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SOUTHEAST COLLECTOR TRUNK SEWER - APPROVAL OF INDIVIDUAL ENVIRONMENTAL ASSESSMENT AND IMPACTS ON WATER CONSERVATION AND EFFICIENCY AND INFLOW AND INFILTRATION REDUCTION PROGRAMMING

The Environmental Services Committee recommends:

- 1. Receipt of the presentation by Daniel Kostopoulos, Director, Capital Planning and Delivery, Environmental Services; and**
- 2. Adoption of the recommendations contained in the following report dated April 30, 2010, from the Commissioner of Environmental Services.**

1. RECOMMENDATIONS

It is recommended that:

1. Regional Council authorize advancement of the timing for the update of the Regional Water Conservation and Efficiency program to meet Ministry of Environment requirements for conditions of approval on the Southeast Collector Trunk Sewer Individual Environmental Assessment.
2. Regional Council authorize the Commissioner of Environmental Services to negotiate and execute an extension to the existing agreements with Hatch Mott Macdonald and AECOM for work required to fulfill the conditions of approval, not to exceed \$3,950,000, exclusive of GST.
3. Regional Council authorize eleven additional full time employees to deliver the required work related to water conservation and efficiency, inflow and infiltration reduction and other Minister of the Environment directed construction and operational conditions of approval.
4. The Regional Clerk forward a copy of this report to the Minister of the Environment and to the Regional Municipality of Durham.

2. PURPOSE

This report provides information on:

- The Minister of the Environment's approval of the Individual Environmental Assessment (IEA) for the Southeast Collector Trunk Sewer (SEC).

- Impacts on the Region's water efficiency and inflow and infiltration reduction programs as a result of the SEC conditions of approval.
- Impacts on the schedule for completion of the SEC and subsequent effects on timing of servicing capacity.

This report provides the rationale to:

- Give authority to the Commissioner of Environmental Services to negotiate and execute a revision to the agreement with consultants working on the SEC to undertake additional work required to comply with IEA Conditions including stakeholder engagement and odour management.
- Add eleven full time employees to complete additional required work as directed by the Minister of the Environment through the SEC IEA conditions of approval.

3. BACKGROUND

Minister of the Environment approves Individual Environmental Assessment on March 31, 2010

The SEC project involves construction of a 15 km tunnelled sanitary trunk sewer from Box Grove in the Town of Markham in the Regional Municipality of York, to the intersection of Finch Avenue and Valley Farm Road in the City of Pickering, in the Regional Municipality of Durham. (*see Attachment 1*)

The project proceeded as an Individual Environmental Assessment with the first submission made in late 2008. Subsequent to that submission, the Ministry of the Environment's (MOE) review process was suspended to enable York Region to address a motion from Durham Region requesting that the facility proposed to treat and control odours associated with this sewer be relocated out of Durham Region.

Opportunities were reviewed and an alternative site for the Odour Control Facility, acceptable to Durham Region, was selected in York Region on the west side of York Durham Line in the Town of Markham. The alternative site was subjected to extensive analysis and an independent peer review. Thereafter, the IEA was resubmitted to the MOE on August 19, 2009. Since that time, the MOE has completed its review and considered further public input as part of its review process. On March 31, 2010 the Minister of the Environment approved the IEA for the project and imposed a series of conditions on the recommended solution.

This \$546M capital project is vital to service approved growth to the year 2031 across the Region.

Preferred undertaking is defined as construction of the Southeast Collector as well as water conservation and efficiency and inflow and infiltration reduction

York Region has ongoing programs in water conservation and an inflow-infiltration reduction that were relied upon as mitigation measures supporting development of the new SEC. Although progress on water conservation, water-use efficiency and inflow-infiltration (I-I) reduction measures has been substantial, as detailed in the following sections, significant additional work is now required to meet the Minister's conditions.

Water conservation and efficiency are essential components of the Region's water supply strategy

York Region has embraced water conservation and efficiency since 1997 as a very effective component of the long-term drinking water supply strategy. Overall, the Water for Tomorrow program has saved enough drinking water supply for a community of more than 90,000 people. Through ongoing implementation of the 2007 Water Efficiency Master Plan Update, additional water savings of 23.4 ML per day are anticipated. These future savings are enough water to supply an additional 98,000 people.

Through endorsement of the Regional Official Plan in December 2010, Council has demonstrated its current and future commitment to water efficiency and conservation programming. Development of a Long-Term Water Conservation Plan is a requirement of the conditions of approval and will translate this important commitment into innovative programs and actions that will reduce water consumption and protect our valuable water resources.

Public and youth education are key components of water efficiency and conservation programming that ensures long term success through behavioural change.

York Region's commitment to reducing inflow and infiltration entering sanitary sewer collection and treatment systems reinforced through requirements imposed on the Southeast Collector Trunk Sewer

Reducing inflow and infiltration has been an integral part of servicing considerations by York Region since the first Water and Wastewater Master Plan developed in 1997. The 2001 YDSS Master Plan update specifically identified "water conservation/extraneous flow reduction" as a significant design consideration for all YDSS projects. In conjunction with alternatives considered during the SEC IEA, I-I reduction efforts were stepped up in 2007 with Regional Council approving a commitment of \$23 million in the 10-year capital plan with ongoing efforts by both Regional and Local Municipal staff regarding implementation.

York Region and all of the local municipalities are actively involved in the York Region and Local Municipal Inflow and Infiltration Reduction Program. This ongoing innovative

initiative, the largest of its kind in Canada, will identify industry best practices and cost effective remediation projects to reduce I-I. Completion of the detailed studies of the pilot program will provide a full suite of I-I reduction measures that are tested and available for all local municipalities and the Region to use in ongoing asset management programs.

4. ANALYSIS AND OPTIONS

Approval of the Southeast Collector Trunk Sewer project is subject to stringent conditions

The Minister's conditions of approval for the SEC are appended (*Attachment 2*). In summary, approval of the SEC Trunk Sewer is subject to stringent conditions based upon the following overall directions:

- A compliance monitoring and reporting program is to be established to document that the project will be undertaken and will continue to be operated in conformance with the commitments made by the Regions in the SEC IEA.
- York Region is required to establish a stakeholder advisory committee consisting of representatives from local and regional municipalities, agencies, environmental groups and residents within three months of IEA approval to enable ongoing liaison between the community and the Regions during the construction period.
- A complaint protocol is to be developed and reviewed by the advisory committee before being provided to the MOE Director, Environmental Assessment and Approvals Branch at least six months prior to the start of construction.
- A review of best-in-class water conservation and efficiency measures and development of inflow and infiltration reduction strategies are to be completed in conjunction with the Region and its Local Municipalities, independently peer reviewed, presented to the advisory committee, submitted to the MOE, implemented, monitored and reported on annually to the MOE.
- An odour monitoring and mitigation plan must be developed, implemented, monitored and reported on twice yearly to the MOE.
- A performance management plan will be developed and then submitted to the advisory committee and the MOE to document performance targets for improvements to water conservation, efficiency, reductions in inflow/infiltration, and performance targets for odour management measures particularly at the odour control facility and air handling facilities.
- An ambient air monitoring and reporting program will be established at several locations, including the odour control facility and air handling facilities.
- A groundwater and surface water monitoring and mitigation plan will be established.
- Proposed enhancements will be implemented within Bob Hunter Memorial Park, including proposed trail systems, creation and restoration of wetlands, tree planting and reforestation, and other community beneficial enhancements.

Approval conditions are very stringent and exceed all past requirements stipulated in project approvals from the MOE

Conditions on the SEC project set new precedents in invoking a new regime of monitoring and reporting requirements to ensure the planning, design and ongoing operation of this critical infrastructure is undertaken in conformance with the IEA commitments. Although these conditions are extremely challenging and will require the Region to incur increased costs and schedule impacts, Regional staff believe they are achievable as implementation of this critical project proceeds.

