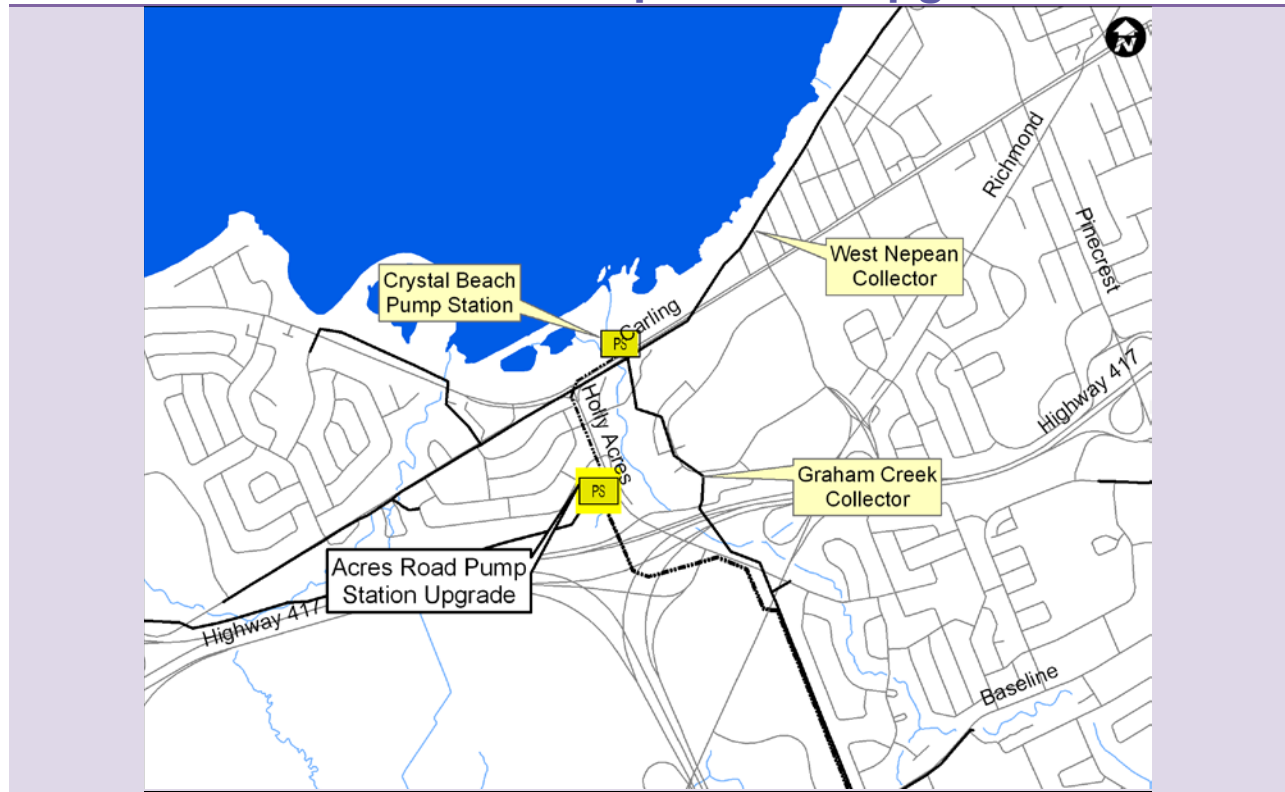


Wastewater Projects

Acres Road Pump Station Upgrade



Scope and Justification

Upgrades to the Acres Road Pump Station to accommodate flows from the West Urban Community development area including Kanata North and Stittsville South Urban Boundary Expansion Area (OPA 76).

Timing

2019 – 2024; Upgrade the pump station
(Rate of development and flow monitoring will determine the exact timing).

Action Item Funding

Construction Cost Estimate = \$2.2 M

Capital Cost Estimate* = \$3.9 M (100% Development Charges, 0% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.
Funding split subject to review as part of 2014 Development Charges By-Law.*

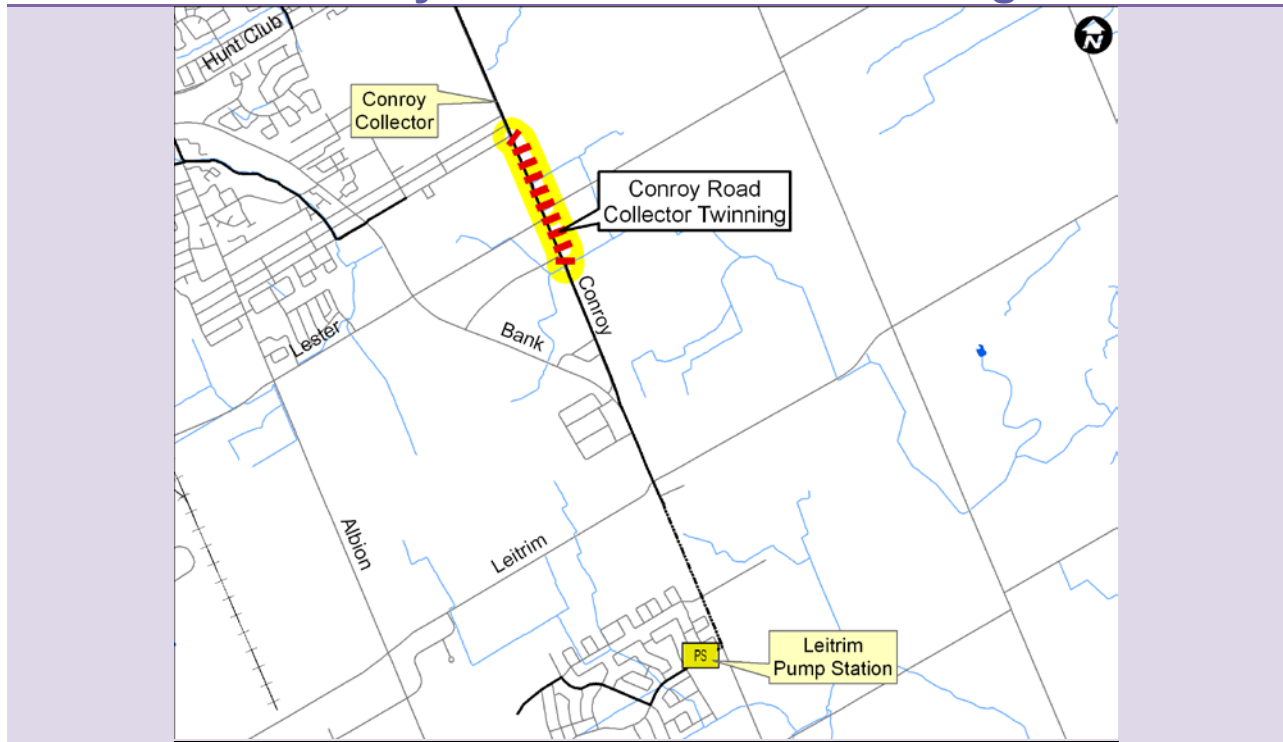
EA Requirements and Consultation

This is Schedule A + (pre-approved) Class EA project. Public will be notified prior to construction.

Follow Up Actions

Monitor flows to the station and rate of development in contributing areas.

Conroy Road Collector Twinning



Scope and Justification

Addition of 1000 meters of Conroy Road Collector pipe twinning to provide capacity for flows from Leitrim Urban Boundary Expansion Area (OPA 76).

Timing

2025 - 2031 Construct the second pipe.
(Rate of development and flow monitoring will determine the exact timing).

Action Item Funding

Construction Cost Estimate = \$1.1 M

Capital Cost Estimate* = \$1.9 M (100% Development Charges, 0% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.*

Funding split subject to review as part of 2014 Development Charges By-Law.

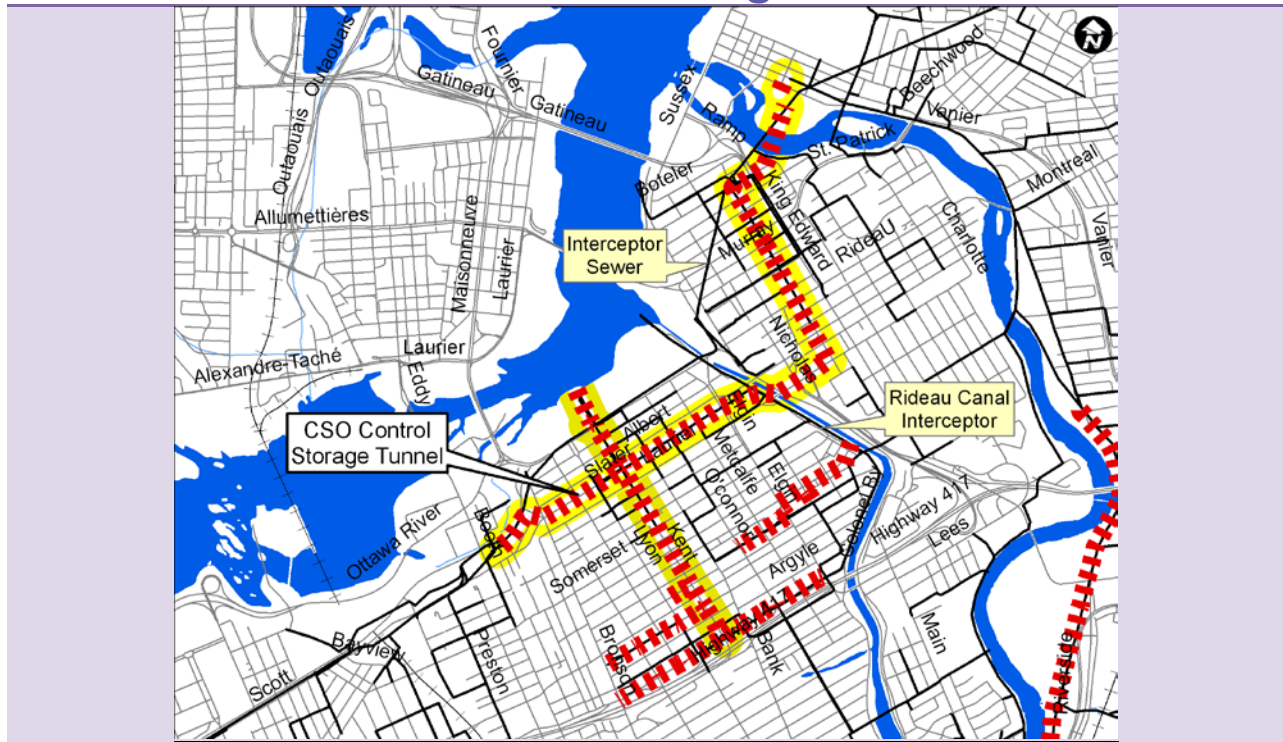
EA Requirements and Consultation

This is Schedule A + (pre-approved) Class EA project. Public will be notified prior to construction.

Follow Up Actions

Monitor flows and rate of development in contributing areas.

CSO Control Storage Tunnel



Scope and Justification

A City, Federal and Provincial one-third funding partnership has contributed to the creation of an Ottawa River Fund focused on the monitoring, volume control and quality of various discharges to the Ottawa River. One of the main components to achieve these objectives is the construction of the Combined Sewage Overflow (CSO) Control Storage Tunnel to reduce combined sewage overflows to the Ottawa River.

Timing

2013 - 2018: Design and construct the storage tunnel.

Action Item Funding

Construction Cost Estimate = \$110.0 M

Capital Cost Estimate* = \$175.M (10% Development Charges, 90% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.*

Funding split subject to review as part of 2014 Development Charges By-Law.

