2016 Capital Plan. Lake Simcoe Water Reclamation Centre has achieved 60 per cent design and is well on its way to completion of 90 per cent design by the end of 2016.

Modifications to the York-Durham Sewage System are nearing 60 per cent design and are on track for tendering in early 2017. With advancement in the detailed design of this project more refined cost estimates will be used to inform the 2017 budget. The project-specific phosphorus off-setting program is still at the very early stage of 30 per cent design with project implementation scheduled in 2022.

Upper York Sewage Solutions project Environmental Assessment approval anticipated in mid-2016

The final Environmental Assessment report for this project was submitted to the Minister of the Environment and Climate Change for approval on July 25, 2014. With submission of the final report, the Ministry is conducting its own internal review and public consultation process in accordance with regulatory guidelines.

Since July 2014, Region staff has been addressing comments and additional information requests from the Ministry in a timely manner over several iterations. All information requests received have been addressed. Based on the current stage of the Minister's review and the Region's previous experience in similar undertakings, formal approval of the undertaking is now anticipated to be secured by summer 2016. This period includes statutory public review (five weeks), which was completed on February 26, 2016, statutory Ministry review (13 weeks), and the decision-making process. The entire statutory timeline for a decision on approval of the undertaking is close to seven months depending on the number of issues that may be in dispute. Contingent on formal approval being received by the Region in mid-2016 as expected, project implementation will continue on schedule.

Kennedy Road Watermain commissioned and ready for service

The Kennedy Road Watermain project involves construction of a 1500mm diameter watermain along Kennedy Road from the Milliken Pumping Station on 14th Avenue to Major Mackenzie Drive. The project is required to provide additional water supply from Toronto to Markham Pressure District 6 to meet long-term growth demands. Work was completed under two contracts, both of which are now commissioned. Disinfection procedures are currently underway

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and the watermain will be in service at the end of May 2016 (last reported, early 2016). The balance of the work, including final restoration, is expected to be complete by summer 2016.

East Vaughan Pumping Station construction progressing to meet servicing requirements

The East Vaughan Pumping Station (formerly known as West Richmond Hill Pumping Station) is a new water pumping facility required to service lands in the northeast portion of Vaughan, portions of Richmond Hill north of Major Mackenzie Drive and the northwest portion of Markham. The Pumping Station will provide service hand-in-hand with the associated East Vaughan watermains on Major Mackenzie Drive, Teston Road and Bathurst Street, currently under construction. Construction of the pumping station was started in April 2014 and approximately 85 per cent of the work is complete. All civil and mechanical works in both the disinfection building and main pumping station are complete. Finishing works, installation and testing of electrical, instrumentation and control equipment for remote monitoring are ongoing. For the watermains, 95 per cent of the work is complete, with only crossing of the TransCanada Pipeline remaining. Commissioning is expected to commence in Q3 2016 (last reported: Q1 2016). Delays in commissioning this project are attributed to added complexity of control programming of process refinements required for the rechloramination facility that has been incorporated into the pumping station contract.

Additional rechloramination is required to boost chlorine levels during periods of low peak water use. Due to the long travel distance of water from Lake Ontario to our local municipalities, rechloramination allows for system flexibility to maintain high standards of drinking water quality under varied water consumption rates. The revised completion date will not delay or impact timing of approved development within the service area.

Additional growth in Vaughan will continue with upgrades at the Humber Sewage Pumping Station

Upgrades to the incoming electrical system and pump controls to meet capacity requirements are currently underway at the Humber Sewage Pumping Station and are on schedule to be completed in Q2 2016 (last reported: Q2 2016). Modifications to the forcemain control, including valve replacement and chamber modifications were added to the scope of the project to improve operational flexibility and manage short term capacity requirements.

Detailed design for West Vaughan Sewage Servicing is progressing well

Preliminary design for the West Vaughan Sewage Servicing Project has been completed and detailed design is currently underway. An Addendum to the

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Environmental Study Report was submitted to the Ministry of the Environment and Climate Change in January 2016 and comments from the public were compiled and addressed. A Value Engineering study was undertaken in April 2016 to identify alternatives, efficiencies, and/or improve required functions at a lower life-cycle cost. The value engineering ideas developed during this study are being evaluated by the design team and will be incorporated into the detailed design phase. The West Vaughan Sewage Servicing project includes over 14 kilometres of trunk sewer and expansion of the Humber Pumping Station. Construction is scheduled to commence in 2022 for the Humber Pumping Station upgrades and 2025 for the tunnelled trunk sewer.

