

7

**SOUTHEAST COLLECTOR TRUNK SEWER AND
DUFFIN CREEK WATER POLLUTION CONTROL PLANT STAGE 3
EXPANSION PROJECT
“ENHANCEMENTS AND GREENING STRATEGY TO LEAVE A POSITIVE
LEGACY”**

The Transportation and Works Committee recommends the adoption of the recommendations contained in the following report, October 23, 2008, from the Commissioner of Environmental Services, subject to the addition of a further Recommendation No. 4 as follows:

- 4. The Commissioner of Environmental Services be authorized to execute a formal agreement with the City of Pickering to undertake enhancement projects, subject to review by Legal Services and upon receipt of project approvals.**

and that Recommendation No. 4 now become Recommendation No. 5.

1. RECOMMENDATIONS

It is recommended that:

1. This report outlining the enhancement projects for the Southeast Collector Trunk Sewer with a total approximate value of \$15 million and the Duffin Creek Water Pollution Control Plant Stage 3 Expansion Greening/Biodiversity Plan at an estimated cost of \$350,000 be received for information, and
2. The Commissioner of Environmental Services be authorized to execute a formal agreement with the Toronto and Region Conservation Authority and Rouge Park to undertake the environmental and recreational trail enhancement projects in the Rouge Park areas including the Bob Hunter Memorial Park, subject to review by Legal Services and upon receipt of project approvals.
3. The Commissioner of Environmental Services be authorized to execute a formal agreement with the Toronto and Region Conservation Authority to undertake the implementation of the Duffin Creek Water Pollution Control Plant Stage 3 Expansion Greening/ Biodiversity Plan at an estimated cost of \$350,000, subject to review by Legal Services.
4. This report be circulated to the Ministry of the Environment, Toronto and Region Conservation Authority, Rouge Park, Town of Markham, City of Pickering and Region of Durham for information.

2. PURPOSE

This report outlines the process followed on the Southeast Collector Trunk Sewer Individual Environmental Assessment project to develop a long list of Enhancement Projects, determine a candidate short list of enhancements and finally to determine the recommended final list of enhancements in the Town of Markham and City of Pickering.

The report provides a list of the type of enhancements planned for the Markham and Pickering areas under the categories of recreational, infrastructure and environmental enhancements. It describes in detail the recommended Enhancement Projects in the Bob Hunter Memorial Park including the First Nations Toronto Carrying Place Trail East within Rouge Park at an estimated cost of approximately \$3 million.

Capital costs, timing and implementation plans are presented for the recommended list of enhancements in Markham and Pickering to be undertaken as part of the construction phase of the SEC Trunk Sewer project planned from 2010 to 2012.

Further, the report discusses the Greening/Biodiversity Plan for the Duffin Creek Water Pollution Control Plant Stage 3 expansion at an estimated cost of approximately \$350,000, as well as the associated cost and schedule breakdown for the various phases of the initiative.

The report discusses the role of the Toronto and Region Conservation Authority and Rouge Park in undertaking the enhancements planned for the Rouge Park and Bob Hunter Memorial Park under the Southeast Collector project and the Greening/Biodiversity Plan for the Duffin Creek Water Pollution Control Plant Stage 3 expansion.

3. BACKGROUND

Southeast Collector Enhancements Included in Approved Terms of Reference

Both York and Durham Regions have developed policies and environmental goals for planning and undertaking major infrastructure projects to advance the principals of good environmental stewardship and environmental sustainability. Consequently, a program of “enhancements” was included in the Terms of Reference for the Southeast Collector Trunk Sewer Individual Environmental Assessment study.

The Terms of Reference, approved by the Minister of the Environment in February 2006, included not only the requirement to develop a Mitigation Plan but also stipulated development of Enhancement Measures aimed at providing a positive legacy for the environment impacted by the Southeast Collector Trunk Sewer Project.

Enhancements are initiatives that go beyond normal mitigation measures required under an Individual Environmental Assessment process and are aimed at creating a lasting improvement to the natural environment and/or human communities impacted by the project. York and Durham Regions are satisfying the commitment made in the approved Terms of Reference by developing an "Enhancement Measures" plan for the SEC project. Both the public and agencies have provided positive feedback on enhancements planned for the Southeast Collector project. The Ministry of the Environment and the Toronto and Region Conservation Authority have also provided a strong endorsement of these enhancements and have credited York Region with this progressive approach towards providing a positive legacy to the local community affected by construction of the new Southeast Collector Trunk Sewer.

Southeast Collector Enhancements Included a Public Consultation Process to Identify a Long List of Environmental, Recreational Infrastructure Enhancements

The Southeast Collector Enhancement process solicited ideas from the public on Environmental, Recreational and Infrastructure Enhancements referred to as the ERIE process. This comprehensive public consultation process with local community groups, stakeholders and agencies developed a candidate "long list" of enhancements. The target area for public consultation was focused along the recommended preferred route which would be impacted to the greatest extent by project construction. To date, consultation under the ERIE process has involved several meetings with community associations, school boards, Toronto Region Conservation Authority, Rouge Park Alliance, Pickering and Markham staff, individual citizens and in particular meetings with the members of the Bob Hunter family concerning the planned enhancements to the Bob Hunter Memorial Park.