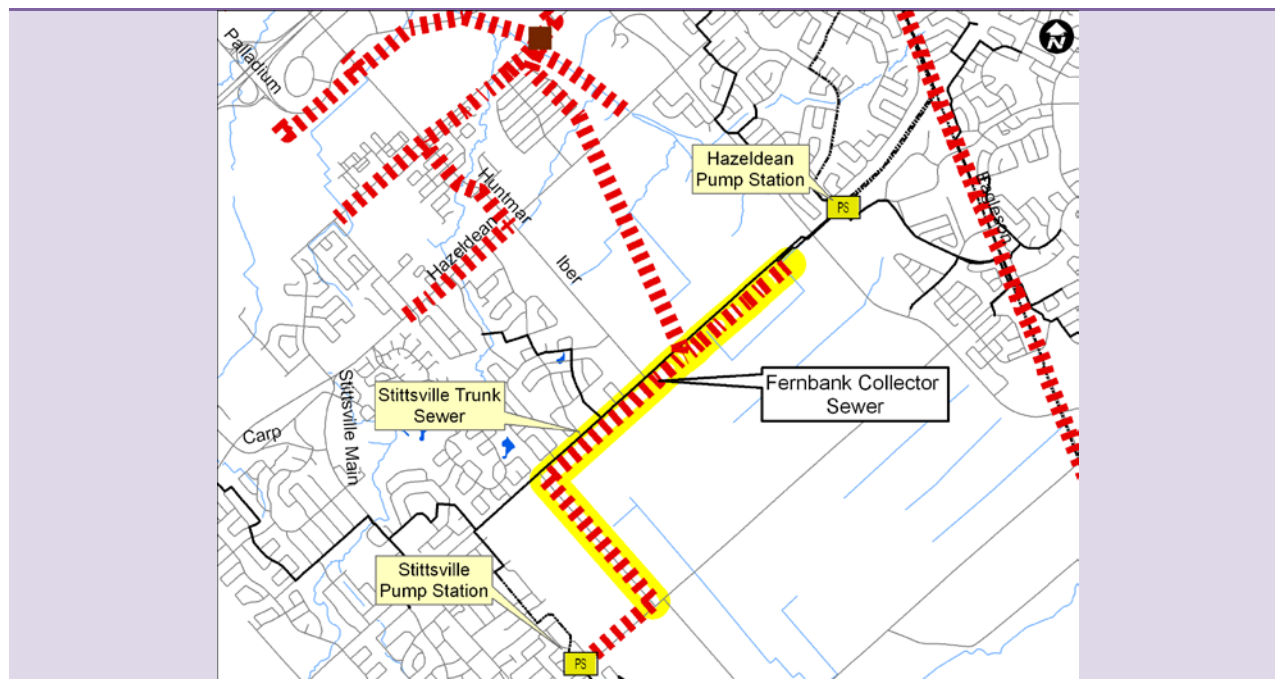
EA Requirements and Consultation

Schedule C Class EA has been completed and the project is approved.

Follow Up Actions

Coordinate with O'Connor flood control works.

Fernbank Collector Sewer



Scope and Justification

To service the proposed Fernbank Lands development, construct a new 3800 meters long collector sanitary sewer parallel to the existing Stittsville trunk and then turning south and terminating at Fernbank Road. The first 2400 meters of the Fernbank collector is a part of the existing front-ending agreement between the City and Fernbank Landowners Group for the total capital cost of \$ 2.5 M. The \$1.5 M has been already committed for repayment. The \$ 1.0 M is scheduled for repayment in 2015 and 2017 budget spending forecast. The remaining 1400 meters of the Fernbank collector is estimated to cost \$ 1.5 M and will be included in the 2019 budget forecast.

Timing

2013 - 2019: Design and construct the sewer (rate of development will determine the exact timing).

Action Item Funding

Construction Cost Estimate = \$1.6 M

Capital Cost Estimate* = \$2.5 M (100% Development Charges, 0% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.
Funding split subject to review as part of 2014 Development Charges By-Law.*

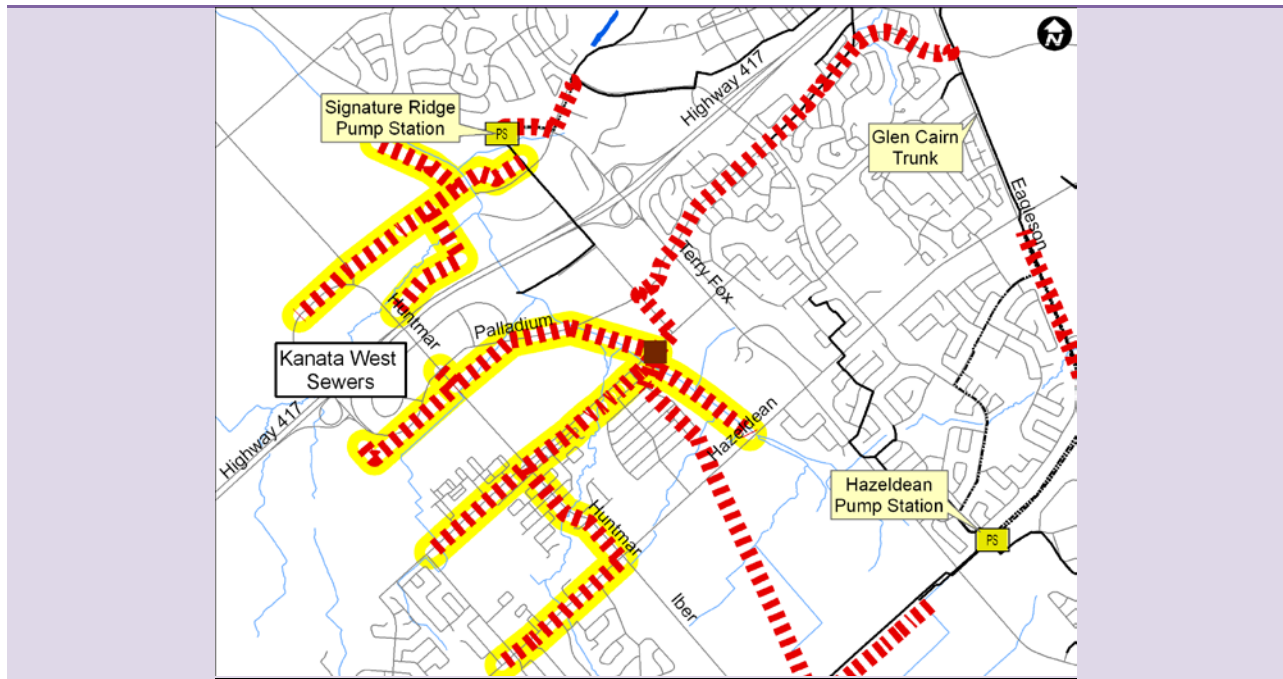
EA Requirements and Consultation

Schedule B Class EA has been completed and the project is approved (Fernbank Development Master Servicing Study).

Follow Up Actions

Coordinate design and construction with local subdivisions development.

Kanata West Sewers



Scope and Justification

To service new development in Kanata West area, construct new collector sewers to provide outlet for new subdivisions. These collectors were identified in the Kanata West Master Servicing Study (Stantec 2006). The construction of collector sanitary sewers servicing the Kanata West development area will, for the most part, occur as part of the construction of local subdivisions. This budget item accounts for the cost of over-sizing local sewers which will be recovered by local developers.

Timing

2013 - 2024: Construction of collector sewers.
(Rate of development will determine the exact timing).

Action Item Funding

Construction Cost Estimate = \$7.1 M

Capital Cost Estimate* = \$11.3 M (100% Development Charges, 0% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.*

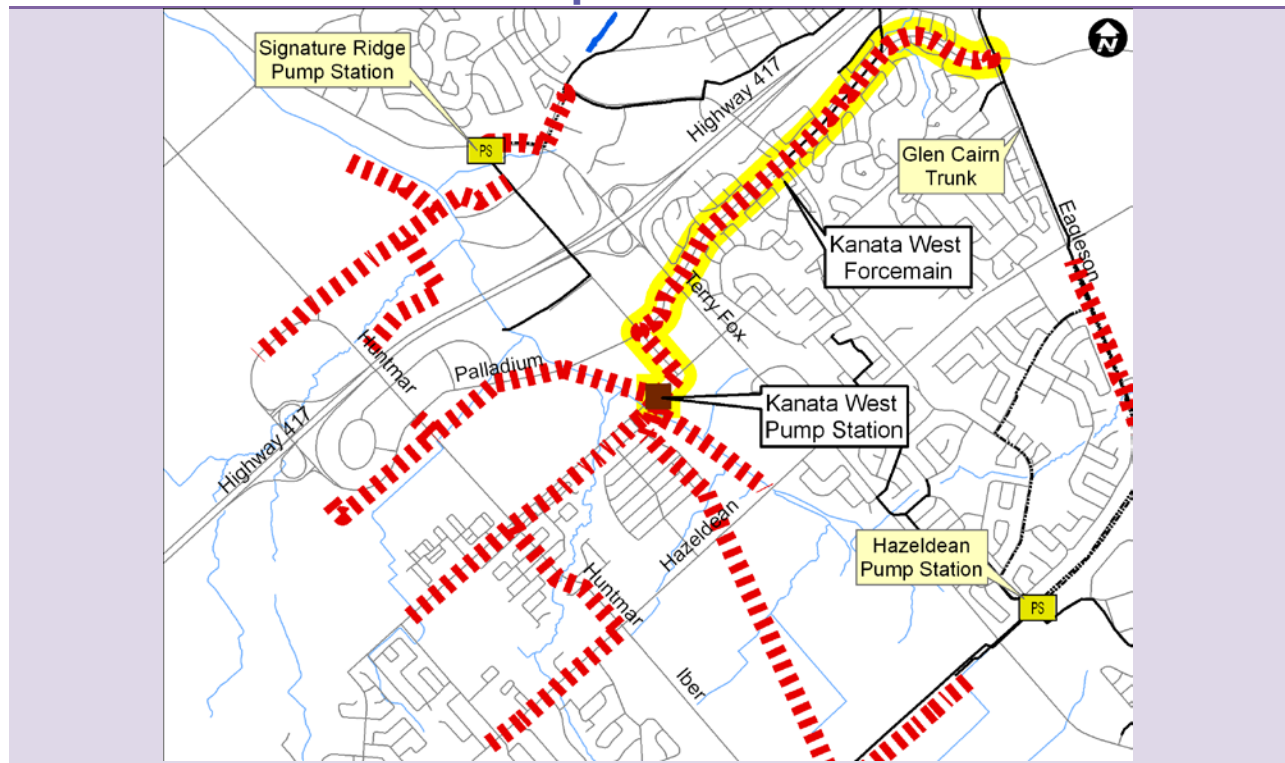
EA Requirements and Consultation

Schedule B Class EA has been completed and the project is approved.

Follow Up Actions

Coordinate design and construction with local subdivision development.

Kanata West Pump Station and Forcemain



Scope and Justification

Construct the Kanata West Pump Station and associated forcemains. These wastewater system components were identified in the Kanata West Master Servicing Study to service growth in the Kanata West area south of Highway 417, and to intercept drainage in existing development areas in the Stittsville area north of Hazeldean Road, currently serviced by the Hazeldean Pump Station. The KWPS and forcemains are currently being designed with tender and construction to follow.

Timing

2013 - 2018 Detailed design, tender and construction of PS and forcemain system.

Action Item Funding

Construction Cost Estimate = \$27.0 M

Total Capital Cost Estimate* = \$37.0 M (100% Development Charges, 0% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.*

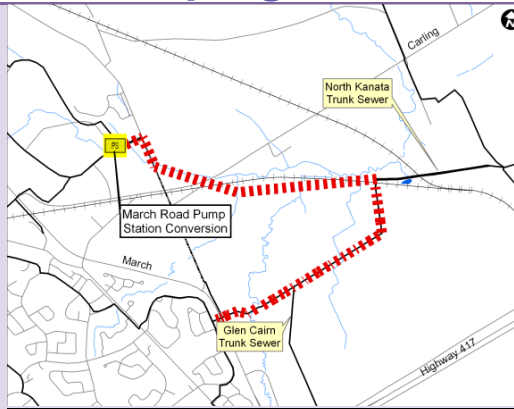
EA Requirements and Consultation

Schedule B Class EA has been completed and the project is approved.

Follow Up Actions

Tender and construction to be initiated for 2014

March Road Pumping Station Conversion



Scope and Justification

The March Pump Station was built in 1972. Currently the firm capacity of the station with one pump being out of services is rated at 490 L/s. The station pumps wastewater to the 600 mm dia. 1300 m long forcemain discharging to the March Road Trunk Sewer. A Class EA was completed in 2001 for the North Kanata Sanitary Sewage Infrastructure Upgrade Study. It recommended building the Kanata North Gravity Collector Sewer including gravity connection of the March Collector Sewer bypassing the March PS and conversion of the March PS to a low lift station.

The existing March PS can be retrofit to a low lift station or a new wet well can be added and existing structure to be used to house a valve chamber, stand-by power, controls, etc... or alternatively new PS can be built and existing structure be decommissioned and removed. Since the constructing new PS is an alternative option there is a requirement to conduct the Schedule B of the Class Environmental Assessment (EA) planning process. The Class EA for the station is currently under way.

Timing

2013 - 2018: Complete EA, detailed design and build the station.

Action Item Funding

Construction Cost Estimate = \$3.4 M

Capital Cost Estimate* = \$6.0 M (100% Development Charges, 0% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.*

Funding split subject to review as part of 2014 Development Charges By-Law.