Best in class water conservation and efficiency as well as inflow and infiltration reduction programs are conditions of approval

Population growth, increasing water consumption and the impact of climate change are all creating challenges and stresses on the quality and quantity of water supplies. Implementation of a Province-wide water conservation and efficiency strategy will apply across Ontario. The Province's commitment to water conservation and efficiency has been applied to York Region through conditions of approval for the SEC IEA. The Province also applied similar principles to their approval of the Terms of Reference for the Upper York Sewage Solutions.

Water efficiency staffing survey indicates York Region programs are delivered with fewest staff

In 2008, the City of London surveyed municipalities in the Greater Toronto Area to determine the number of staff required to manage a water conservation and efficiency program. The purpose of the survey was to help the City determine their own staff requirements to begin and maintain a water efficiency program. Results of the survey clearly show that York Region's Water for Tomorrow program delivers far more water efficiency programs with fewer staff than any other municipality surveyed. Additional staff are required to deliver enhanced water conservation and efficiency programs that are being expedited to comply with conditions being imposed on the SEC.

Between 1997 and 2007 the Region's water efficiency program, Water for Tomorrow was outsourced to a consulting team at a cost of approximately \$3 million per year. In 2008 the decision was made to incorporate the Water for Tomorrow program internally by maintaining knowledgeable staff to guide the next stages for water efficiency and conservation in the Region. Some components of the programs such as rebate management services, lawn and garden visits and scheduling of gardening workshops and seminars are currently outsourced to consultants that specialize in these services.

Conditions imposed by the Province impact the Region's current water conservation and efficiency work program

As noted earlier, approval of the SEC Trunk Sewer Environmental Assessment includes stringent conditions specifically related to:

- a) water conservation and efficiency and
- b) inflow and infiltration reduction.

These conditions require the Region to do the following over and above existing programs:

- Prepare a water conservation and efficiency strategy for water and wastewater flows to the SEC including targets and timelines for achieving the targets, as well as the strategies, tactics, programs and initiatives to be used, implementation costs.
- Develop and implement a program for the reduction of inflow and infiltration by York Region to the SEC Trunk Sewer from Regional and local municipal sewage systems including implementation costs.
- Prepare a review and analysis of best in class water conservation and efficiency programs, initiatives, strategies and tactics adopted by other jurisdictions throughout the world.
- Consult with local municipalities, the advisory committee, the public, relevant government agencies and the Ministry's Central Region Office on the proposed strategy prior to submission of the strategy to the MOE Regional Director.
- Carry out the water conservation and efficiency strategy.
- Submit annual reports detailing progress on implementation.
- Update the strategy every five years.

Development and implementation of a strategy for inflow and infiltration reduction will satisfy Provincial requirements and position York Region as a leader

A joint strategy and detailed implementation plan between York Region and the local municipalities will be developed in 2010. The program will include reduction priorities, targets, timelines, tactics and initiatives and associated implementation costs. The program will use a full suite of I-I reduction measures that are being tested through the pilot program and will be available for all municipalities to use for implementation.

Regional staff currently involved in the inflow and infiltration reduction pilot program are fully allocated in delivering the current program components which include completion of the pilot program.

Current staff resources not able to accommodate additional workload required to comply with Minister's conditions and deadlines

The Region's water conservation and efficiency program staff are presently fully allocated in delivering the current Water for Tomorrow program components. To meet the conditions of the SEC Individual Environmental Assessment, approval requires additional staff to plan, guide and implement the Long Term Water Conservation Plan.

Table 1 provides a summary of existing resources assigned to current program components as well as details of additional work and associated resources required to meet the conditions of approval.

Table 1
Summary of Resource Requirements to Fulfill MOE Approval Conditions

Existing Programs and Resources	Incremental / New Programs and Resource Needs
Water Conservation and Efficiency (Water for Tomorrow)	
Current staff resources fully allocated to implementation of the following work: • Rebates for toilets and water efficient fixtures • Rain barrel sales • Industrial, commercial and institutional water audits • Work plan development with local municipalities for leak detection • Promotion and education including delivery of Children's Water Festival, various water conservation and efficiency public campaigns, summer water reduction program, etc. Existing programs are resourced by: • 1 FTE Public and Youth Coordinator • 1 FTE Water Efficiency and Conservation Coordinator • 0.33 FTE Manager,	MOE conditions require: • Prepare a water conservation and efficiency strategy including targets and timelines for achieving the targets, as well as the strategies, tactics, programs and initiatives to be used, including implementation costs • Prepare a review and analysis of best in class water conservation and efficiency programs, initiatives, strategies and tactics adopted by other jurisdictions throughout the world • Consult with lower tier municipalities, the advisory committee, the public, relevant government agencies and the ministry's Central Regional Office on the proposed strategy prior to submission to the MOE Regional Director • Carry out the water conservation and efficiency strategy • Submit annual reports detailing progress on implementation • Update the strategy every five years Resources required to manage strategy development and program implementation: • 1 FTE Program Manager • 1 FTE Program Coordinator • 1 FTE Technologist

Environmental Education and Promotion	0.5 FTE Environmental Reporting Specialist
Existing Programs and Resources	Incremental / New Programs and Resource Needs
Inflow and Infiltration Reduction Program	
- Existing project is a pilot project funded through the 10 year Capital program - Pilot project is currently being internally resourced by: 1 FTE Environmental Programs Technologist 0.33 FTE Manager, Environmental Education and Promotion - Program gaps include: stakeholder/customer service levels, measurable performance metrics and data requirements, data and information systems, local systems condition data, local systems short term and long term rehabilitation & replacement capital planning and best practices risk analysis - Existing Pilot Remediation projects will provide information to help develop the I-I strategy and programs	MOE conditions include: - Best-in-class inflow and infiltration reduction strategies are to be developed in conjunction with the Region and local municipalities, independently peer reviewed, presented to the advisory committee, submitted to the MOE, implemented, monitored and reported annually. - A performance management plan shall be submitted annually to the advisory group and the MOE to document performance targets for reductions in inflow/infiltration - Coordinate a system wide Infrastructure Improvement Program based on York's current program - Coordinate a system-wide State of Infrastructure Report - Support the local municipalities in developing sustainable Infrastructure Management Programs Resources required: 1 FTE - Program Coordinator 1 FTE – Infrastructure Engineer 1 FTE – GIS Technologist 0.5 FTE – Environmental Reporting Specialist New I-I program will: - Develop clear service levels and targets, performance metrics and data requirements related to the I/I program and infrastructure (sewer system)

	• Coordinate I-I task force with full participation from York and local municipalities • Report to the advisory committee and MOE progress on the I-I reduction strategy • Identify and prioritize projects for I-I remediation
Existing Programs and Resources	Incremental / New Programs and Resource Needs
Other SEC Construction and Commissioning Conditions	
Current staff resources fully allocated to manage and administer the following work: • IEA Commitments • Enhancement Program • Property Acquisition/Expropriation • Permits/Approvals/Agreements • Procurement Process for: • 30 RFQ's/RFP's and Tenders • Oversight of Engineering, Construction Inspection and Contract Administration • Detailed Design and Contract Documents • Tendering and Award of Main Sewer Construction Contract • Project management including cost and schedule • Liaison with Durham Region to address their requirements Current project is resourced through six FTE's including: • 1 Manager, Engineering • 2 Project Managers	• Establish and administer new stakeholder advisory committee • Develop comprehensive compliance monitoring program for all IEA Mitigation, Public/ Stakeholder consultation and additional Engineering/Technical studies • Annual compliance reporting on IEA Conditions of Approval • Develop and administer complaint protocol – before, during and after construction • Develop comprehensive Odour Management and Mitigation Plan (including the Odour Control Facility and Air Handling Facilities) • Develop and Implement Ambient Air Monitoring and Annual Reporting Plan. • Prepare comprehensive groundwater and surface water monitoring and mitigation plan • Prepare/implement Bob Hunter Memorial Park Enhancement Plan • Prepare and implement a comprehensive Performance Management Plan for plans/ programs identified in the IEA approval conditions with annual and five year performance targets, resource requirements, timelines, etc. Consultation with the stakeholder advisory committee and the public is required throughout implementation of the work • Resources required to manage and administer delivery of this work include:

• 3 Support Staff: • One Technical • One Environmental • One Construction	• 1 FTE – Senior Project Manager • 2 FTE – Special Project Technologists • 1 FTE – Administrative Clerk-Secretary
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Progress continues on SEC project activities independent of IEA approval

Recognizing the need to initiate this project at the earliest opportunity, the Region has proceeded with many elements that were not dependent upon the IEA approval.