York Region staff have been working with the City of Vaughan and local developers to manage capacity needs in Northeast Vaughan and West Vaughan until servicing projects are complete in 2028. An update of ongoing work will be provided in a Long Range Planning report scheduled for June 2016 in response to Council resolutions on November 19, 2015 in Clause 12 of Committee of the Whole Report 17, entitled *York Region 2041 Preferred Growth Scenario*. The report directs staff to meet with landowners and determine options for servicing these areas in Vaughan.

Master Plan study to inform water servicing strategy for West Vaughan

The Master Plan Study Update is currently underway to review the infrastructure needs to service growth in West Vaughan service area including Kleinburg-Nashville.

Works identified by the Master Plan Update include:

- Replacement of the Kleinburg elevated tank and West Woodbridge elevated tank to provide additional storage capacity
- Enhancement to system resiliency through additional interconnection between Pressure Districts 5 and 6

Timing of the works will be finalized upon completion of the Master Plan Update and included in the 10 Year Capital Plan as required. This information will be used to update the water servicing strategy and optimization needs for West Vaughan area including Kleinburg-Nashville.

Northeast Vaughan Water and Wastewater Servicing Environmental Study is progressing

The Northeast Vaughan Water and Wastewater Servicing project is underway to provide Regional infrastructure for servicing anticipated growth in northeast Vaughan to the year 2051. The Class Environmental Assessment study is

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progressing and alternative watermain routes, water storage sites and trunk sewer routes are being developed.

The first Public Consultation Centre was held in April 2015 to introduce project objectives and present preliminary servicing alternatives. The second Public Consultation Centre will be held in Q4 2016 (last reported: Q4 2015) to ensure the Class Environmental Assessment work is consistent with servicing strategies identified in the Region's Water and Wastewater Master Plan Update. The updated demand forecasts are being incorporated into the Water and Wastewater Master Plan Update modelling and this strategy will provide the Environmental Assessment with the most current servicing requirements and strategies for consideration. The purpose of this Public Consultation Centre is to obtain public feedback on recommended water and wastewater sites and routes.

Work is concurrently underway to add an additional pump to the Region's Maple Pumping Station to service some of the early growth in northeast Vaughan on an interim basis. Work is expected to be complete by early 2018.

Detailed design to service the Richmond Hill/Langstaff Gateway Regional Centre has commenced

The Richmond Hill/Langstaff Gateway Regional Centre is located within the Town of Richmond Hill and the City of Markham and includes lands adjacent to Highway 7 from Red Maple Avenue to Bayview Avenue. The Municipal Class Environmental Assessment to review potential servicing solutions for the area was completed in 2015. The assessment recommended water and wastewater servicing solutions that fully utilize existing water and wastewater infrastructure to minimize capital cost and reduce overall environmental impacts while providing acceptable servicing for the land. Recommendations consisted of adding three water connection points to the existing Regional watermain and constructing a new, relatively small diameter, sanitary sewers to connect to the existing Regional Richmond Hill Collector sewer and a Town of Richmond Hill sewer. Commissioning is currently planned for 2025 (no change since last reported).

Sutton Water Resource Recovery Facility operating at less than 60 per cent capacity

The existing Sutton Water Resource Recovery Facility was commissioned in 2003 with an original design capacity to service 7,500 people. An Environmental Assessment for plant expansion to service 13,500 people was completed in 2010. The detailed design is anticipated to start in 2028 and construction completed in 2033.

As reported in the last status update in November 2015, the Region will consider bringing the facility's expansion into the 10 Year Capital Plan when flow reaches 70 per cent of plant capacity, subject to funding availability and Council approval

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at that time. Flow records from 2013 through 2015 indicated that the plant is operating at 55 per cent of its total capacity.

Key component of Region's long-term servicing strategy is Peel and Toronto cost-shared projects

Provision of water and wastewater services through partnerships with the City of Toronto and Peel Region is a key component of the Region's long-term servicing strategy. Three water projects and two wastewater projects in the Region of Peel, and four water projects in the City of Toronto are currently underway to provide capacity to service growth in the Region, including five in construction.