EA Requirements and Consultation

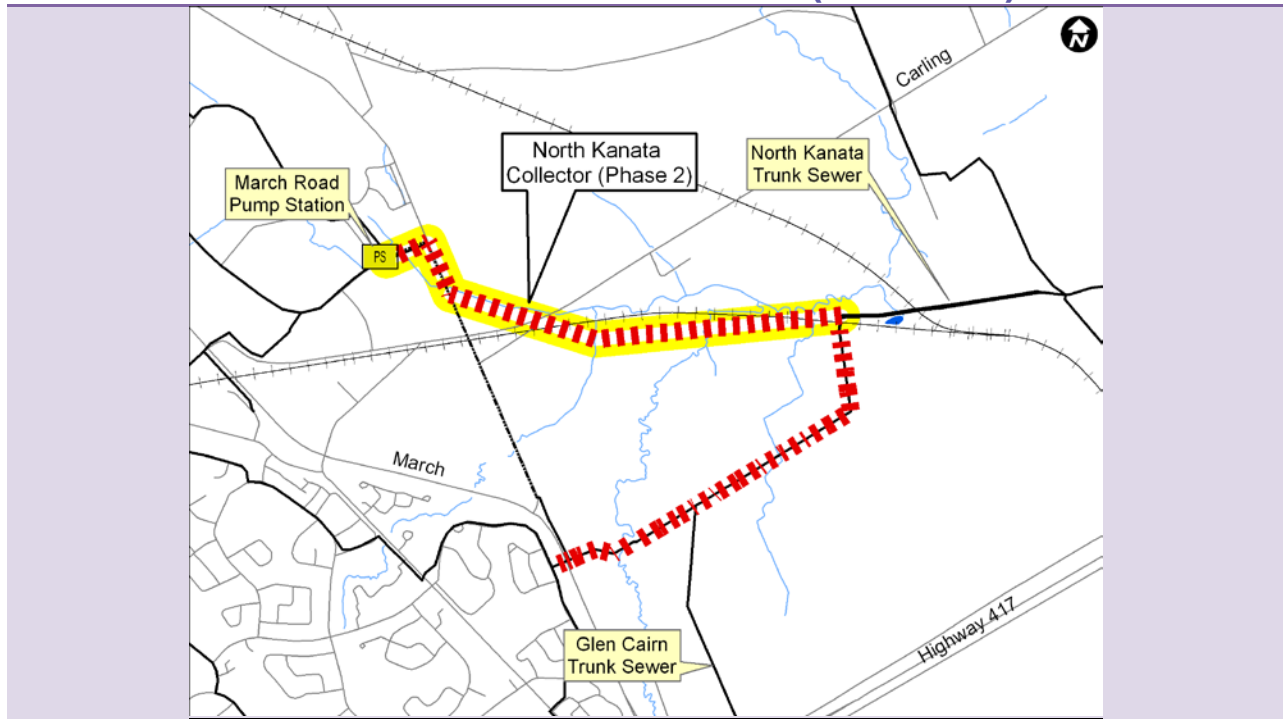
Class EA Schedule B project study is currently underway.

The EA recommendations will be presented to City Council for approval. Once approved by Council the 'Notice of Study Completion' will be posted for the 30 day review period.

Follow Up Actions

Coordinate with Kanata North Collector Sewer Phase 2 project.

North Kanata Collector (Phase 2)



Scope and Justification

Construct the North Kanata Phase 2 Sewer to provide capacity for the North Kanata growth area. This project was identified in the 1997 Wastewater Master Plan to provide infrastructure to convey the projected flows for the planning period. Follow up studies such as the Environmental Assessment (EA), Functional Design and Preliminary Design of sewers in the study area refined and confirmed the infrastructure, phasing, schedule and costing. The Phase 2 sewer will be 1200 mm dia. pipe and approximately 2100 m long.

Timing

2013-2018: Complete detailed design and construct the sewer.

Action Item Funding

Construction Cost Estimate = \$5.5 M

Capital Cost Estimate* = \$8.7 M (90% Development Charges, 10% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.*

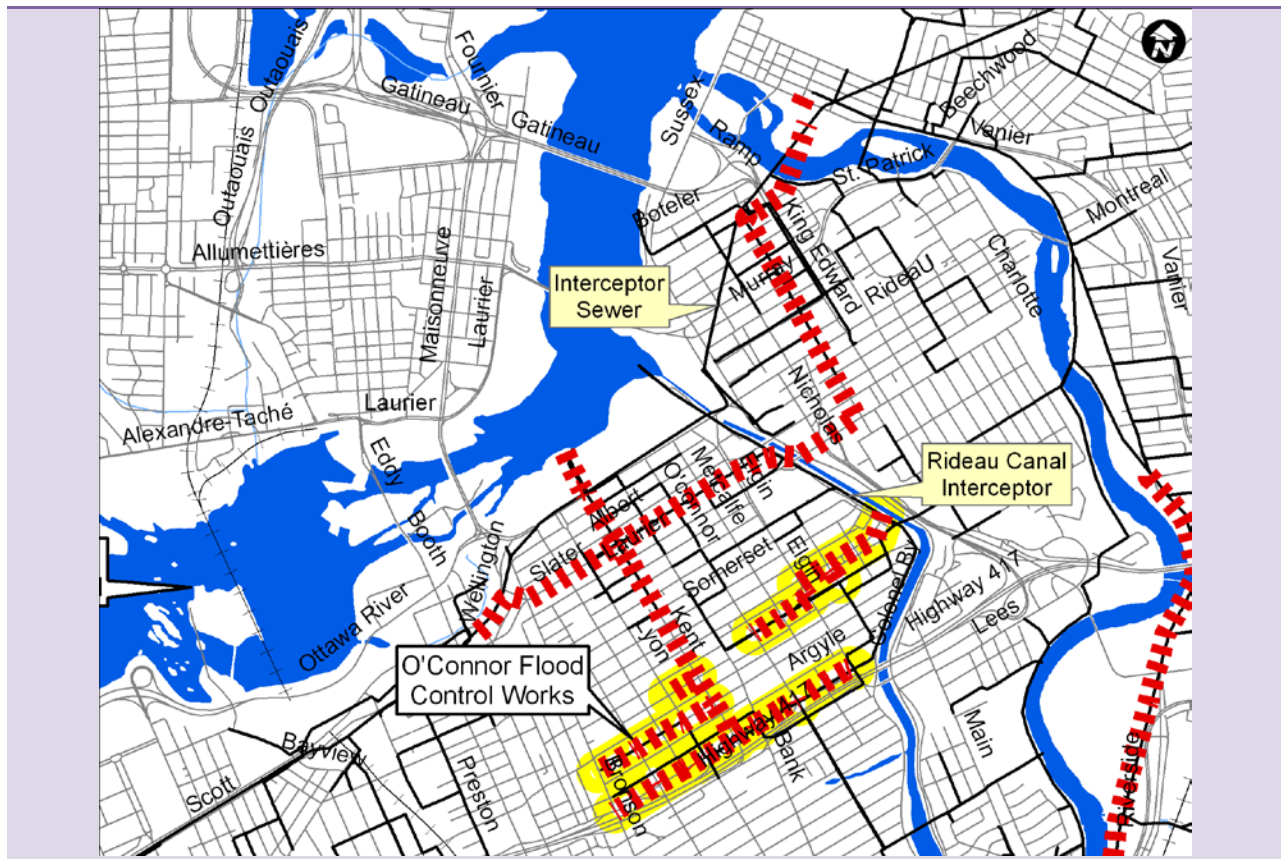
EA Requirements and Consultation

Schedule B Class EA has been completed and the project is approved.

Follow Up Actions

Tender and Construction

O'Connor Flood Control Works



Scope and Justification

Construct various flood control works in the O'Connor drainage area to provide flood relieve.

Timing

2013 - 2031: Complete detailed design and construct the works.

Action Item Funding

Construction Cost Estimate = \$36.0 M

Capital Cost Estimate* = \$58.0 M (10% Development Charges, 90% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.*

Funding split subject to review as part of 2014 Development Charges By-Law.

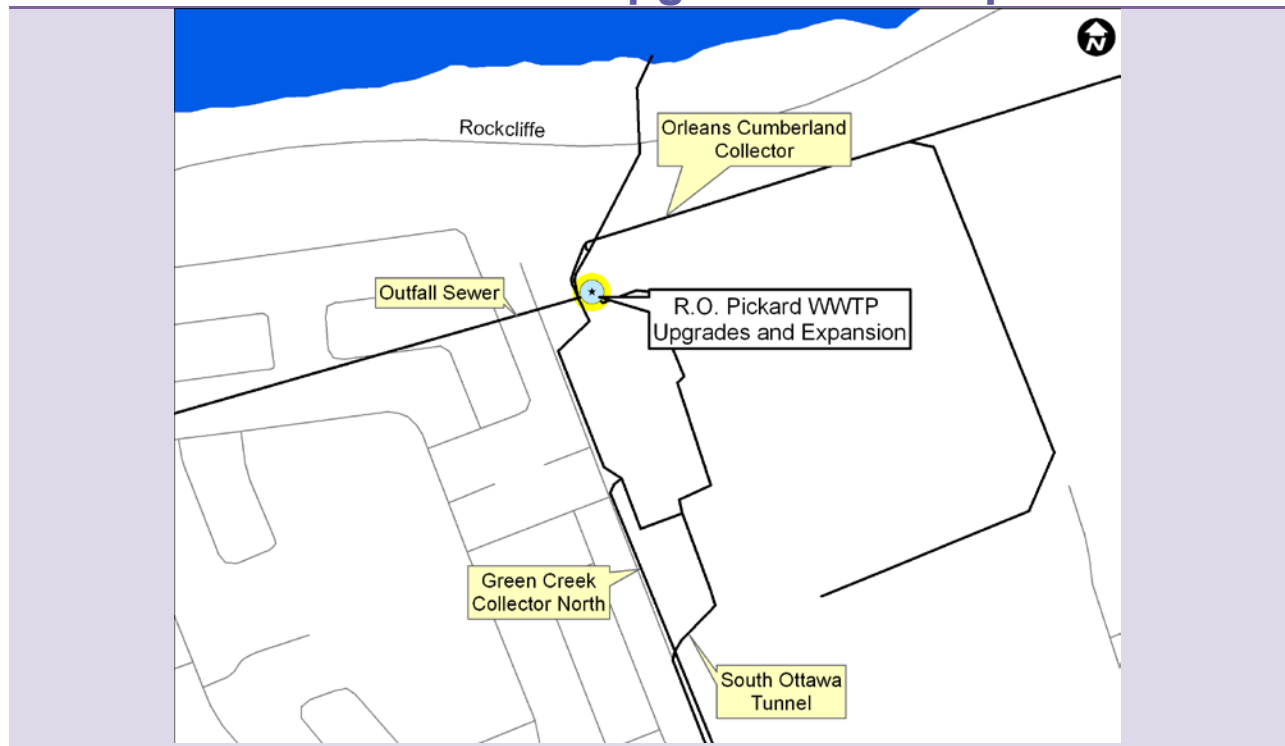
EA Requirements and Consultation

Schedule B Class EA has been completed and the project is approved.

Follow Up Actions

Coordinate with the CSO Control Storage Tunnel project.

R.O. Pickard WWTP Upgrades and Expansion



Scope and Justification

A number of projects related to the upgrade and expansion of the R.O. Pickard Wastewater Environmental Centre are proposed to be completed between 2013 and 2031. These projects are necessary for the plant maintenance, operation and capacity increase to accommodate additional flows from the anticipated population growth.

Timing

2013- 2031: Complete detailed design and construct the works.

Action Item Funding

Construction Cost Estimate = \$380.0 M

Capital Cost Estimate* = \$669.0 M (35% Development Charges, 65% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.*

Funding split subject to review as part of 2014 Development Charges By-Law.