Most significantly, four Tunnel Boring Machines were ordered in 2009 and are being manufactured on schedule. These machines will be available for use upon award of the tunnel contract. Similarly, the supplier of the precast concrete segmental liners was selected and the liner production is in progress. Liners will be available for shipping in 2011 per the contract requirements.

Upgrading proposed haul routes has been planned to ensure truck traffic associated with this project does not impact the roads in the City of Pickering and Region of Durham.

Other associated activity to proceed in 2010 includes planned execution of agreements and, subject to MOE approval, the start of construction for enhancements in Bob Hunter Memorial Park and Rouge Park. Supplemental archaeological work that was committed to First Nations and installation of electrical power supply to all mining and maintenance shaft locations is also scheduled.

Construction forecasted to start Q2 2011 and completed in 2014

To comply with the conditions of approval, diversion of flows to the new SEC may not be feasible by the end of 2013 as previously reported. Most significantly, the time implications imposed by the MOE for establishing the advisory committee and submitting the complaint protocol six months prior to construction may require deferral of the start of construction until the spring of 2011. In turn, this may delay commissioning of the new SEC until 2014. A high level schedule showing anticipated completion dates for key components is provided in Table 2.

At this time the project team has advanced the design and preparation of contract documents beyond the 90% stage; however the tender package includes many significant changes required to address details that could not be finalized until the IEA approval conditions were known and permit and approval conditions are confirmed by the regulatory agencies.

Tenders are now forecasted to close in Q4 2010 by which time it is anticipated that all regulatory permits and approvals sufficient to award the contract will be issued. With mobilization forecasted for the second quarter of 2011, diversion of flows to the new pipe is forecasted for early to mid 2014. Thereafter, completion activities will include building finishes, landscaping of various sites and customary project close out activities to address deficiencies which will likely extend to late 2014 or early 2015.

Table 2
Task Completion Schedule

Task	Date
IEA Approved	March 31, 2010
Undertake Submissions in Response to IEA Conditions	April 2010-March 2011
Commence Expropriation	April 2010
Apply for permits and approvals	May 2010
Invite Tender	Late Q3 / Early Q4 2010
Permits Received	Late Q3 / Early Q4 2010
Close Tender	Q4 2010
Award Contract	Q1 2011
Start Construction	Q2 2011
Commission New Sewer	Q1 / Q2 2014
Total Completion	Late 2014 / Early 2015
Post Construction Monitoring and Reporting	2017

Southeast Collector completion date will not affect 2013 Servicing Capacity

In February of this year, the Region committed to providing 2013 servicing capacity to the local municipalities upon receipt of local municipal commitment to pursue inflow and infiltration reduction through the newly formed Inflow and Infiltration Task Force. The 2013 capacity assignment is subject to completion of triggers, stipulating no pre-sales be permitted two years prior to the commissioning date of SEC. Timing for pre-sales will be confirmed as the project proceeds through construction. With the expected commissioning date of SEC now revised to spring/summer 2014, the exposure to system risk is extended beyond the originally anticipated 12 month period to up to 18 months. The risk period may be mitigated through implementation of the inflow and infiltration reduction program. At this time, it is recommended that the date for permitting pre-sales be maintained at December 2011 (last update: December 2011) and be updated subject to future progress of SEC.

5. FINANCIAL IMPLICATIONS

The current 10 year Capital Program provides \$546,000,000 for the planning, construction and completion of the SEC Trunk Sewer.

Current 2010 Capital expenditures on the SEC project are reduced from \$166M to \$50M due to the delays incurred by the IEA approval and the time required to meet conditions of approval prior to the Ministry permitting construction to proceed. Overall total project budget authority is not required to be changed at this time but will be reconfirmed after permit and approval conditions are known as part of the upcoming 2011 capital budget process.

Additional Consultant work required to address approval conditions highly compatible with existing project scope assigned to this project team

The Hatch Mott Macdonald and AECOM have been working on this project since 2005 and understand the requirements and needs of the Region and the MOE. They are intimately familiar with the existing YDSS and have been instrumental in assisting staff understand and develop the preferred solution for the SEC. The odour management strategy is very complex and would take a significant effort for another design group to become familiar with the implementation of the overall odour management strategy. The risks to the Regions and the natural environment associated with a misunderstanding are significant. Also, staff estimates that over one year of additional delay can be avoided by extending the existing agreement.

Activities necessary to address the stringent IEA conditions prior to tendering and throughout construction are beyond the scope of work in the original Agreement. An additional \$3,950,000, exclusive of GST, is required to fund the additional work required and is summarized in Table 3. This increase is less than 10% of the original engineering fee for this project and less than 1% of the total project cost. This work will commence immediately and run until 2017.

Table 3
Major Elements of Additional Work for Consultant Assignment

Condition #	Approval Condition	Key Deliverables	Budget
4	Compliance Monitoring Program	• Program to implement and monitor all IEA commitments, including mitigation measures, enhancements, public consultation, additional studies and work to be completed. • Development of implementation schedule • Monitoring and reporting	\$75,000

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5	Compliance Reporting	• Prepare procedures and documentation • Prepare annual report outlining the Region's compliance with MOE's IEA approval conditions	\$75,000
6	Stakeholder Advisory Committee	• Coordination of Advisory Committee meetings, record minutes, prepare notices, letters, presentations, reports, agendas • Facilitation of meetings • Prepare annual report on consultation with Advisory Committee	\$100,000
7	Complaint Protocol	• Development and administration of protocol to respond to inquiries and complaints received during construction and operation of the facility.	\$50,000
8	Water Efficiency and I-I Strategy	• Best in class worldwide review for Inflow/Infiltration reduction • Develop strategy including tools/targets/schedules and funding requirements • Assist in administration of I/I Task Force including provision of technical expertise, presentations, etc. • Develop comprehensive strategy to quantify reductions achieved in local and regional systems to satisfy MOE reporting requirements	\$500,000
9	Odour Management and Mitigation Plan	• Prepare and implement Odour Management and Mitigation Plan • For the odour control facility, prepare standard operating procedures, maintenance schedules, contingency plans • Odour testing program • Monitor odour control strategy performance • Meet annually and report semi annually to MOE	\$950,000

10	Performance Management Plan	• Develop plan to set annual and five year performance targets for MOE's IEA approval conditions • Develop schedules, demonstrate adequate resources are allocated to achieve targets, develop contingency plans • Monitor performance and reports results	\$950,000
11	Ambient Air Monitoring and Reporting Program	• Develop ambient air monitoring program at several locations including air sampling at odour control facility, air handling facilities and sensitive areas along the SEC route before, during and after construction • Report results including contaminants monitored • Respond to MOE audit and recommendations and implement required actions within 3 months of each audit report	\$750,000
12	Groundwater and Surface Water Monitoring and Mitigation Program	• Prepare plans to mitigate impacts to groundwater and surface water during construction of the SEC • Develop monitoring program to demonstrate successful implementation of plan • Prepare reports and consult with stakeholders	\$500,000
Total			\$3,950,000

Additional staff resources required to ensure compliance with new and stringent IEA approval conditions and to implement programs over the long-term

Work must commence immediately to fully comply with the strict conditions imposed by the Minister of the Environment. Additional resources are required to be in place commencing in Q2 2010 as existing staff are engaged full-time with current program priorities. Additional Regional staff are needed to manage the consultant work program,

prepare and review deliverables, ensure compliance with Regulatory Conditions, approve expenditures, as well as deal directly with the MOE, local municipal staff and other stakeholders to drive results. These additional staff resources will be completely integrated into the Region's existing water efficiency, I-I and capital delivery programs to ensure ongoing work is fully implemented and these programs are cost effectively expanded to meet provincial requirements. The Region's practice of outsourcing components of specialized technical work for water efficiency, inflow and infiltration reduction, capital delivery, including design, will continue.