The Region conducts regular meetings with Toronto and Peel staff to discuss issues regarding supply commitments, including cost-shared project delivery schedules. The West Trunk Twinning project, which includes installing a trunk sewer beneath a runway at Lester B. Pearson International Airport, is now in construction and is expected to achieve substantial performance in June 2016. Both the Region of Peel and the City of Toronto are on track to meet their long-term water supply agreement commitments to the Region.

Hanlan Feedermain projects are scheduled to be commissioned by Q4 2017

In 2009, the Region of Peel completed a Schedule 'C' Class Environmental Assessment study to identify the preferred route for the new 2400mm diameter Hanlan Feedermain, which will extend approximately 12 kilometres north from Lakeview Water Treatment Plant to Hanlan Pumping Station.

York Region has secured 331 MLD in supply and transmission capacity from Peel. Based on preliminary results of the Water and Wastewater Master Plan Update, the water supply from Peel combined with water supply from Toronto will provide adequate capacity to service existing and future growth to the year 2041 and beyond.

The project was separated into three contracts. Contract No. 2 (open cut) achieved substantial performance in November 2015. Contract No. 1 (tunnelling) and Contract No. 3 (open cut/tunnelling) are in the middle of construction and are scheduled to achieve substantial performance in Q2 2017 (last reported: Q2 2017). Full commissioning of the entire Hanlan Feedermain will be in late 2017.

Critical watermain link commissioned in November 2015

The Gerrard Street Watermain was commissioned by the City of Toronto in November 2015. This key cost-shared project involved tunnel construction of approximately four kilometres of 1650mm diameter steel watermain underneath D'Arcy, Elm and Gerrard Streets stretching across downtown Toronto from

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Spadina Avenue to River Street. This trunk watermain forms an inverted 'T' shape trunk transmission main pumping water from the City's Island and Harris Water Filtration Plants up to York Region via the Region's Bayview Pumping Station.

[Link to key Council-approved plans](#)

Timely delivery of critical infrastructure projects identified in this report is essential to ensure that water and wastewater system capacity is available to service targeted growth of the Regional Official Plan. By prioritizing and integrating delivery of critical infrastructure projects with timing of planning approvals to address growth needs in an efficient manner, community benefit is being optimized in accordance with the goals of the 2015-2019 Strategic Plan under the objectives Optimizing critical infrastructure systems capacity and Encouraging growth along Regional Centres and Corridors.

5. Financial Implications

\$2.3 billion in capital infrastructure works over the next ten years in the 2016 Environmental Services Budget

The 2016 Environmental Services Budget and 10 Year Capital Plan includes \$2.3 billion in water, wastewater, waste management, forestry and energy projects. Of the total \$2.3 billion of capital works in the proposed program, approximately \$1.3 billion is for growth in the water and wastewater program, \$1.0 billion for rehabilitation and replacement in the water and wastewater program and \$65 million for waste management, forestry and energy projects.

The 2016 Capital Spending Authority for Environmental Services Capital is \$969 million. Additional Capital Spending Authority will be requested annually as projects progress and specific requirements are established.

Growth capital work is debt financed with debt repaid through development charges and asset management paid through rate. Waste management, forestry and energy are primarily paid through the tax levy. As part of the budget process, associated funding and resource requirements for operations and asset management of expanded infrastructure systems is an area of focus to inform financial implications of servicing growth. A summary of infrastructure project costs is provided in Table 3.

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Table 3
Cost Estimates for Key Infrastructure Projects