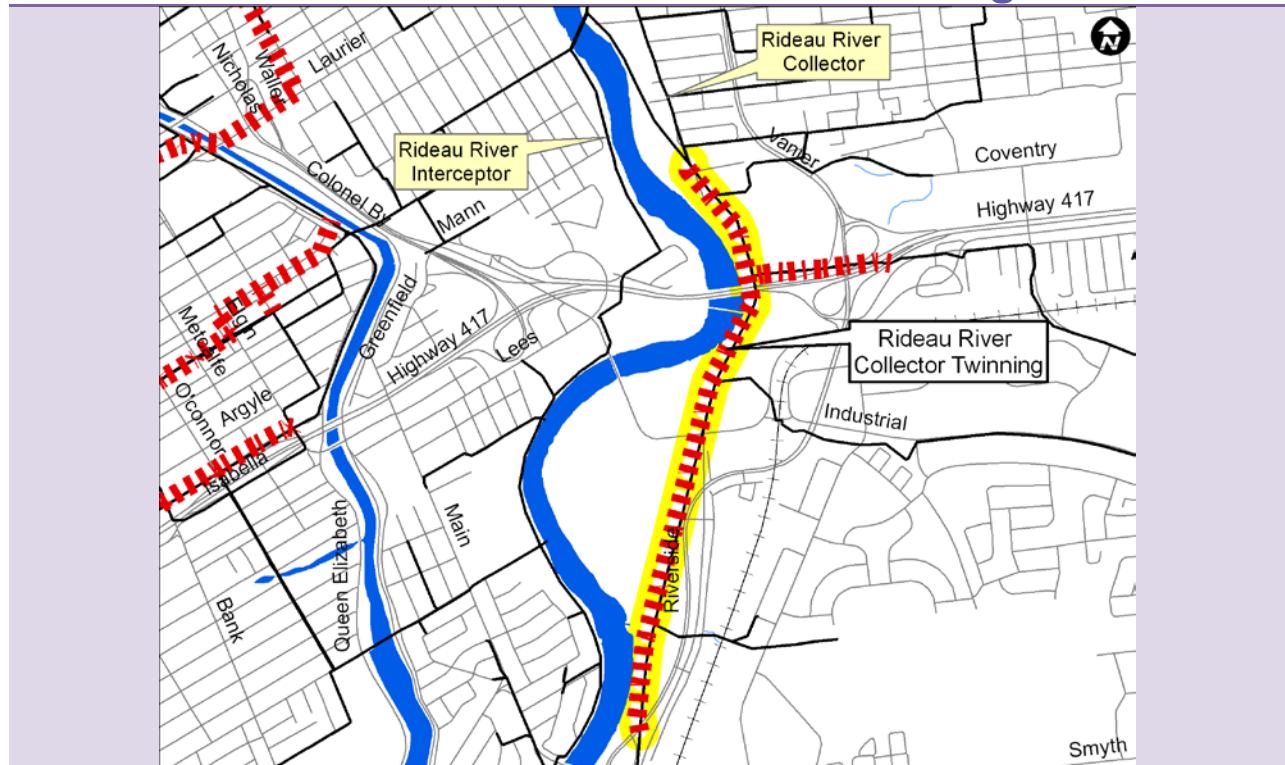
EA Requirements and Consultation

Expansion of the plant beyond existing rated capacity will be subject to a Schedule C Class EA study.

Follow Up Actions

Monitor flows to the plant and rate of development.

Rideau River Collector Twinning



Scope and Justification

The 2013 IMP Wastewater Study identified the need for twinning approximately 2,350 meters of Rideau River Collector pipe in the vicinity of the Billings Bridge area to accommodate additional flows from projected development intensification.

Timing

2025 - 2031: Detailed design and construction of the second pipe.
(Rate of development and flow monitoring will determine the exact timing).

Action Item Funding

Construction Cost Estimate = \$5.0 M

Capital Cost Estimate* = \$8.9 M (100% Development Charges, 0% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.*

Funding split subject to review as part of 2014 Development Charges By-Law.

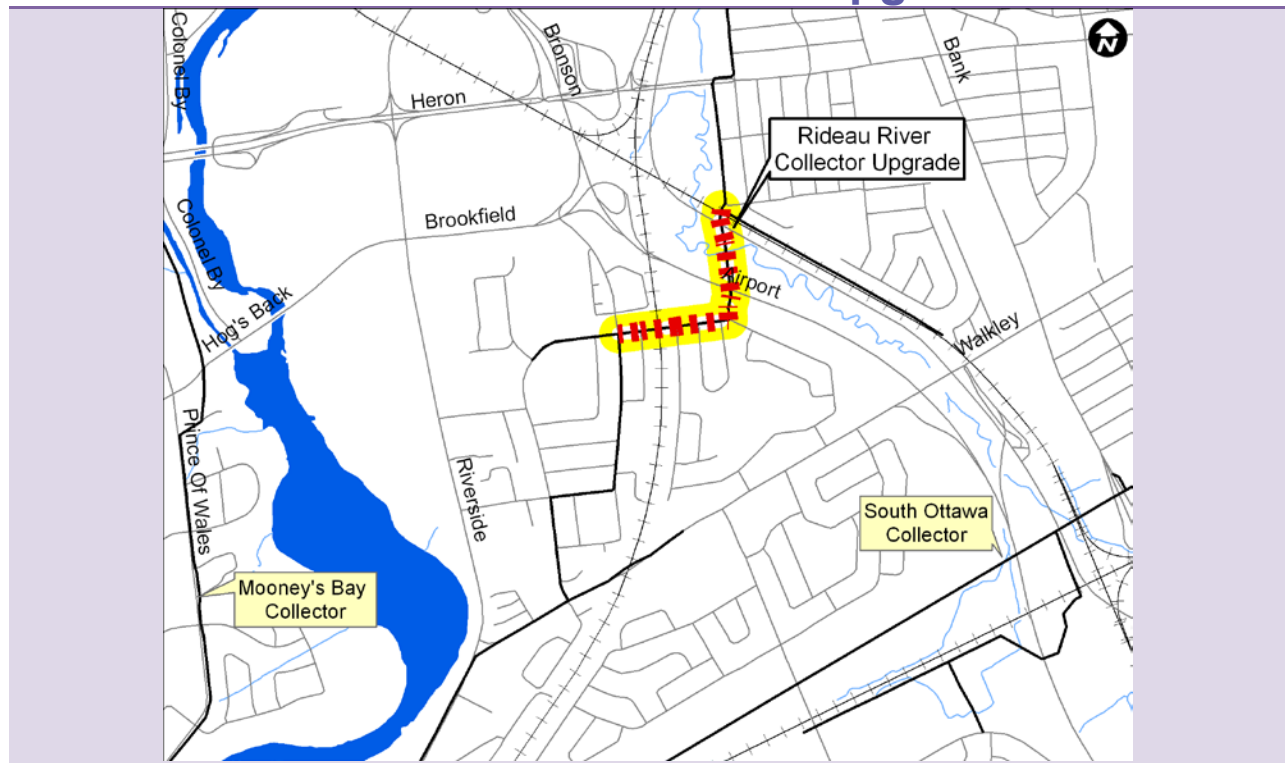
EA Requirements and Consultation

This is Schedule A + (pre-approved) Class EA project. Public will be notified prior to construction.

Follow Up Actions

Monitor rate of intensification in contributing areas and flows to the sewer.

Rideau River Collector Upgrade



Scope and Justification

The 2014 IMP Wastewater Study identified the need for approximately 500 meters of Rideau River Collector pipe upgrade in the vicinity of the Riverside Park to accommodate flows from projected development intensification.

Timing

2025 - 2031: Detailed design and construction of second pipe.(rate of development and flow monitoring will determine the exact timing).

Action Item Funding

Construction Cost Estimate = \$1.0 M

Capital Cost Estimate* = \$1.8 M (100% Development Charges, 0% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.*

Funding split subject to review as part of 2014 Development Charges By-Law.

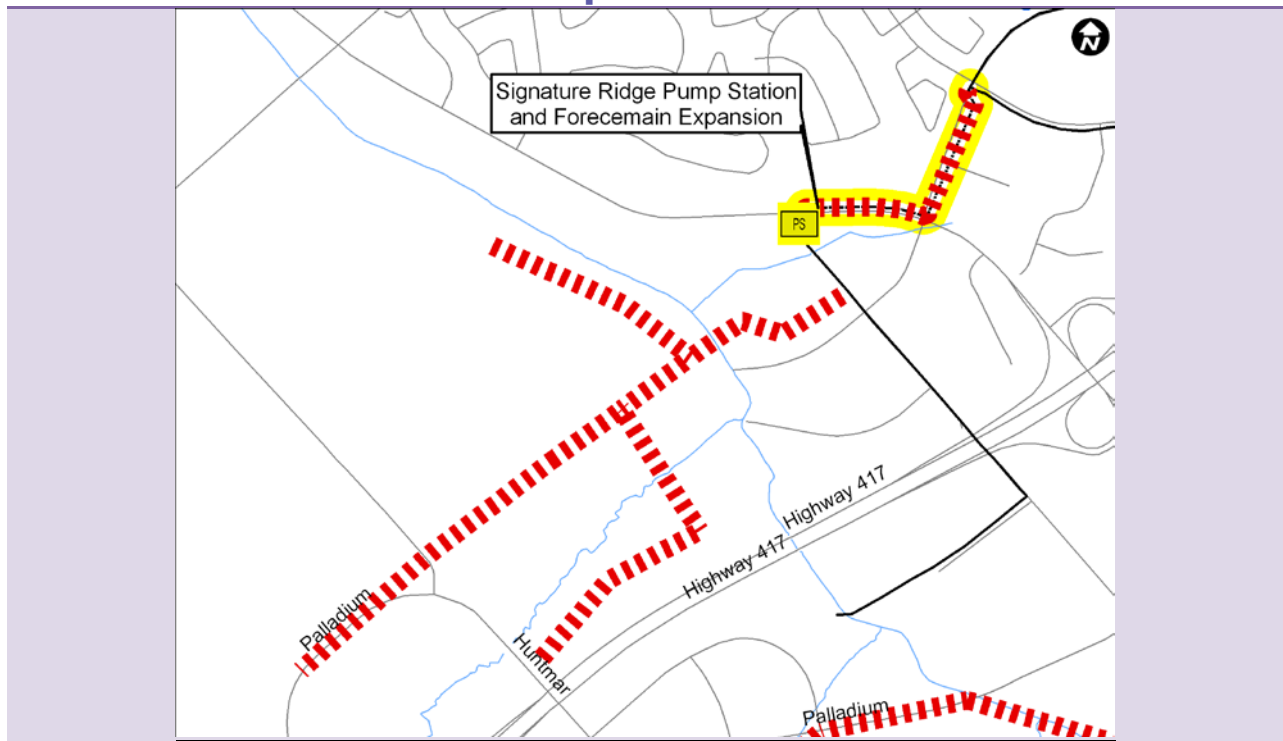
EA Requirements and Consultation

This is Schedule A + (pre-approved) Class EA project. Public will be notified prior to construction.

Follow Up Actions

Monitor rate of intensification in contributing areas and flows to the sewer.

Signature Ridge Pump Station and Foremain Expansion



Scope and Justification

To provide for the predicted flows from the expanded development area, the existing station requires expansion beyond its current rated capacity including upgrades to the wet well, control building, an addition of a second forcemain and replacement of section of Penfield gravity sewer. It is expected that this project will be required by 2023 but the rate of growth of the Kanata West developments will determine the final project timing.

Timing

2019- 2024: Detailed design and construct second forcemain
(Rate of development and flow monitoring will determine the exact timing).

Action Item Funding

Construction Cost Estimate = \$2.8 M

Capital Cost Estimate* = \$4.5 M (100% Development Charges, 0% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.*

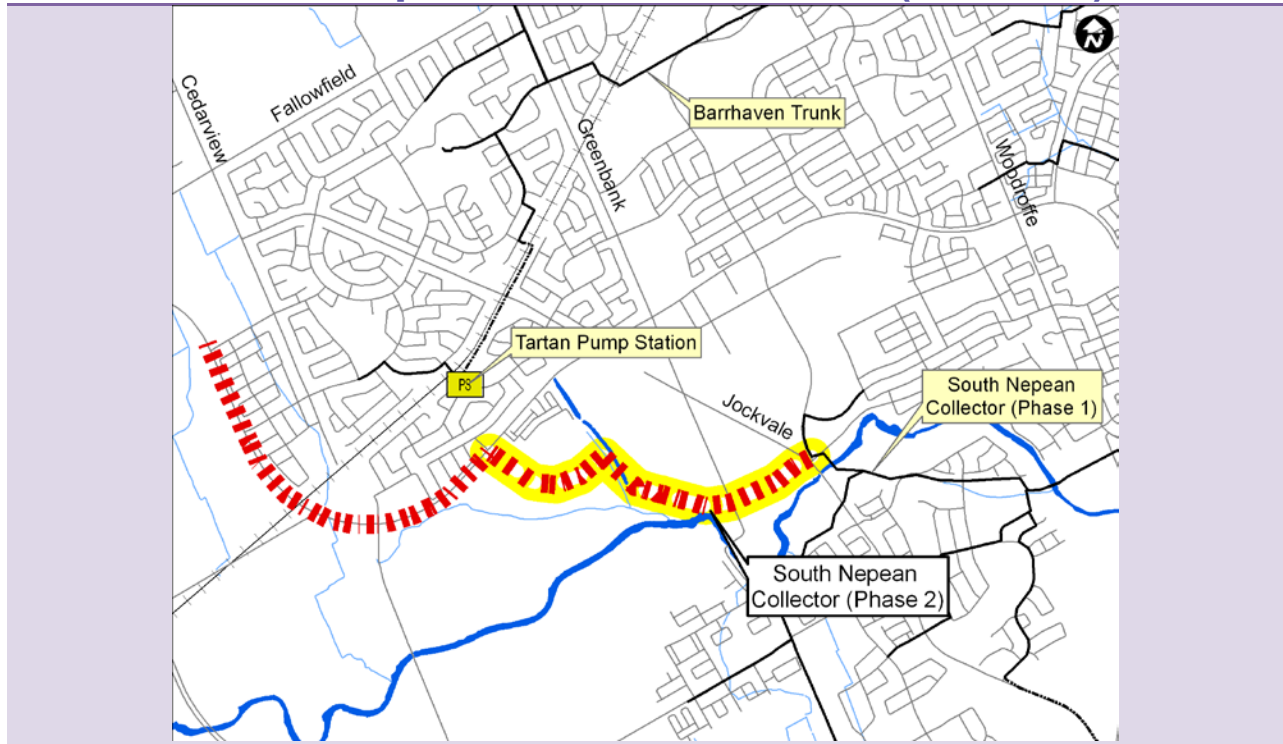
EA Requirements and Consultation

This is Schedule A + (pre-approved) Class EA project since it will be constructed in existing ROW. Public will be notified prior to construction.