Table 4 provides a list of the additional eleven full time employees required. Gross costs noted in the table reflect the salaries, benefits and employee set-up costs. Net costs represent the impact on the wastewater rate. The majority of the costs will be charged to the capital program (SEC project) and recovered from development charges.

In summary, staff will continue to outsource specialized components of work while ensuring we have sufficient internal resources to complete this work in full compliance with the Minister's conditions.

Table 4
Summary of Additional Staff Resource Requirement
to Fulfill MOE Approval Conditions

	FTE's	Gross Cost	Net Cost
Water Conservation and Efficiency			
• Program Manager	1	\$125,000	\$8,750
• Program Coordinator	1	\$105,000	\$7,350
• Technician	1	\$100,000	\$7,000
Inflow and Infiltration Reduction Program			
• Program Coordinator	1	\$105,000	\$7,350
• Infrastructure Engineer	1	\$115,000	\$8,050
• GIS Technologist	1	\$100,000	\$7,000
• Environmental Reporting Specialist	1	\$85,000	\$5,950
Capital Planning and Delivery			
• Senior Project Manager	1	\$135,000	\$9,450
• Project Technologist	2	\$200,000	\$14,000
• Administrative Clerk-Secretary	1	\$65,000	\$65,000
Total	11	\$1,135,000	\$139,900

Development of the Long Term Water Conservation Plan and Inflow and Infiltration Reduction Strategy will commence immediately and will continue at an aggressive pace. In addition to fulfilling MOE approval conditions, provision of staff resources to implement the I-I reduction and water conservation and efficiency strategies will result in additional capacity in the SEC Trunk Sewer and at the Duffin Creek WPCP which can enable future growth with reduced investment in infrastructure.

The scope of work identified in this report to complete the SEC Trunk Sewer project will need to commence immediately upon approval and will continue until 2015. Ongoing monitoring and reporting requirements will continue until such time that the MOE deems the conditions of approval to be satisfied.

Total program management costs are well within industry standards

Industry standards for program management vary from 5-15% of total project costs. The gross annual new staffing cost represents less than 0.3% of the total project cost and approximately 1% of the total project cost to the end of the post construction period. When incorporated with the costs for existing staff resources throughout the IEA, detail design and construction administration phases to the end of construction period, the total internal costs for program management are forecast to be less than 3% of the total project cost.

Funds are available in the 10-year capital plan for development of the Long Term Water Conservation Plan. Regional and Local Municipal funding principles required for the long term I-I reduction program are being developed through the newly created I-I Task Force and will be reported in June 2010.

6. LOCAL MUNICIPAL IMPACT

The SEC is a critical infrastructure component that is required to ensure adequate wastewater capacity for growth across York Region. Construction of the SEC is required to support forecasted growth within the Region, as established by “*Places to Grow*” and reflected in the York Region Official Plan (June, 2009). The Plan establishes forecasts for each local municipality for the Plan Period. Further, as envisioned in the Province of Ontario’s Growth Plan for Greater Golden Horseshoe (2006), York Region is required to service a residential population of 1.5 million people and an employment population of 800,000 people by the year 2031. To achieve this, a new SEC Trunk Sewer is required to carry projected flows to accommodate growth in York Region to 2036 and beyond.

The full participation of local municipalities in I-I reduction and water conservation programs are essential for providing servicing allocation for sustainable growth in York Region and compliance with the full intentions of the SEC conditions of approval.

7. CONCLUSION

York Region is charged with planning and providing capacity for additional growth, while working within sustainable servicing options. Water conservation and efficiency continues to be an important water supply source for York Region. Each Master Plan for

water servicing has consistently relied on a preferred alternative, which incorporates water savings from water conservation and efficiency efforts.

The Minister of the Environment has approved the IEA for the SEC Trunk Sewer. The approval includes stringent, but achievable conditions of approval that must be adhered to immediately, throughout construction and during operation of the trunk sewer. Receipt of the IEA approval represents a significant milestone for York Region. Upon completion of construction, the sewer will enable growth to occur in accordance York Region's Official Plan and the Province's "*Places to Grow*" objectives.

For more information on this report, please contact Daniel Kostopoulos, Director of Capital Planning and Delivery at Ext. 5070 or Laura McDowell, Director of Environmental Promotion and Protection at Ext. 5077.

The Senior Management Group has reviewed this report.

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

ENVIRONMENTAL ASSESSMENT ACT

SECTION 9

NOTICE OF APPROVAL TO PROCEED WITH THE UNDERTAKING

RE: Southeast Collector Trunk Sewer Environmental Assessment
(as amended August 2009)

Proponent: Regional Municipalities of York and Durham

EA File No.: 02-04-03

TAKE NOTICE that the period for requesting a hearing, provided for in the Notice of Completion of the Review for the above-noted undertaking, expired on November 20, 2009.

I received over 250 submissions before the expiration date. The majority of these submissions requested a hearing by the Environmental Review Tribunal.

I consider a hearing to be unnecessary in this case. Having considered the purpose of the *Environmental Assessment Act*, the approved terms of reference, the environmental assessment, the ministry Review of the environmental assessment and submissions received, I hereby give approval to proceed with the undertaking, subject to conditions set out below.

SUMMARY OF CONDITIONS

**Southeast Collector Trunk Sewer – Ministry of the Environment
Approval of Individual Environmental Assessment**



Environmental Services

REASONS

My reasons for giving approval are:

- (1) The proponent has complied with the requirements of the *Environmental Assessment Act*.
- (2) The Environmental Assessment has been prepared in accordance with the approved Terms of Reference.
- (3) On the basis of the proponent's environmental assessment and the ministry Review, the proponent's conclusion that, on balance, the advantages of this undertaking outweigh its disadvantages appears to be valid.
- (4) No other beneficial alternative method of implementing the undertaking was identified.
- (5) The proponent has demonstrated that the environmental effects of the undertaking can be appropriately prevented, changed, mitigated or remedied.
- (6) On the basis of the proponent's Environmental Assessment, the ministry Review and the conditions of approval, the construction, operation and maintenance of the undertaking will be consistent with the purpose of the *Environmental Assessment Act* (section 2).
- (7) The government, public and Aboriginal community review of the Environmental Assessment has indicated no outstanding concerns that have not been addressed or that cannot be addressed through commitments made during the Environmental Assessment process, through the conditions set out below or through future approvals that will be required.
- (8) The submissions received after the Notice of Completion of ministry Review was published are being addressed through commitments made during the Environmental Assessment process, through the conditions set out below or through future approvals that will be required, where appropriate. I am not aware of any outstanding issues with respect to this undertaking which suggest that a hearing should be required.

SUMMARY OF CONDITIONS

**Southeast Collector Trunk Sewer – Ministry of the Environment
Approval of Individual Environmental Assessment**



Environmental Services

CONDITIONS

The approval is subject to the following conditions:

1. Definitions

For the purposes of these conditions:

"Director" means the Director of the Environmental Assessment and Approvals Branch.

"EAAB" means the Environmental Assessment and Approvals Branch of the Ministry of the Environment.

"environmental assessment" means the document titled Southeast Collector Environmental Assessment Final (Amended) August 2009.

"ministry" means the Ministry of the Environment.

"program" means compliance monitoring program.

"proponent" means the Regional Municipality of York and the Regional Municipality of Durham.

"Regional Director" means the Director of the ministry's Central Regional Office.

2. General Requirements

2.1 The proponent shall comply with the provisions in the environmental assessment which are hereby incorporated in this approval by reference except as provided in these conditions and as provided in any other approval or permit that may be issued for the undertaking.