| Project | Estimated Total Project Cost | Remaining Estimated Cost in 10 Year Plan | Commissioning Date |
|---|------------------------------|--|------------------------|
| Queensville/Holland Landing/Sharon York-Durham Sewage System Connection | \$114.0M | \$10.5M | Commissioned |
| Southeast Collector Trunk Sewer | \$578.9M | \$9.9M | Commissioned |
| Duffin Creek Plant Stages 1 and 2 Upgrades | \$241.7M | \$114.2M | 2017 |
| Duffin Creek Plant Outfall – Diffusers | \$17.4M | \$14.2M | 2017 |
| Duffin Creek Plant Outfall – future expansion* | \$170.0M | \$12.6M | 2028 |
| Leslie Street Sewage Pumping Station Upgrades | \$30.7M | \$3.3M | New pumps Commissioned |
| Upper York Sewage Solutions | \$625.2M | \$531.2M | 2024 |
| Kennedy Road Watermain | \$75.0M | \$5.9M | Commissioned |
| East Vaughan Pumping Station | \$52.5M | \$10.6M | 2016 |
| West Vaughan Sewage Servicing | \$272.8M | \$84.4M | 2028 |
| Northeast Vaughan Servicing | \$168.4M | \$52.6M | 2028 |
| Richmond Hill/Langstaff Gateway Regional Centre Servicing | \$28.9M | \$27.6M | 2025 |
| Sutton Water Resource Recovery Facility Expansion | \$40.7M | \$2.0M | 2033 |
| City of Toronto Cost Shared Projects* | \$428.6M | \$100.1M | 2021* |
| Peel Region Water Cost Shared* Projects | \$605.2M | \$66.6M | 2021* |
| Peel Region Wastewater Cost Shared Projects* | \$93.2M | \$33.7M | 2021* |
| Remaining Estimate in 2016 Budget and 10 Year Plan | \$3,543.2M | \$1,079.4M | |

*Timing to be confirmed by Master Plan Update and ongoing monitoring

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Managing the longevity of existing infrastructure through comprehensive Asset Management

One of Environmental Services key strategic goals involves proactively managing and maintaining infrastructure to ensure short and long-term reliability and compliance with all regulatory requirements. Accordingly, the Asset Management Program manages the lifecycle of Environmental Services multi-billion dollar asset base and identifies non-growth related projects for infrastructure rehabilitation and replacement. Some of the key projects are the Duffin Creek Incinerator Replacement, Southeast Collector Rehabilitation, Supervisory Control and Data Acquisition Communication Network Upgrades and Elevated Water Tank improvements. The Asset Management Program coupled with Waste Management, Natural Heritage and Forestry and Energy Management programs areas are a key part of the 10 Year Plan. A breakdown of estimated costs for these projects is provided in Table 4.

Table 4
Cost Estimates for Environmental Services 10 Year Capital Plan

| Project | Remaining Estimated Cost in 10 Year Plan |
|---|--|
| Key Infrastructure Projects (As detailed in Table 3) | \$1,079.4M |
| Other Water Growth Capital Projects | \$102.1M |
| Other Wastewater Growth Capital Projects | \$84.5M |
| Water Rehabilitation/Replacement | \$325.5M |
| Wastewater Rehabilitation/Replacement | \$664.9M |
| Waste Management | \$36.7M |
| Natural Heritage and Forestry | \$16.3M |
| Energy Management | \$12.4M |
| TOTAL Remaining Estimate in 2016 Budget and 10 Year Plan | \$2,321.8M |

Development charge collections need to increase beyond forecasts to move growth related capital projects forward

Growth related wastewater projects are funded by development charges. Development charge collections in 2015 were \$258.3 million. The Region's 2016 Capital Plan is predicated on the Region achieving development charge collection of \$322 million for 2016, and rising development charges collections beyond 2016. Moving projects forward in the Capital Plan would require the

Region to collect significantly more development charges than forecasted over a sustained period of time. To date, development charge collections have not exceeded the 2016 forecast. Currently, no additional project deferrals or further adjustments to existing projects have been planned.

6. Local Municipal Impact

York Region continues to work closely with local municipalities affected by capital works program to facilitate planned community growth

Priority projects detailed in this report are crucial to providing timely servicing capacity to municipalities. This water and wastewater capacity is necessary to meet growth expectations while maintaining a high level of environmental and public health protection.

Additional servicing capacity for development is created through timely completion of key infrastructure projects

Release of additional capacity, as well as granting of approvals in each phase of the approval process, is contingent on projects being completed as planned. Projects are continually monitored to ensure that risk of delay is minimized and capacity will be available as planned. Staff continues to collaborate with local municipalities affected by the capital works program to ensure impacts to planned community growth are minimized to the extent possible considering capacity constraints created by any delay of these projects. A collaborative approach with local municipalities will continue to assist with reporting on their local capacity allocation in a timely manner to support Regional capacity assignment and ensure fiscal sustainability. Capacity assignment to local municipalities is anticipated by the end of 2016.