Follow Up Actions

Monitor sewage flows at the station to determine exact timing of the project.

South Nepean Collector Sewer (Phase 2)



Scope and Justification

Phase 1 of the South Nepean Collector (SNC) was constructed in 2010 and ends at the Jockvale Road just north of the Jock River. The Phase 2 of SNC which is required to service growth in the South Nepean community starts from the top end of the Phase 1 and extends north and west to Strandherd Drive. The Phase 2 is 1050 mm dia. pipe and is approximately 1450 m long.

Timing

2013 – 2018: Detailed design and construct the sewer

Action Item Funding

Construction Cost Estimate = \$3.0 M

Capital Cost Estimate* = \$4.8 M (100% Development Charges, 0% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.*

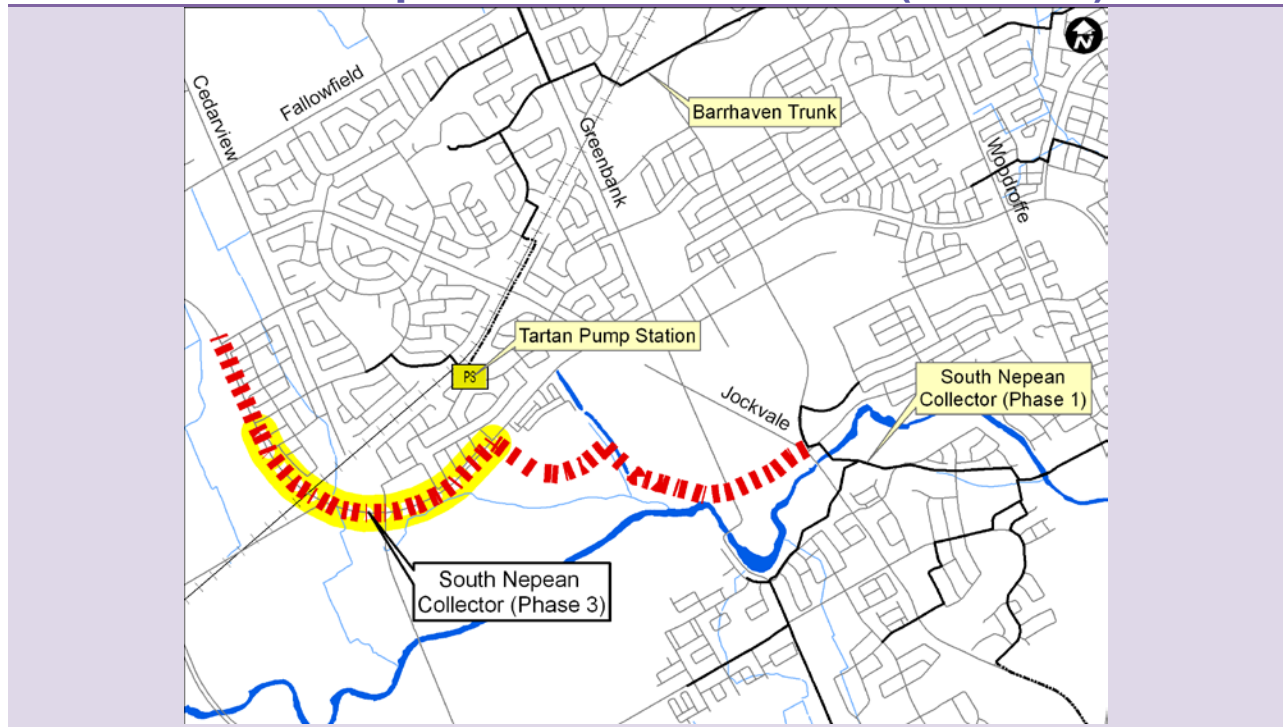
EA Requirements and Consultation

Schedule B Class EA has been completed and the project is approved.

Follow Up Actions

Coordinate alignment with plans for the local subdivisions and community design plans.

South Nepean Collector Sewer (Phase 3)



Scope and Justification

Phase 1 of the South Nepean Collector (SNC) was constructed in 2010 and ends at the Jockvale Road just north of the Jock River. The Phase 2 of SNC is scheduled for construction in 2016. The Phase 3 of SNC which is required to service growth in the west part of South Nepean community will start at the end of Phase 2 and continue west and north along Strandherd Drive. The Phase 3 will be constructed with 900, 825 and 750 mm dia. pipe sections and will be approximately 2650 m long.

Timing

2019 – 2024: Detailed design and construct the sewer as a part of the Strandherd Drive expansion.

Action Item Funding

Construction Cost Estimate = \$4.8 M

Capital Cost Estimate* = \$7.7 M (100% Development Charges, 0% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.*

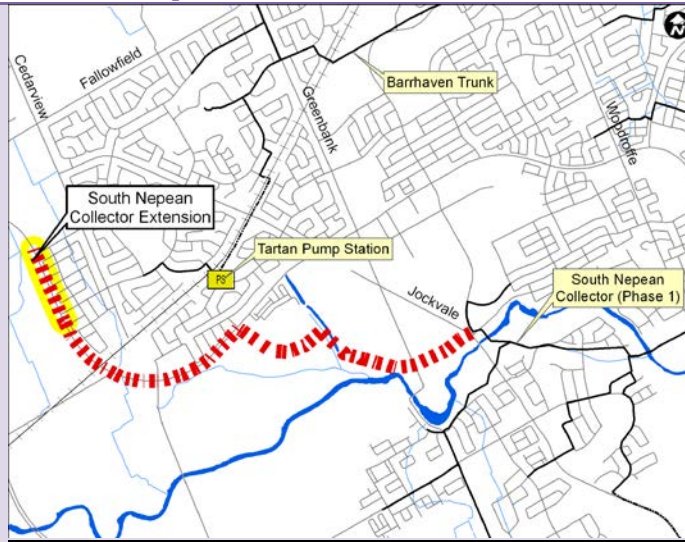
EA Requirements and Consultation

Schedule B Class EA has been completed and the project is approved.

Follow Up Actions

Coordinate detailed design and construction with the Strandherd Drive expansion project.

South Nepean Collector Extension



Scope and Justification

The design and construction of the South Nepean Collector (SNC) is required to service growth in the South Nepean community. The Functional Design of the SNC, updated in 2012, identified the need to extend the SNC an additional 500m between Kennevale Drive and Merivista Drive.

The design and construction of the SNC Extension will be completed in conjunction the development of the adjacent Highway 416 lands that is expected to be initiated in 2014. This initial phase of construction of the SNC could outlet to a temporary pump station that would outlet to the Tartan PS because of timing issues with the completion of Phases 2 and 3 of the SNC.

Timing

2013- 2018 Detailed design and construct the sewer.

Action Item Funding

Construction Cost Estimate = \$0.6 M (growth)

Capital Cost Estimate* = \$1.0 M (100% Development Charges, 0% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.*

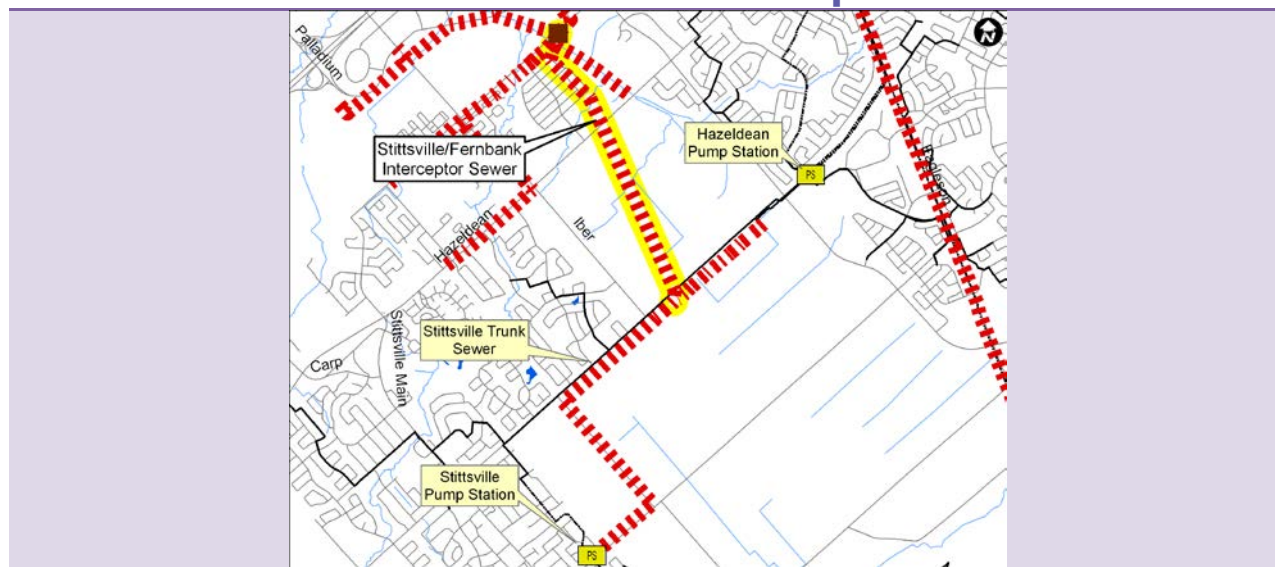
EA Requirements and Consultation

It is Schedule A + (pre-approved) Class EA project. Public will be notified before construction.

Follow Up Actions

Coordinate the project with development of the adjacent Highway 416 lands.

Stittsville/Fernbank Interceptor Sewer



Scope and Justification

The Stittsville/Fernbank Interceptor Sewer was recommended in the West Urban Community Wastewater Master Plan Update completed in 2012. The Interceptor Sewer will function as a relief sewer, balancing flows between the existing Hazeldean Pump Station and planned Kanata West Pump Station and will eliminate need for the Hazeldean Pump Station expansion to accommodate new growth. The timing of construction of the interceptor sewer is tied to growth in the Fernbank and Kanata West communities, but is generally expected to be required by 2017. The interceptor sewer will be constructed with 750, 900 and 975 mm dia. pipe sections and will be approximately 3040 m long. Proposed interceptor alignment may provide opportunities for combining with other proposed trunk wastewater sewers.

Timing

2013 - 2018: Design and construct the sewer.

Action Item Funding

Construction Cost Estimate = \$4.1 M

Total Capital Cost Estimate* = \$7.4 M (90% Development Charges, 10% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.
Funding split subject to review as part of 2014 Development Charges By-Law.*

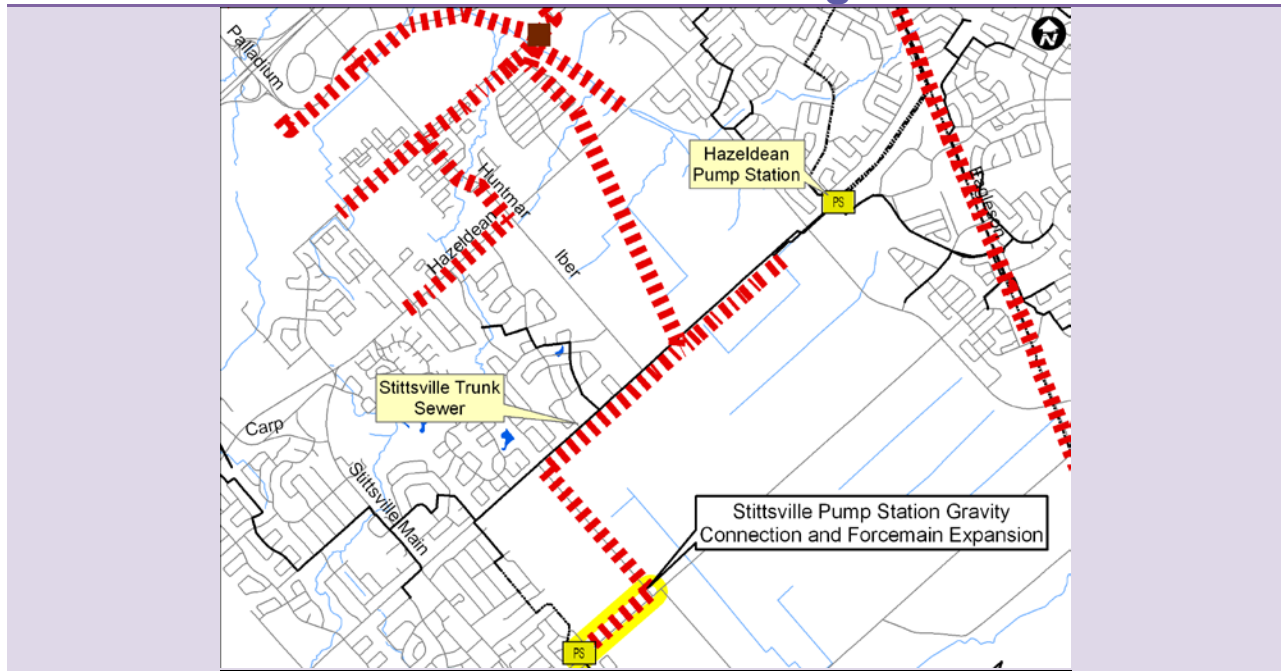
EA Requirements and Consultation

It is a Schedule A + (pre-approved) Class EA project. Public will be notified before construction.