2.2 These conditions do not prevent more restrictive conditions being imposed under other statutes.

3. Public Record

3.1 Where a document is required for the public record, the proponent shall provide two copies of the document to the Director: a copy for filing within the specific public record file maintained for the undertaking and a copy for staff use.

3.2 Additional copies of such documents will be provided by the proponent for public access to the:

- a) Regional Director (as required);
- b) Clerk of the Regional Municipality of York and the Regional Municipality of Durham(as required); and,
- c) Southeast Collector Advisory Committee, if applicable.

SUMMARY OF CONDITIONS

**Southeast Collector Trunk Sewer – Ministry of the Environment
Approval of Individual Environmental Assessment**



Environmental Services

3.3 The EAAB file number 02-04-03 shall be quoted on the document.

3.4 These documents may also be provided through other means as considered appropriate by the proponent.

4. Compliance Monitoring Program

4.1 The proponent shall prepare and submit to the Director for the public record, an environmental assessment compliance monitoring program.

4.2 The program shall be submitted one year from the date of approval of the undertaking, or 60 days before the commencement of construction, whichever is earlier.

4.3 The program shall be prepared for the monitoring of the proponent's fulfilment of the provisions of the environmental assessment for mitigation measures, public consultation, and additional studies and work to be carried out, and for all other commitments made during the preparation of the environmental assessment and the subsequent review of the environmental assessment for mitigation measures, public consultation, and additional studies and work to be carried out.

4.4 The program must contain an implementation schedule.

4.5 A statement must accompany the program when submitted to the Director indicating that the program is intended to fulfil this condition.

4.6 The program, as it may be amended by the Director, must be carried out by the proponent.

4.7 The proponent shall make the documentation available to the ministry or its designate upon request in a timely manner when so requested by the ministry during an on-site inspection, audit, or response to a pollution incident report or when information concerning compliance is requested by the ministry.

5. Compliance Reporting

5.1 The proponent shall prepare an annual compliance report which describes compliance with the conditions of approval set out in this notice and which describes the results of the proponent's environmental assessment compliance monitoring program.

5.2 The annual compliance report shall be submitted to the Director on or before March 31 of each year, with the first report being due in 2011, and shall cover all activities of the previous calendar year.

5.3 Subsequent compliance reports shall be issued and submitted to the Director for the public record on or before March 31 each year thereafter and shall cover the previous calendar year.

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- 5.4 The proponent shall submit annual compliance reports until all conditions are satisfied.
- 5.5 When all conditions have been satisfied, the proponent shall indicate in the annual compliance report that this is its final submission.
- 5.6 The proponent shall retain either on site or in another location approved by the Director, copies of the annual compliance reports for each reporting year and any associated documentation of compliance monitoring activities.
- 5.7 The proponent shall make the documentation available to the ministry or its designate upon request in a timely manner when so requested by the ministry during an on-site inspection, audit, or in response to a pollution incident report or when information concerning compliance is requested by the ministry.

6. Southeast Collector Advisory Committee (SeCAC)

- 6.1 The proponent shall establish a new SeCAC to ensure that concerns about the implementation of the undertaking are addressed and mitigation measures are undertaken where appropriate.
- 6.2 The proponent shall provide administrative support for the SeCAC including, at minimum:
 - a) Providing SeCAC meeting space;
 - b) Recording minutes of each meeting;
 - c) Preparing and publishing meeting notices; and,
 - d) Preparing an annual report to be submitted as part of Compliance Reporting as required by Condition 5.
- 6.3 For the purposes of the SeCAC, the proponent shall invite the following to participate on the SeCAC:
 - a) One representative from the Regional Municipality of York;
 - b) One representative from the Regional Municipality of Durham;
 - c) One representative from the Rouge Park Alliance;
 - d) One representative from the City of Pickering;
 - e) One representative from the Town of Markham;
 - f) One representative from the Durham Environmental Advisory Committee;
 - g) One representative from Stop the Stink;
 - h) One representative from the Rouge-Duffins Greenspace Coalition;
 - i) Up to two individuals who live in the Regional Municipality of Durham; and,
 - j) Up to two individuals who live in the Regional Municipality of York.

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A representative from the Ministry of the Environment shall be invited to attend meetings as an observer.

- 6.4 The SeCAC may review and provide advice to the proponent relevant to the undertaking including:
- a) Compliance Reporting as required by Condition 5;
 - b) Complaint Protocol as required by Condition 7;
 - c) Water Efficiency and Inflow and Infiltration Reduction Monitoring as required by Condition 8;
 - d) Odour Management and Mitigation as required by Condition 9;
 - e) Performance Management Plan as required by Condition 10; and,
 - f) Ambient Air Monitoring and Reporting as required by Condition 11.
- 6.5 The proponent shall hold the first SeCAC meeting within three months of approval of the undertaking. At the first meeting, the SeCAC shall develop its Terms of Reference outlining the governance and function of the SeCAC. The Terms of Reference shall be developed in accordance with this Condition and shall be provided to the Director and Regional Director. The Terms of Reference shall, at minimum include:
- a) Roles and responsibilities of SeCAC members;
 - b) Frequency of meetings;
 - c) Member code of conduct;
 - d) Protocol for dissemination and review of information including timing; and,
 - e) Protocol for dissolution of the SeCAC.

7. Complaint Protocol

- 7.1 The proponent shall prepare and implement a protocol on how it will deal with and respond to inquiries and complaints received during the construction and operation of the undertaking, including the construction and operation of the Odour Control Facility.
- 7.2 The Complaint Protocol shall be provided to the SeCAC for review prior to submission to the Director.
- 7.3 The proponent shall submit the Complaint Protocol to the Director for placement in the public record six months prior to commencement of construction of the undertaking.
- 7.4 A statement must accompany the protocol when submitted to the Director indicating that the protocol is intended to fulfil this condition.

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8. Water Efficiency and Inflow and Infiltration Reduction Monitoring

- 8.1 The Regional Municipality of York shall prepare, to the satisfaction of the Regional Director, a Water Conservation and Efficiency Strategy (Strategy) for the water and waste water flows to the Southeast Collector Trunk Sewer. The Strategy shall include targets for conservation, efficiency, inflow and infiltration reduction to the Southeast Collector Trunk Sewer, and timelines for achieving the targets, as well as the strategies, tactics, programs and initiatives to be used, including the cost to implement these.
- 8.2 The Strategy shall include a program for the reduction of inflow and infiltration by the Regional Municipality of York to the Southeast Collector Trunk Sewer from its and its lower tier municipalities' sewage systems. This program shall include reduction priorities, targets, timelines, tactics and initiatives, and the associated costs to implement these.
- 8.3 The Regional Municipality of York shall consult with its lower tier municipalities, the SeCAC, the public, relevant government agencies and the ministry's Central Regional Office on its proposed Strategy prior to submitting the Strategy to the Regional Director.
- 8.4 The Regional Municipality of York shall prepare a review of best in class water conservation and efficiency programs, initiatives, strategies and tactics adopted by other jurisdictions. The review shall include an analysis of best in class tactics/strategies used by jurisdictions throughout the world. This review shall be made public and shall form part of the consultation process for the Strategy, as required by Condition 8.3 above. This review shall be posted on the proponent's web site for the undertaking.
- 8.5 The Regional Municipality of York shall have a peer review of the Strategy completed. The peer review shall include a comparative analysis of the Regional Municipality of York's proposed Strategy relative to best in class tactics/strategies used by jurisdictions throughout the world.
- 8.6 Following completion of the consultation required by Condition 8.3 and the peer review process required by Condition 8.5 above, the Regional Municipality of York shall submit the Strategy to the Regional Director within twelve months of the approval of the undertaking.
- 8.7 The Regional Municipality of York shall carry out the Water Conservation and Efficiency Strategy.
- 8.8 The Regional Municipality of York shall submit to the Regional Director and the SeCAC an annual report detailing its progress on implementing the Strategy including inflow and infiltration reduction. The first report is required to be provided one year following finalization of the Strategy and every twelve months thereafter until such date as the Regional Director determines the reports are no longer required.
- 8.9 Each of the annual reports prepared in accordance with Condition 8.8 above shall at minimum include:

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- a) Results of water conservation and efficiency measures;
 - b) Results of flow monitoring and visual inspections to determine the sources and amount of inflow and infiltration into the Southeast Collector Trunk Sewer within the Regional Municipality of York;
 - c) Progress in the reduction of inflow and infiltration into the Southeast Collector Trunk Sewer;
 - d) Details of any remedial work to the sewage system undertaken and the results of the remediation; and,
 - e) Results achieved within the Regional Municipality of York with respect to inflow and infiltration reduction measures.
- 8.10 The proponent shall update the Strategy, to the satisfaction of the Regional Director, at a minimum once every 5 years from the date the Strategy is finalized until such date as the Regional Director indicates that the updates are no longer required.
- 8.11 The proponent shall post the Strategy prepared in accordance with Condition 8.1 and the annual report submitted in accordance with Condition 8.8 on the proponent's web site for the undertaking.
- 9. Odour Management and Mitigation**
- 9.1 The proponent shall prepare, to the satisfaction of the Regional Director, an Odour Management and Mitigation Plan for the Southeast Collector Trunk Sewer in consultation with the ministry's Central Regional Office.
- 9.2 The proponent shall submit the Odour Management and Mitigation Plan to the Regional Director within six months of the approval of the undertaking.
- 9.3 The proponent shall include in the Odour Management and Mitigation Plan a specific section that addresses the Odour Control Facility component of the undertaking and shall include at minimum:
- a) Standard operating procedures;
 - b) Maintenance schedules;
 - c) Corrective action measures and other best management practices for ongoing odour control and for potential operational malfunctions;
 - d) A schedule for odour testing at the Odour Control Facility and at sensitive receptors; and,
 - e) At least one meeting on an annual basis between the proponent and the Regional Director to discuss the plan, its results and any changes that are required to be made to the plan by the Regional Director.
- 9.4 The proponent shall carry out the Odour Management and Mitigation Plan.
- 9.5 The proponent shall prepare and submit twice annually to the Director, Regional Director and SeCAC (if applicable), Odour Management and Mitigation

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Monitoring Reports beginning six months following the commencement of operation of the undertaking.

- 9.6 The proponent shall include in each of the Odour Management and Mitigation Monitoring Reports submitted in accordance with Condition 9.5, a report on the performance of the technology used for odour control at the Odour Control Facility.
- 9.7 The proponent shall post the Odour Management and Mitigation Monitoring Reports submitted in accordance with Condition 9.5 on the proponent's web site for the undertaking.

10. Performance Management Plan

- 10.1 The Regional Municipality of York shall prepare, to the satisfaction of the Regional Director, a Performance Management Plan related to increased water conservation, efficiency, and inflow/infiltration reduction associated with its Water Conservation and Efficiency Strategy, and odour management aspects of the undertaking in consultation with the ministry's Central Regional Office.
- 10.2 The Performance Management Plan shall be provided to the SeCAC for review prior to submission of the Performance Management Plan to the Regional Director.
- 10.3 The Regional Municipality of York shall submit to the Regional Director the Performance Management Plan within one year of approval of the undertaking.
- 10.4 The Performance Management Plan shall at minimum include:
 - a) Annual and five year performance targets for improvements to water conservation, efficiency, reductions in inflow/infiltration, and performance targets for odour management measures particularly at the odour control facility and the air handling facilities;
 - b) Dates by when performance targets will be reached; and,
 - c) Demonstration that resources are available to achieve the performance targets within the projected timelines.
- 10.5 The proponent shall post the Performance Management Plan submitted in accordance with Condition 10.1 on the proponent's web site for the undertaking.
- 10.6 The Regional Municipality of York shall carry out the Performance Management Plan.
- 10.7 The Regional Municipality of York shall notify the Regional Director within a reasonable time if it becomes aware that it has or will not meet a performance target identified in the Performance Management Plan.
- 10.8 Within three months of notifying the Regional Director that a performance target for water conservation, efficiency or inflow/infiltration reduction has not or will not be met, the Regional Municipality of York shall submit to the satisfaction of the

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Regional Director a plan that outlines enhanced initiatives that will be implemented to meet the targets, and the resources available.

- 10.9 Within three months of notifying the Regional Director that a performance target for odour measures has not been met, or within such other time as required by the Regional Director, the Regional Municipality of York shall submit to the satisfaction of the Regional Director a plan to enhance or remediate its odour control measures, and the resources available.
- 10.10 The proponent shall prepare and submit annually to the Director, the Regional Director and SeCAC (if applicable), a Performance Management Monitoring Report beginning one year of the Performance Management Plan being finalized.
- 10.11 The proponent shall post the Performance Management Monitoring Report submitted in accordance with Condition 10.10 on the proponent's web site for the undertaking.

11. Ambient Air Monitoring and Reporting

- 11.1 The proponent shall prepare, to the satisfaction of the Regional Director, an Ambient Air Monitoring and Reporting Plan for the undertaking in consultation with the ministry's Central Regional Office.
- 11.2 The proponent shall submit the Ambient Air Monitoring and Reporting Plan to the Regional Director within six months of approval of the undertaking.
- 11.3 The Ambient Air Monitoring and Reporting Plan shall include at minimum:
 - a) An ambient air monitoring program with a minimum of five sampling locations including at the Odour Control Facility and at the air handling facilities;
 - b) The sampling locations described in Condition 11.3 a) which shall be located within the boundaries of the Southeast Collector Trunk Sewer right of way and/or at sensitive receptors in the communities adjacent to the boundaries of the Southeast Collector Trunk Sewer right of way. Siting of the locations shall be done in accordance with the ministry's Operations Manual for Air Quality Monitoring in Ontario, March 2008;
 - c) The proposed start date and frequency of the ambient air monitoring and reporting to be carried out;
 - d) The contaminants that shall be monitored as part of the Ambient Air Monitoring and Reporting Plan; and,
 - e) At least one meeting on an annual basis between the proponent and the Regional Director to discuss the plan, its results and any changes that are required to be made to the plan by the Regional Director.
- 11.4 The ambient air monitoring program set out in the Ambient Air Monitoring and Reporting Plan shall commence upon a date determined by the Regional Director and shall continue until such date as the Regional Director determines and notifies the proponent in writing that the Ambient Air Monitoring Program is no longer required.

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- 11.5 The proponent shall report the results of the ambient air monitoring program to the Regional Director and SeCAC (if applicable) in accordance with the Ambient Air Monitoring and Reporting Plan.
- 11.6 Audits will be conducted by the ministry, as outlined in the ministry's Audit Manual for Air Quality Monitoring in Ontario, March 2008 to confirm that siting and performance criteria are met. The proponent shall implement any recommendations on siting and performance criteria set out in the audit report(s). Such recommendations are to be implemented within three months of each audit report being provided to the proponent by the ministry.
- 11.7 The proponent shall post the Ambient Air Monitoring and Reporting Plan and the results of the ambient air monitoring program submitted in accordance with condition 11.1 and 11.5 on the proponent's web site for the undertaking.

12. Groundwater and Surface Water Monitoring

- 12.1 The proponent shall prepare and submit a Monitoring and Mitigation Plan as part of its application for any Permit to Take Water that is required for dewatering purposes.
- 12.2 Prior to the submission of any Permit to Take Water application that is required for dewatering purposes, the proponent shall post the Monitoring and Mitigation Plan on the proponent's web site for the undertaking for a period of thirty days for review and public comment. The proponent shall take any submissions received into consideration.
- 12.3 Any monitoring reports prepared by the proponent that may be required in any Permit to Take Water shall be made publicly available on the proponent's web site for the undertaking.