Reporting by local municipalities will continue to assist in monitoring system capacity

Senior engineering and planning staff from all local municipalities and from the Region will continue to work together on annual reporting of development applications and allocation of previously assigned servicing capacity. This information provides a clear understanding of available existing capacity and timing for anticipated servicing needs of planned and approved growth. In March 2016, the Region updated the Inflow and Infiltration Reduction Strategy and the Long Term Water Conservation Strategy. Coordinated efforts with local municipalities to implement the two strategies will continue, thereby better managing system risk while continuing to increase available system capacity.

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These efforts are mandated by the province through the Southeast Collector Individual Environmental Assessment conditions of approval.

7. Conclusion

\$2.3 billion Proposed 10 Year Capital Plan includes required projects for current and future capacity assignments

This report provides Council with a status of priority projects within the 10 Year Capital Plan and its relationship to timing of capacity availability. Continuing to monitor these projects will ensure that both capacity allocation and granting of planning approvals are synchronized with project delivery schedules. The 2016 10 Year Capital Plan includes critical projects required to provide capacity to service future growth.

The Region will continue to monitor development charge collections. Also, where appropriate, the Region will continue to look for other funding sources.

For more information on this report, please contact Mike Rabeau, Director, Capital Planning and Delivery, Environmental Services at ext. 75157.

The Senior Management Group has reviewed this report.

April 21, 2016

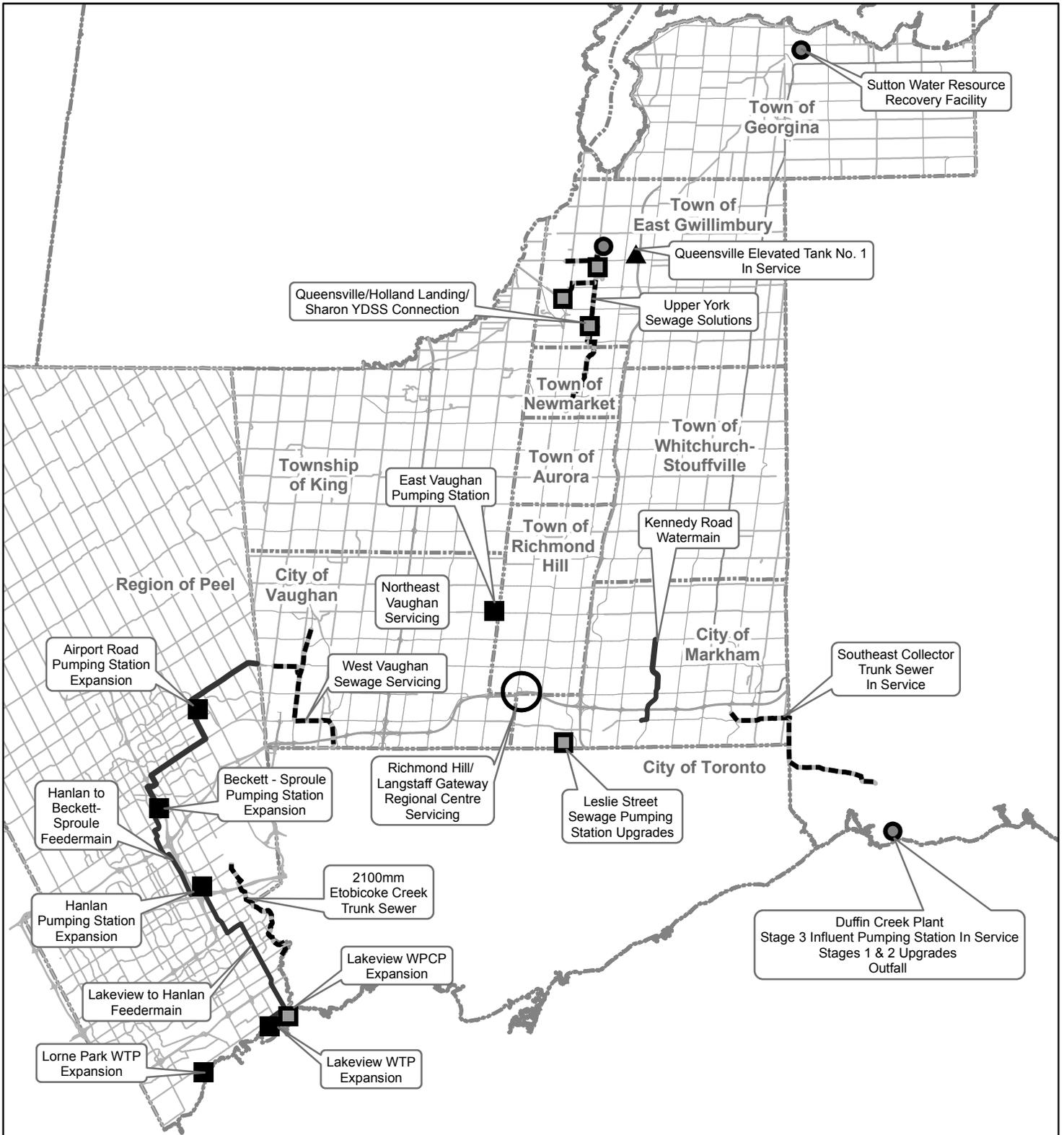
Attachments (2)