Follow Up Actions

Coordinate design and construction with local subdivisions development plans.

Stittsville Pump Station Gravity Connection and Decommissioning



Scope and Justification

After construction of the west portion of Fernbank Trunk Sewer it is expected that gravity connection can be made from the existing Stittsville Pump Station and the Pump Station and forcemain can be decommissioned. The existing station would need to be expanded to accommodate new south Stittsville development so gravity connection seems to be preferred option (subject to EA completion).

Timing

2013-2018: Complete detailed design and construct new sewers and decommission the station.

Action Item Funding

Construction Cost Estimate = 0.8 M

Capital Cost Estimate* = 1.5 M (90% Development Charges, 10% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.
Funding split subject to review as part of 2014 Development Charges By-Law.*

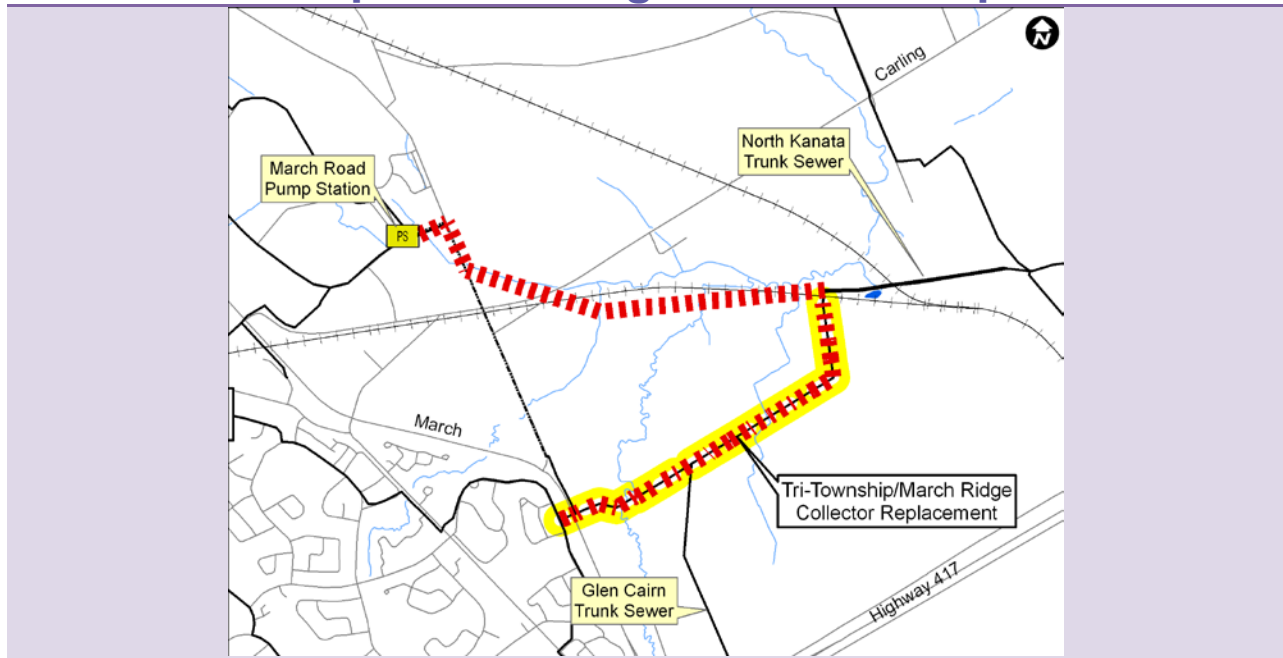
EA Requirements and Consultation

Schedule B Class EA study is currently underway (Stittsville South Master Servicing Study).

Follow Up Actions

Monitor flows to the station and rate of development.

Tri-Township/March Ridge Collector Replacement



Scope and Justification

With the Kanata West and Fernbank lands development there is a need to replace Tri-Township and March Ridge collectors since the existing sewers will be too small to accommodate the future wastewater flows. In addition these sewers are in poor condition and would need to be rehabilitated in the near future. With additional flows the rehabilitation options are no longer feasible.

Timing

2013-2024 Complete detailed design and construct new sewers.

Action Item Funding

Construction Cost Estimate = \$4.9 M

Total Capital Cost Estimate* = \$8.8 M (59% Rate, 41% Development Charges)

**Including construction cost, engineering, city internal costs and contingency allowance.*

Funding split subject to review as part of 2014 Development Charges By-Law.

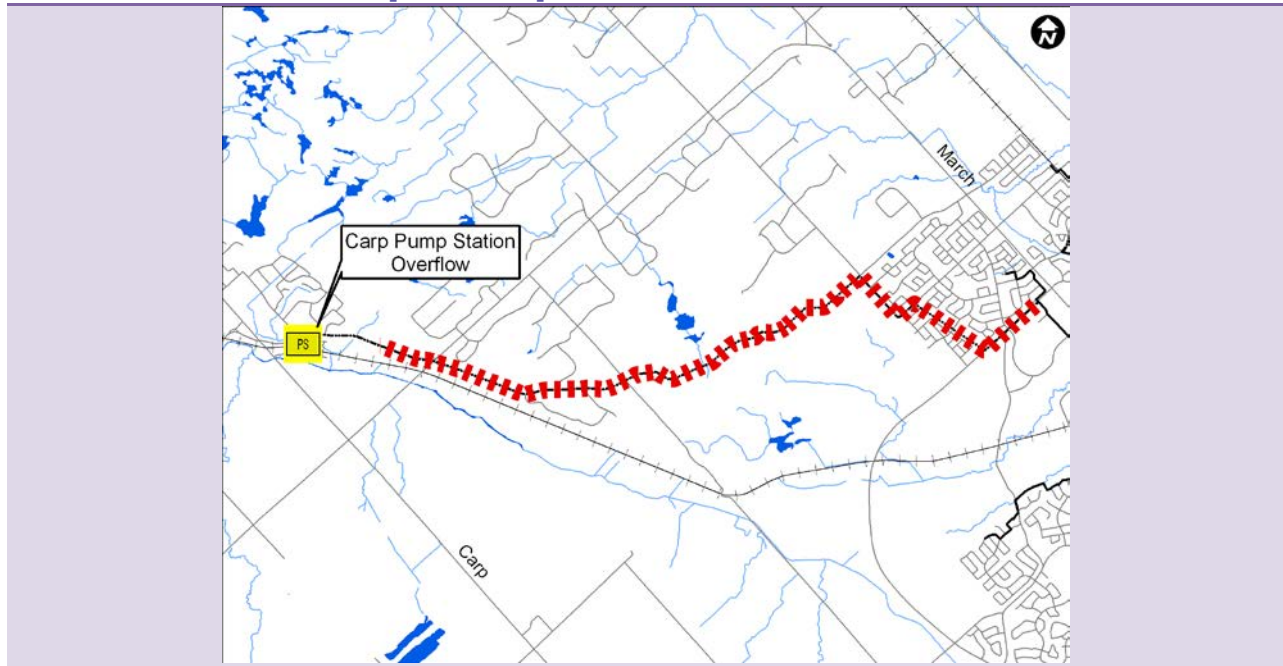
EA Requirements and Consultation

This is Schedule A + (pre-approved) Class EA project. Public will be notified prior to construction.

Follow Up Actions

Proceed with design, tender and construction starting in 2017

Carp Pump Station Overflows



Scope and Justification

Both Village of Carp PSs were constructed in 1993 – 1994, prior to the development of the current City of Ottawa Sewer Design Guidelines and do not have an emergency overflows. Emergency overflows for both PSs facilities are necessary to protect the neighbourhood households from basement flooding during extreme flow events or catastrophic failures of the PSs.

Timing

2013 - 2018 Design and construct stations overflows.

Action Item Funding

Construction Cost Estimate = \$0.3 M

Capital Cost Estimate* = \$0.5 M (55% Area Specific Development Charges, 45% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.*

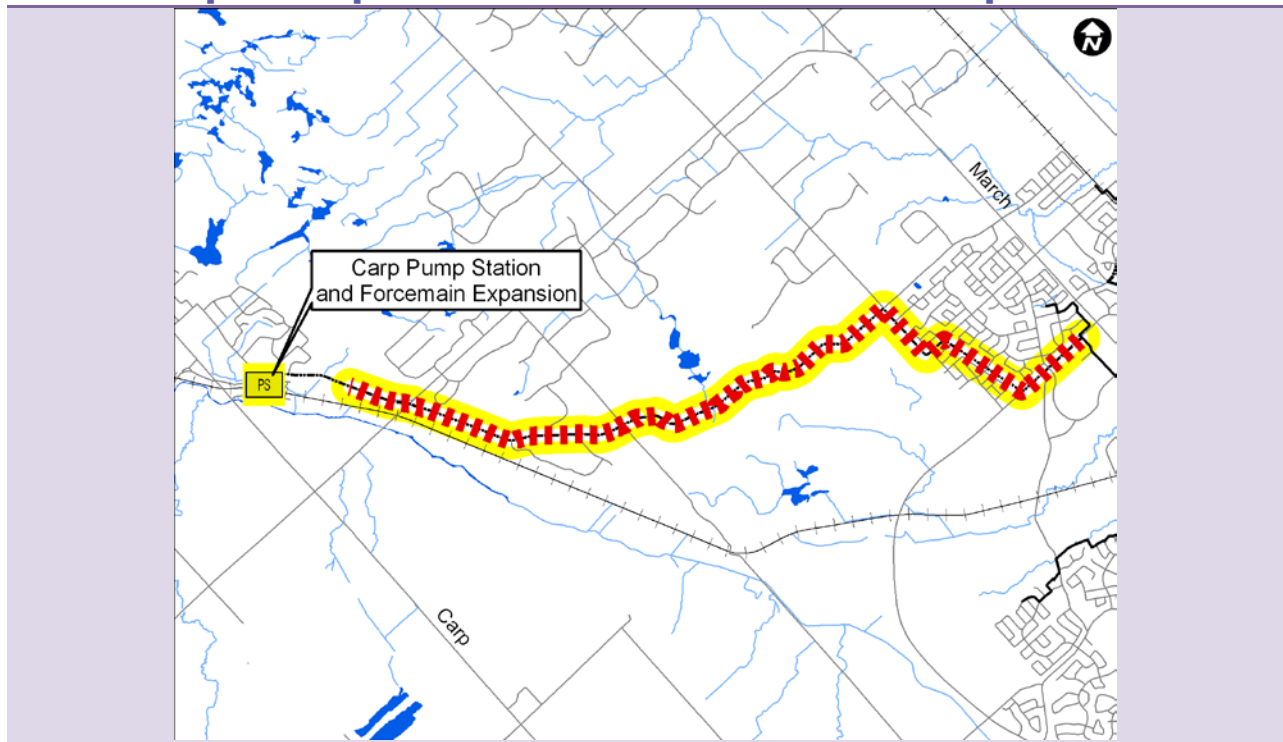
EA Requirements and Consultation

EA requirements already completed as a Schedule B Class EA project (Village of Carp Water and Wastewater Infrastructure Upgrade/Expansion Study).

Follow Up Actions

Proceed with design in 2014, tender and construction in 2015

Carp Pump Station and Forcemain Expansion



Scope and Justification

New pumps for the existing Pump Stations, twinning of forcemains and the replacement of undersized sewer lines including the first 900 meters of the Hines Road Trunk Sewer in Kanata are needed to accommodate and support village growth as anticipated by the approved Community Design Plan and to comply with the current design guidelines.

Timing

2019-2024: Design and construct the works.
(Rate of development and flow monitoring will determine the exact timing).