13. Bob Hunter Memorial Park

- 13.1 The proponent shall use tunnel boring machine equipment in earth pressure balance mode to construct the Southeast Collector Trunk Sewer between Shaft 11 and Shaft 12 as illustrated in Appendix A of this Notice of Approval.
- 13.2 The proponent shall construct the Southeast Collector Trunk Sewer between Shaft 11 and Shaft 12 as illustrated in Appendix A of this Notice of Approval wholly within the 14th Avenue existing roadway owned by the Regional Municipality of York.
- 13.3 The proponent shall continue to work with interested stakeholders including the Toronto and Region Conservation Authority, the Rouge Park Alliance, the Town of Markham, and the family of Bob Hunter on any refinements to the proposed enhancements described in the environmental assessment.
- 13.4 The proponent shall prepare to the Regional Director's satisfaction a Bob Hunter Memorial Park Enhancement Plan. The plan shall include, at a minimum:

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- a) Details of the enhancements proposed for Bob Hunter Memorial Park including any proposed trail systems; and,
- b) Timelines outlining when the proposed enhancements will be implemented.

The Bob Hunter Memorial Park Enhancement Plan shall be submitted to the Regional Director within six months of approval of the undertaking,

- 13.5 The proponent shall prepare and submit annually to the Director, Regional Director, and SeCAC (if applicable), Bob Hunter Memorial Park Enhancement Plan compliance reports as required by Condition 5.1.
- 13.6 The proponent shall post the Bob Hunter Memorial Park Enhancement Plan on the proponent's web site for the undertaking.

Dated the 11th day of March 2010 at TORONTO.

Original signed by Minister John Gerretsen

Minister of the Environment
Ferguson Block
77 Wellesley Street West, 11th Floor
Toronto ON M7A 2T5

Approved by O.C. No. 440/2010

Date O.C. Approved March 31, 2010

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**Southeast Collector Trunk Sewer – Ministry of the Environment
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Environmental Services



Moving Forward with the Southeast Collector Project

Presentation to Environmental
Services Committee

Daniel Kostopoulos
May 12, 2010

Recent Milestones Achievements....

- **August 21, 2009** – Final (Amended) IEA Report submitted to MOE
- **October 2, 2009** – MOE confirms IEA consultation meets requirements of Environmental Assessment Act and issued government review
- **March 31, 2010** – MOE approves IEA subject to 74 conditions of approval
- **April 6, 2010** – Region notified of IEA Approval

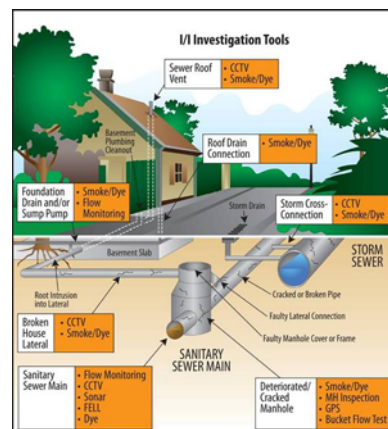
74 Strict Conditions imposed on Project

- Stakeholder Advisory Committee
- Complaint protocol
- Compliance monitoring and reporting
- Water efficiency
- Inflow/Infiltration reduction
- Odour monitoring & mitigation
- Performance management & monitoring plan
- Groundwater & surface water monitoring and mitigation
- Enhancements in Bob Hunter Memorial Park

Individual Environmental Assessment conditions are significant and costly, but still achievable

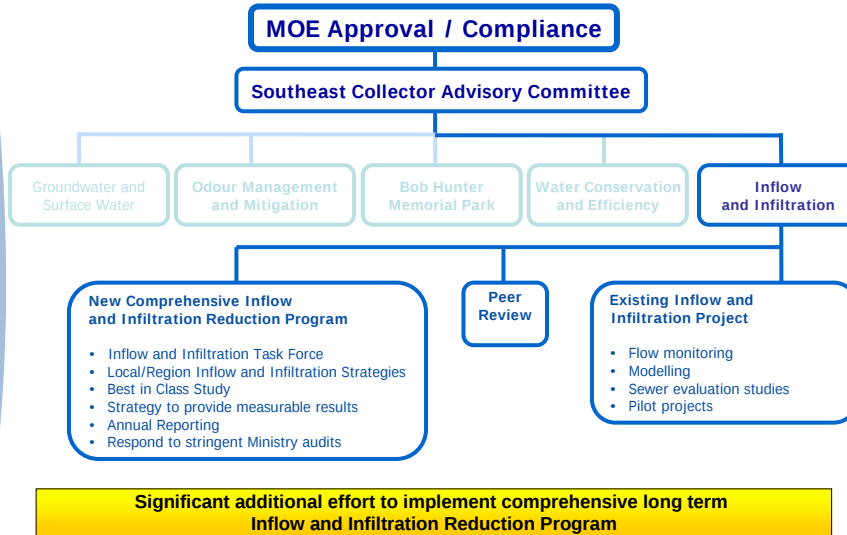
How does Inflow and Infiltration relate to the Southeast Collector?

- New SEC Trunk Sewer Individual Environmental Assessment recommends 10% reduction in flow due to inflow and infiltration and water efficiency programs
- MOE's conditions of approval require long-term inflow and infiltration reduction and water conservation and efficiency strategies
- Condition will require continuous effort system-wide to implement

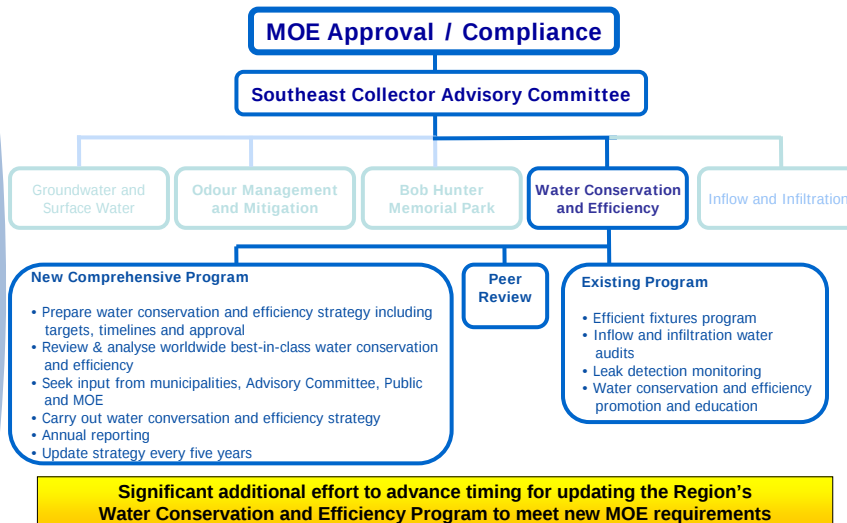


Stringent MOE approval conditions on SEC related to reducing inflow and infiltration