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Accessible formats or communication supports are available upon request

Status of Key Infrastructure Projects

| Project Name | Description | Current Status | Expected Project Commissioning Date |
|---|--|--------------------------------|-------------------------------------|
| Queensville/Holland Landing/Sharon Servicing | Queensville Elevated Tank No. 1 | In Service | |
| | New pumping stations and linear works | Ready for Service | |
| Southeast Collector Trunk Sewer | Twinning of existing trunk sewer to provide additional conveyance capacity | In Service | |
| Duffin Creek Plant Stage 3 Influent Pumping Station | New pumping station to convey sewage to Stage 3 Liquid Process Expansion | In Service | |
| Duffin Creek Plant Stages 1 & 2 Upgrades | Upgrade and refurbish existing Stages 1 & 2 | Construction | Q4 2017 (last reported: Q4 2017) |
| Duffin Creek Plant Outfall | EA to address diffusion requirements and increase outfall capacity to 630MLD | Class Environmental Assessment | Q1 2017 (last reported: 2015) |
| Leslie Street Sewage Pumping Station Upgrades | Upgrades electrical and standby power improvements, and four refurbished pumps | Construction | Q2 2017 (last reported: Q4 2016) |
| | Two new pumps | In Service | |
| Upper York Sewage Solutions | Sanitary servicing solution to accommodate growth in Holland Landing, Queensville, Sharon, and parts of Aurora and Newmarket | Detailed Design | 2024 (last reported: 2024) |
| Kennedy Road Watermain | Watermain along Kennedy Road from Milliken Pumping Station to Major Mackenzie Drive | Ready for Service | |
| East Vaughan Pumping Station | New pumping station to pump water from Pressure District (PD) 6 to PD7 and PD8 | Construction | Q3 2016 (last reported: Q1 2016) |
| West Vaughan Sewage Servicing | Sanitary servicing solution to accommodate growth in West Vaughan area | Detailed Design | 2028 (last reported: 2028) |
| Northeast Vaughan Servicing | Water and wastewater servicing solution to accommodate growth in East Vaughan | Class Environmental Assessment | 2028 (last reported: 2028) |
| Richmond Hill/Langstaff Gateway Regional Centre | Water and wastewater servicing solution to accommodate growth | Detailed Design | 2025 (last reported: 2025) |
| Sutton Water Resource Recovery Expansion | Expansion of existing facility to accommodate growth in Sutton | Class Environmental Assessment | 2033 (last reported: 2033) |

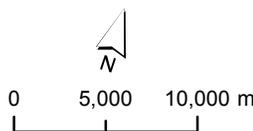


LOCATION PLAN
Key Infrastructure Projects

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 May 5, 2016

Produced by: The Regional Municipality of York
 Infrastructure Asset Management Branch, Environmental Services Department April, 2016

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Legend

-  Priority Water Projects
-  Priority Wastewater Projects
-  Priority Wastewater Projects
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