Action Item Funding

Construction Cost Estimate = \$3.8 M

Capital Cost Estimate* = \$6.0 M (75% Area Specific Development Charges, 25% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.*

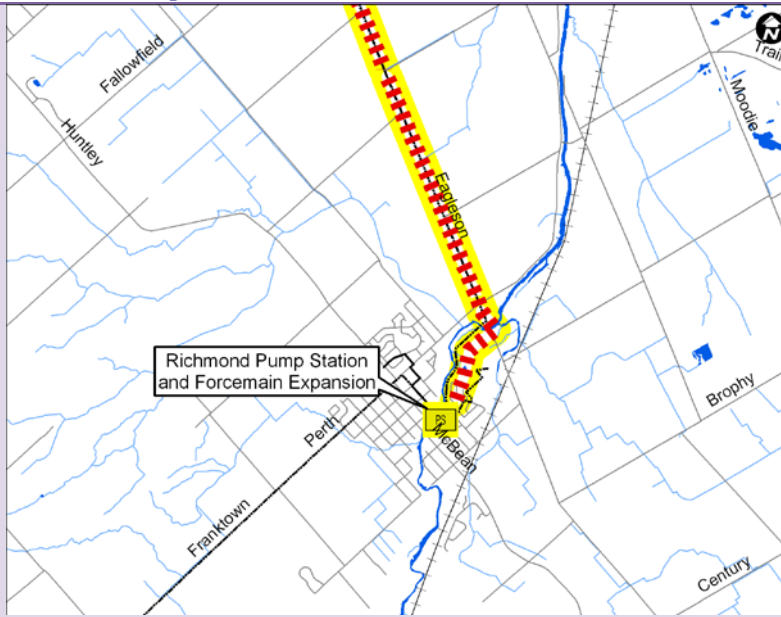
EA Requirements and Consultation

EA requirements already completed as a Schedule B Class EA project (Village of Carp Water and Wastewater Infrastructure Upgrade/Expansion Study).

Follow Up Actions

Monitor flows to the station and rate of development in the Village.

Richmond Pump Station and Forcemain Expansion



Scope and Justification

To support village growth as anticipated by the approved Community Design Plan the expansion of the existing wastewater system is needed. It will include the expansion of the existing Pump Station, installation of the second forcemain and upgrading of some sections of the gravity sewer lines. The required work is expected to proceed in stages.

Timing

2013-2018: Detailed design, tender and construction of the Phase 1 forcemain.

2025-2031: Design and construct the works.

(Rate of development and flow monitoring will determine the exact timing).

Action Item Funding

Construction Cost Estimate = \$19.0 M

Capital Cost Estimate* = \$30.0 M (100% Area Specific Development Charges, 0% Rate)

**including construction cost, engineering, city internal costs and contingency allowance.*

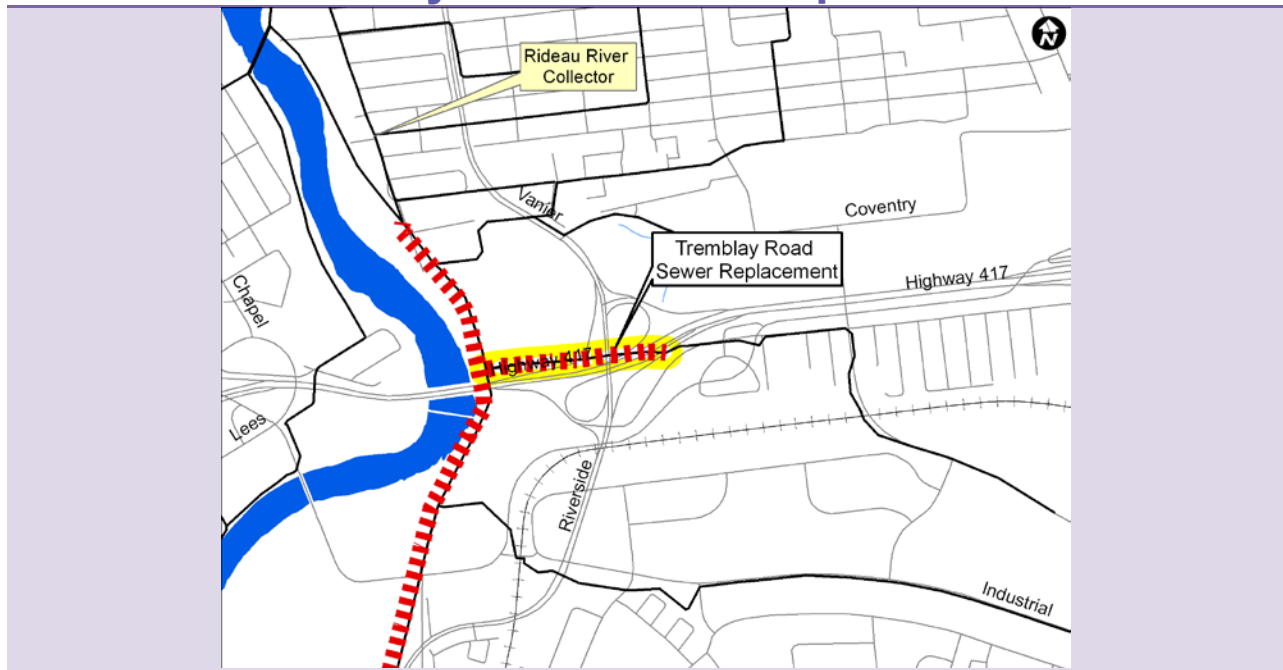
EA Requirements and Consultation

EA requirements already completed as a Schedule B Class EA project (Village of Richmond Master Servicing Study).

Follow Up Actions

Monitor flows to the station and rate of development in the Village.

Tremblay Road Sewer Replacement



Scope and Justification

The 2012 Transit-Oriented Development (TOD) Study identified the need for Tremblay Road Sewer replacement to provide capacity for flows from projected development intensification.

Timing

2025- 2031 Design and construct the sewer.
(rate of development and flow monitoring will determine the exact timing).

Action Item Funding

Construction Cost Estimate = \$3.5 M

Capital Cost Estimate* = \$6.2 M (100% Development Charges, 0% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.*

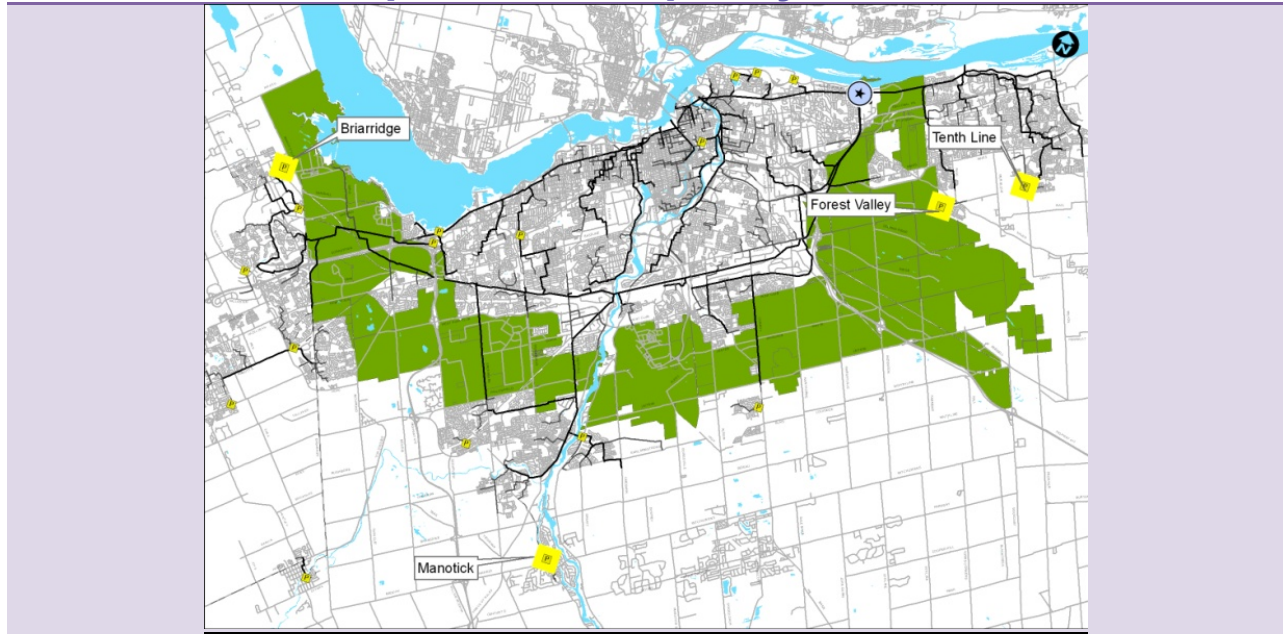
EA Requirements and Consultation

This is Schedule A + (pre-approved) Class EA project. Public will be notified prior to construction.

Follow Up Actions

Monitor flows and rate of development in the contributing area.

Pump Station Capacity Increase



Scope and Justification

Capacity increases to the Manotick, Briaridge, Forest Valley and Tenth Line Pump Stations is needed to accommodate growth which is expected to occur within their catchment area. The proposed work will involve the replacement of existing pumps with larger ones.

Timing

2019 – 2031 Replace existing pumps.
(rate of development and flow monitoring will determine the exact timing).

Action Item Funding

Construction Cost Estimate = \$0.9 M

Capital Cost Estimate* = \$1.5 M (100% Development Charges, 0% Rate)

**Including construction cost, engineering, city internal costs and contingency allowance.*

EA Requirements and Consultation

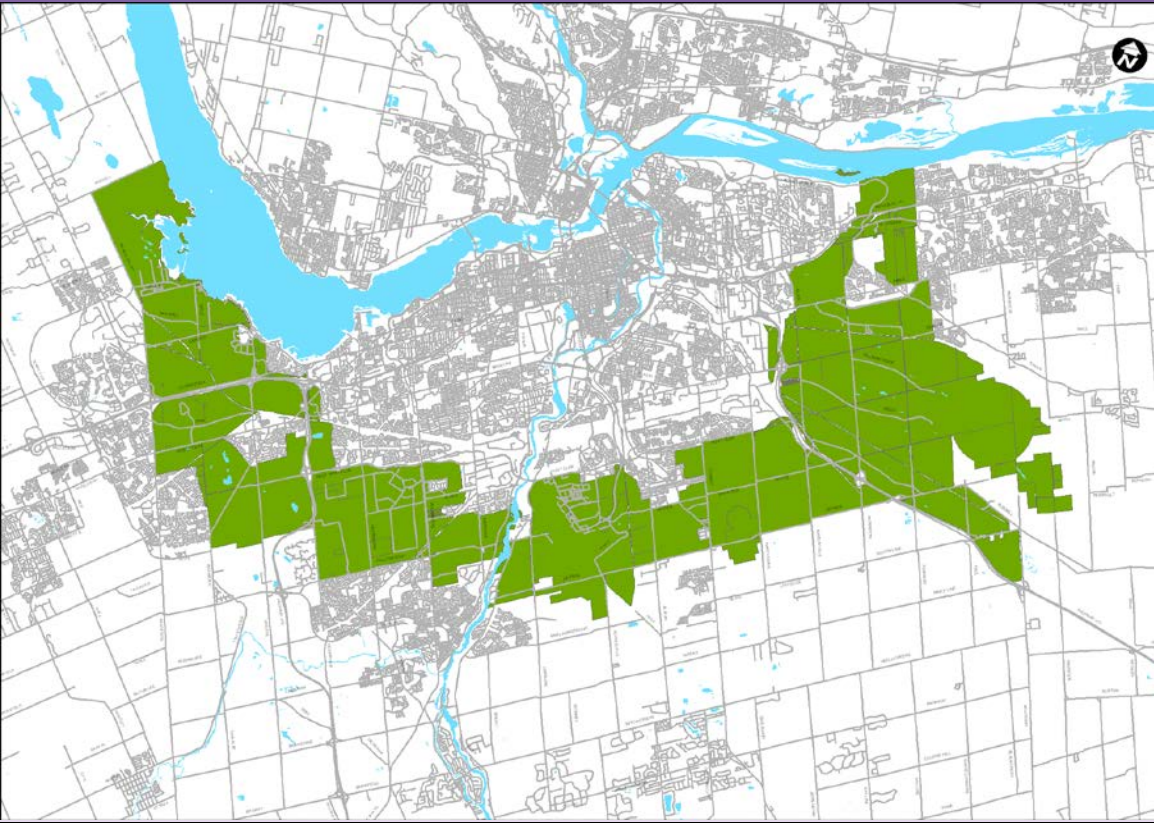
This is Schedule A (pre-approved) Class EA project. No public consultation required before implementation.

Follow Up Actions

Monitor flows to the stations and rate of development in contributing areas.

Pipe Renewal Projects

Water Renewal Programs - LRFP 4.1



Scope and Justification

The City has ongoing annual condition and performance assessments for its existing asset base. These programs inform needs definition and prioritization exercises through validation and risk assessments. Forecast models are used to complement the short to mid-term in forecasting anticipated long range financial requirements for the existing asset base as it changes. Renewal requirements are continually being reassessed and adjusted to meet delivery of service requirement and state of good repair.