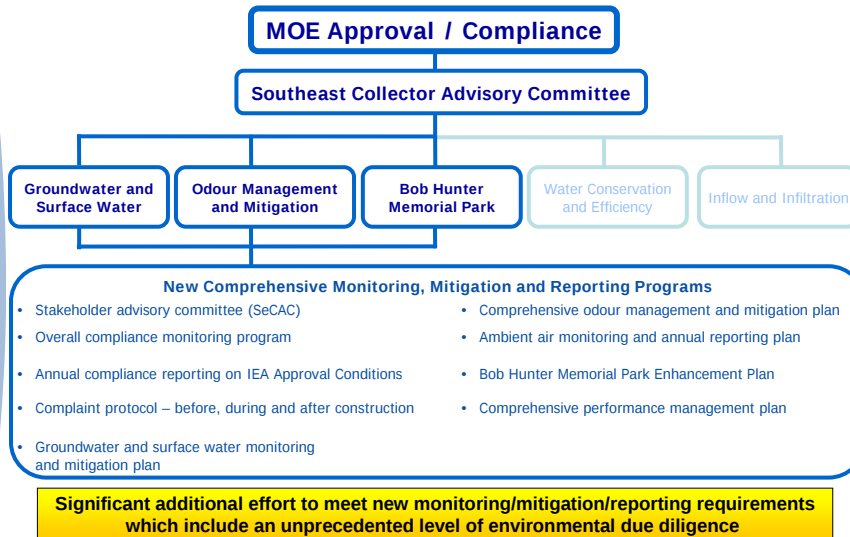
New Programs and Resource Needs



New Programs and Resource Needs



New Programs and Resource Needs



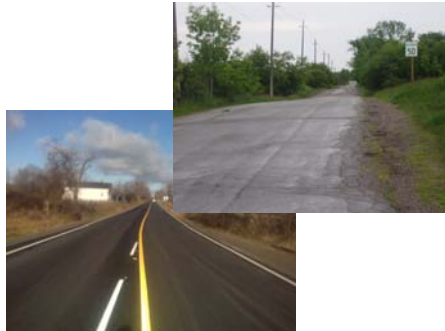
Work Currently Underway

York Region has proceeded with work not dependent on IEA Approval

- Four Tunnel Boring Machines available later this year
- Concrete segmental sewer components in production this year
- Four Tunnelling contractors pre-qualified in 2009
- Odour Control Facility contractors prequalified in 2010
- Advanced procurement of biofilters for odour control facility in 2010



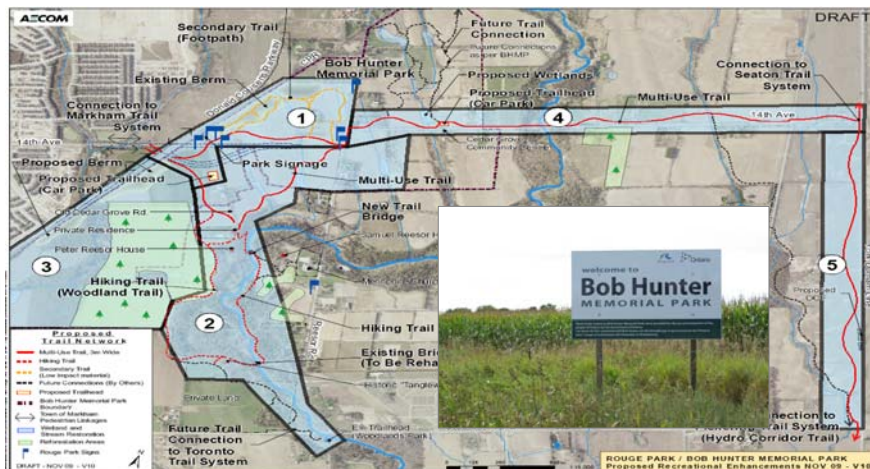
Work Currently Underway



- Properties needed for project identified and acquisitions commenced
- Contract awarded for upgrades to Pickering and Durham Region roads used as haul routes for construction in 2010

Detailed design and development of tender documents is ongoing; currently 90% complete

Work Currently Underway



\$6M in enhancements to Bob Hunter Memorial Park and Rouge Park to start in Q2-2010

Next Steps

- Preconstruction conditions from IEA approval underway
 - Applications to MOE for:
 - Certificates of Approval
 - Permit to Take Water (PTTW)
 - Property acquisition from Ontario Realty Corporation, Hydro One Networks Incorporated, TRCA and private owners requiring expropriation underway
 - Site Plan Approvals are required from the City of Pickering, Town of Markham and Region of Durham
 - Design Drawings and Tender packages can now be finalized

Activities dependant upon IEA approval are now underway

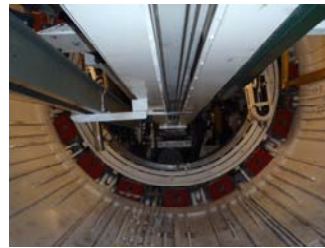
Schedule Milestones



IEA Approved	March 31, 2010
Commence Expropriation	April 2010
Submit Responses to IEA Conditions	April 2010 – March 2011
Tender Issue	Late Q3 / Early Q4 2010
Award Contract	Q1 2011
Start Construction	Q2 2011
Commission new Sewer	Q1 / Q2 2014
Total Completion	Late 2014 / Early 2015
Post Construction Monitoring and reporting	2017

Project Risks

- Permits/Approvals required prior to construction
- Expropriation may continue beyond Q1 2011
- Pickering legal action
- Risks may result in further delays to commissioning in 2014



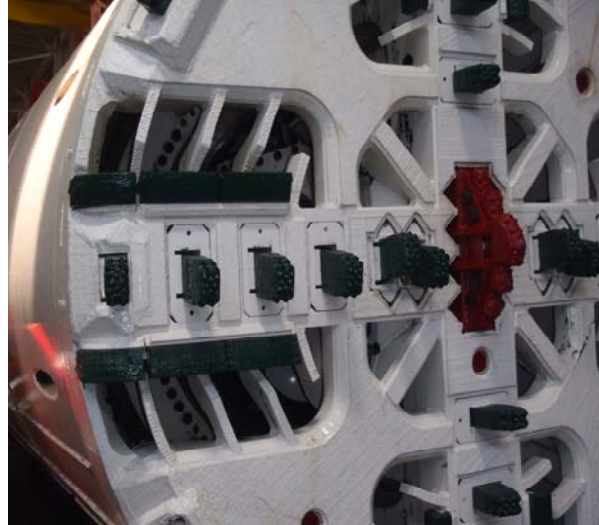
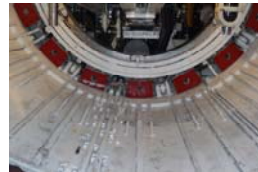
Managing risks to minimize additional delays in commissioning sewer

Summary

IEA approved for Southeast Collector Trunk Sewer

- IEA approval granted with stringent conditions
- Approval conditions are achievable but require additional time, resources and funding
- York proceeding to implementation with significant work underway
- Commissioning of new Southeast Collector now in 2014

Questions



Major Elements of Additional Work for Consultant Assignment

Condition #	Approval Condition	Budget
4	Compliance Monitoring Program	\$75,000
5	Compliance Reporting	\$75,000
6	Stakeholder Advisory Committee	\$100,000
7	Complaint Protocol	\$50,000
8	Water Efficiency and I-I Strategy	\$500,000
9	Odour Management and Mitigation Plan	\$950,000
10	Performance Management Plan	\$950,000
11	Ambient Air Monitoring and Reporting Program	\$750,000
12	Groundwater and Surface Water Monitoring and Mitigation Program	\$500,000
Total		\$3,950,000

Summary of Additional Staff Resource Requirement to Fulfill MOE Approval Conditions

	FTE's	Gross Cost	Net Cost
Water Conservation and Efficiency			
• Program Manager	1	\$125,000	\$8,750
• Program Coordinator	1	\$105,000	\$7,350
• Technologist	1	\$100,000	\$7,000
Inflow and Infiltration Reduction Program			
• Program Coordinator	1	\$105,000	\$7,350
• Infrastructure Engineer	1	\$115,000	\$8,050
• GIS Technologist	1	\$100,000	\$7,000
• Environmental Reporting Specialist	1	\$85,000	\$5,950
Capital Planning and Delivery			
• Senior Project Manager	1	\$135,000	\$9,450
• Project Technologist	2	\$200,000	\$14,000
• Administrative Clerk-Secretary	1	\$65,000	\$65,000
Total	11	\$1,135,000	\$ 139,900

Total Program Management Costs and Industry standards

- Industry standards for program management vary from 5-15% of total project costs.
- The gross annual new staffing cost represents less than 0.3% of the total project cost and approximately 1% of the total project cost to the end of the post construction period.
- Total internal costs for program management are forecast to be less than 3% of the total project cost.
- Funds available in the 10-year capital plan for development of the Long Term Water Conservation Plan.
- Funding principles required for the long term I-I reduction program are being developed through the newly created I-I Task Force and will be reported in June 2010
- Program management costs for the SEC, including new staff at Gross Cost of \$1,135,000