Timing

On-going. The next refresh of existing LRFP4 renewal requirements will also be influenced by a better understanding of , backbone reliability risk mitigation, Wet Weather Management, Downtown Moves, intensification and TOD implications to existing infrastructure. It is expected that over the initial term of this IMP the Comprehensive asset Management Program will have completed implementation of strategic initiatives aimed at documenting service based delivery of service expectation from customers based on willingness to pay, enhancements to capital investment prioritization processes to align to the documented delivery of service expectations and overall corporate strategic objectives and service based asset management plans documenting the consolidated renewal, growth and legislated needs, options and capital investment requirements from a business perspective.

Action Item Funding

Investigations, analysis, design and implementation cost estimate

2014 - 2022

\$905.0 M

Class D

Associated Programs

ID	Name	2014-2022*	Supports Growth** and Intensification
	Drinking Water Plants and Remote Facilities	\$320.0	
	Misc Capital Maintenance Programs	\$131.6	
TU1000	Integrated Road, Sewer and Water Program	\$72.1	
TU1003	Integrated Rehabilitation - Intensification Areas	\$216.4	X
TU1001	Integrated Sewer and Water Program - Rate	\$12.8	X
TU1250	Structures	\$0.0	
TU4400	Water System Rehabilitation Program	\$152.1	X

**Including construction cost, engineering, city internal costs and contingency allowance.*

***Development Charges and Rate funding split will be established as a part of 2014 Development Charges By-Law.*

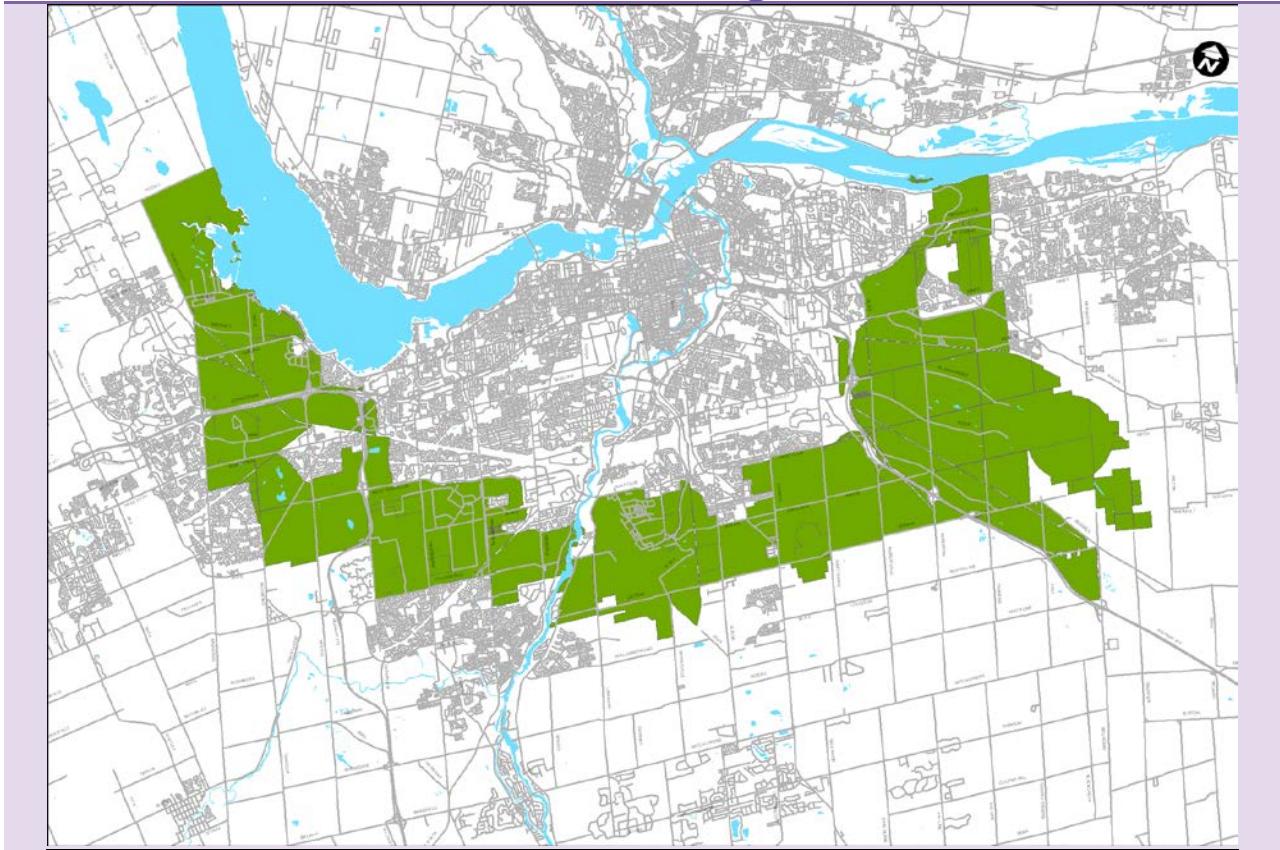
EA Requirements and Consultation

Requirements vary. Capital planning exercises will ensure appropriate level of environmental screening and assessments are undertaken

Follow Up Actions

Continual reassessment and adjustment to meet delivery of service requirement and state of good repair. Process adjustment to integrate Comprehensive Asset Management best practices to achieve outcomes of the City's CAM Strategy and Policy objectives.

Waste Water Renewal Programs - LRFP 4.1



Scope and Justification

The City has ongoing annual condition and performance assessments for its existing asset base. These programs inform needs definition and prioritization exercises through validation and risk assessments. Forecast models are used to complement the short to mid-term in forecasting anticipated long range financial requirements for the existing asset base as it changes. Renewal requirements are continually being reassessed and adjusted to meet delivery of service requirement and state of good repair.

Timing

On-going. The next refresh of existing LRFP4 renewal requirements will also be influenced by a better understanding of , backbone reliability risk mitigation, Wet Weather Management, Downtown Moves, intensification and TOD implications to existing infrastructure. It is expected that over the initial term of this IMP the Comprehensive asset Management Program will have completed implementation of strategic initiatives aimed at documenting service based delivery of service expectation from customers based on willingness to pay, enhancements to capital investment prioritization processes to align to the documented delivery of service expectations and overall corporate strategic objectives and service based asset management plans documenting the consolidated renewal, growth and legislated needs, options and capital investment requirements from a business perspective.

Action Item Funding

Investigations, analysis, design and implementation cost estimate

2014 - 2022 \$935.5 M Class D

Associated Programs

ID	Name	2014-2022*	Supports Growth** and Intensification
	Waste Water Facilities	\$250.0	
	Misc Capital Maintenance Programs	\$101.9	
TU1000	Integrated Road, Sewer and Water Program	\$48.9	
TU1003	Integrated Rehabilitation - Intensification Areas	\$146.7	X
TU1001	Integrated Sewer and Water Program - Rate	\$23.8	X
TU5300	Sanitary Sewer Rehabilitation Program	\$350.2	X
TU5550	Wet Weather Program	\$14.0	X

**Including construction cost, engineering, city internal costs and contingency allowance.*

***Development Charges and Rate funding split will be established as a part of 2014 Development Charges By-Law.*

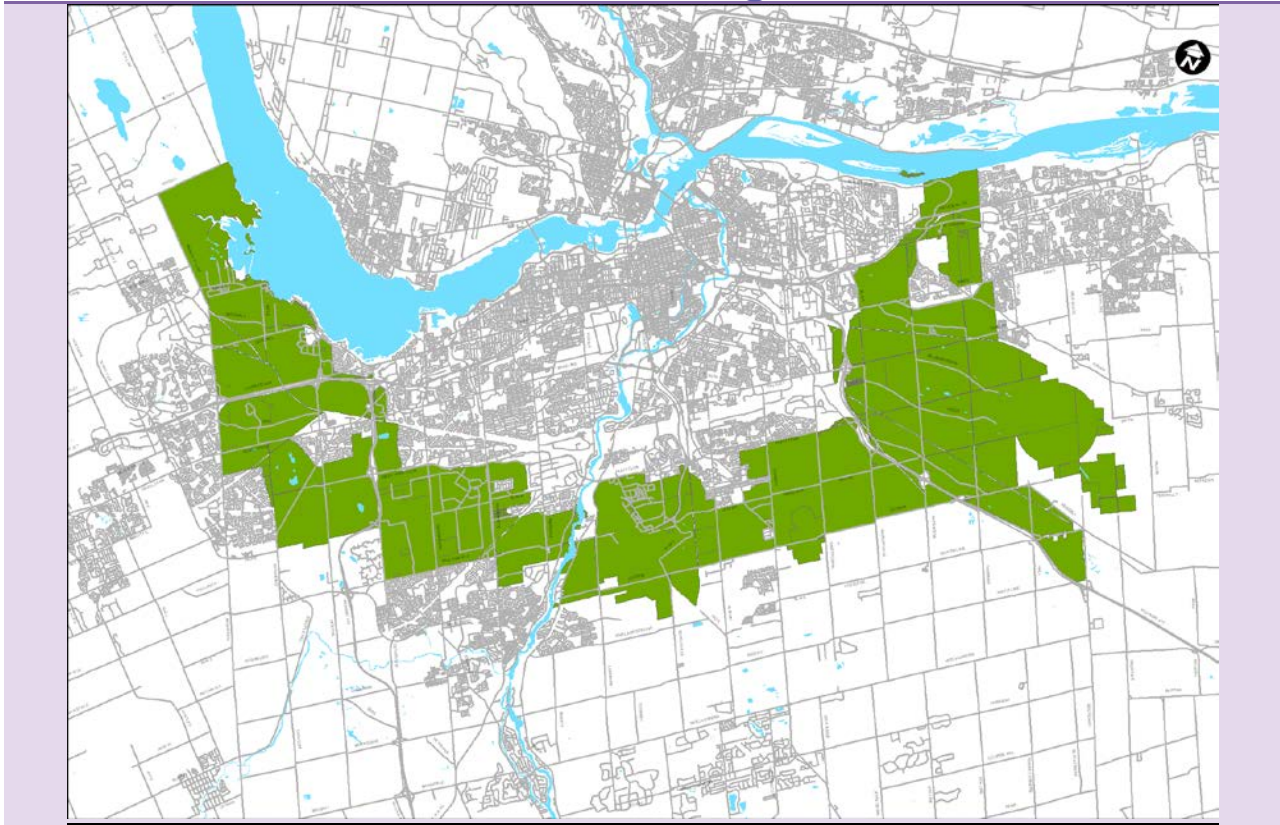
EA Requirements and Consultation

Requirements vary. Capital planning exercises will ensure appropriate level of environmental screening and assessments are undertaken

Follow Up Actions

Continual reassessment and adjustment to meet delivery of service requirement and state of good repair. Process adjustment to integrate Comprehensive Asset Management best practices to achieve outcomes of the City's CAM Strategy and Policy objectives.

Storm Water Renewal Programs - LRFP 4.1



Scope and Justification

The City has ongoing annual condition and performance assessments for its existing asset base. These programs inform needs definition and prioritization exercises through validation and risk assessments. Forecast models are used to complement the short to mid-term in forecasting anticipated long range financial requirements for the existing asset base as it changes. Renewal requirements are continually being reassessed and adjusted to meet delivery of service requirement and state of good repair.

Timing

On-going. The next refresh of existing LRFP4 renewal requirements will also be influenced by a better understanding of , backbone reliability risk mitigation, Wet Weather Management, Downtown Moves, intensification and TOD implications to existing infrastructure. It is expected that over the initial term of this IMP the Comprehensive asset Management Program will have completed implementation of strategic initiatives aimed at documenting service based delivery of service expectation from customers based on willingness to pay, enhancements to capital investment prioritization processes to align to the documented delivery of service expectations and overall corporate strategic objectives and service based asset management plans documenting the consolidated renewal, growth and legislated needs, options and capital investment requirements from a business perspective.

Action Item Funding

Investigations, analysis, design and implementation cost estimate

2014 - 2022 \$299.5 M

Class D

Associated Programs

ID	Name	2014-2022*	Supports Growth** and Intensification
	Stormwater Facilities	\$5.0	
	Misc Capital Maintenance Programs	\$2.8	
TU1000	Integrated Road, Sewer and Water Program	\$45.8	
TU1003	Integrated Rehabilitation - Intensification Areas	\$137.4	X
TU1001	Integrated Sewer and Water Program - Rate	\$23.8	X
TU1250	Structures	\$67.0	
TU5300	Storm Sewer Rehabilitation Program	\$14.1	X
TU5550	Wet Weather Program	\$3.6	X

*Including construction cost, engineering, city internal costs and contingency allowance.

**Development Charges and Rate funding split will be established as a part of 2014 Development Charges By-Law.

EA Requirements and Consultation

Requirements vary. Capital planning exercises will ensure appropriate level of environmental screening and assessments are undertaken

Follow Up Actions

Continual reassessment and adjustment to meet delivery of service requirement and state of good repair. Process adjustment to integrate Comprehensive Asset Management best practices to achieve outcomes of the City's CAM Strategy and Policy objectives.