The ERIE process considered three specific categories of enhancements including:

- Ecological Enhancements including improvements to the natural environment, surface and groundwater systems.
- Recreational Enhancements including improvements to existing or new additions to community facilities. In some cases recreational enhancements may also add to a community's cultural heritage.
- Local Infrastructure Enhancements including improvements to existing or new infrastructure features not currently in existing community budgets.

Southeast Collector Enhancements Included in the First Nations Consultation Process

Consultation with the First Nations communities has been ongoing throughout the Individual Environmental Assessment process and has included five joint meetings with

several First Nations communities including the Huron-Wendatt First Nation located in Quebec, as well as those First Nations signatory to the Williams Treaty, which comprises a large part of York and Durham Regions. In addition, meetings have been held with the Mississauga's of the New Credit and the Kawartha Nishnawbe First Nation. This consultation process has resulted in development of a First Nations Protocol for managing First Nations interests on the Southeast Collector Project.

The First Nations communities have supported the planned environmental enhancements and have favourably received the plan to extend the heritage trail system used by the First Nations communities and early settlers to move goods between Lake Ontario and Lake Simcoe generally along the Rouge Valley. This trail system which represents a cultural enhancement has been referred to by the Rouge Park Alliance and the First Nations communities as the Toronto Carrying Place Trail East. Extension of this heritage trail northerly from Steeles Avenue to the Bob Hunter Park (14th Ave) is recommended herein as one of the early enhancement projects to be undertaken as a first priority.

The consultation process with the First Nations communities is ongoing and flexibility will be maintained in the final list of recommended enhancements to allow this process to be concluded.

Greening Strategy for the Duffin Creek WPCP Stage 3 Includes Site Landscaping and Environmental Enhancements

Site landscaping and environmental enhancements referred to as the "Greening Strategy" are planned for the Duffin Creek WPCP Stage 3 Expansion. These were included in the Stage 3 Class Environmental Assessment process. This work has been incorporated into the site planning for the Stage 3 expansion as part of a community enhancement project. The Greening Strategy has been developed in consultation with the Toronto and Region Conservation Authority and the City of Pickering. The primary focus of these works will be to improve the habitat in the vicinity of the treatment plant and the adjacent Waterfront Trail located in the City of Pickering.

The Greening Strategy will be located adjacent to a large conservation area owned by the TRCA. The lands on which the Greening Strategy will be undertaken are jointly owned by the Regions of York and Durham. It is recommended herein that the TRCA and Region of York execute an agreement satisfactory to the Regional Solicitor for design and construction of the Greening Strategy works.

The Greening/Biodiversity Strategy is consistent with the Toronto and Region Conservation Authorities Terrestrial Natural Heritage System Strategy and incorporates biodiversity and protection measures. The strategy provides long-term benefit to the Duffin Creek marsh, located adjacent to the Duffin Creek WPCP, such as migratory bird habitat and other habitats within the adjacent natural heritage system. The key features of the Greening/Biodiversity Plan include landscape level assessment of opportunities to provide a buffer and habitat function within the lands which are not part of the expansion

footprint to offset the loss of habitat potential for the lands utilized for the plant expansion.

4. ANALYSIS AND OPTIONS

Determining a List of Recommended Enhancements for the Southeast Collector Project

An initial long list of over 140 candidate enhancements was determined through a comprehensive consultation process with key stakeholders, agencies, municipalities (ERIE process) and with First Nations communities.

The “long list” of candidate Enhancement Projects was assessed based on the following screening criteria to arrive at a short list of enhancements:

- Is the proposed enhancement eligible/feasible?
- Is the proposed enhancement beneficial to the community/environment at large?
- Does the proposed enhancement comply with plans and policy documents?
- Can the proposed enhancement be completed between 2010 and 2012?
- Is the proposed enhancement presently excluded from existing funding sources/budgets?
- Is the capital cost associated with the proposed enhancement reasonable?

The “short list” of candidate enhancements were further comparatively evaluated according to eleven criteria to arrive at a current recommended list of 39 enhancements:

- Potential to provide social benefits.
- Potential to provide environmental benefit.
- Potential for assisting York and Durham Regions attain their stated goals.
- Potential location relative to new Southeast Collector Trunk Sewer or haul routes.
- Potential for improving a proposed mitigation measure.
- Potential for phasing the proposed enhancement.
- Potential likelihood of obtaining approval requirements within construction time frame.
- Potential of partnering for delivering the proposed enhancement.
- Potential for long-term ownership of the enhancement.
- Potential for being a catalyst to other future enhancements; and

- Potential estimated capital costs associated with the proposed enhancement.

The process for developing a list of recommended enhancements has been made available to the public, stakeholders and agencies in a document titled “Generation, Screening and Evaluation of Enhancement Methodology”. Generally, the planned enhancements complement the Regional Municipality of York’s “Greening Strategy” as set out in our Natural Heritage Strategic Directions document (2007) as well as the Region’s Vision 2026 aimed at promoting sustainable development and in particular an “Enhanced Environment, Heritage and Culture” for the Region.

These priority enhancements will demonstrate the Region’s commitment to ensuring a positive legacy for communities impacted by major trunk infrastructure projects. A number of the remaining enhancements in Pickering and Markham will require further refinement, technical assessment and property confirmation to determine a final list of recommended enhancements.

\$15 Million in Enhancements Planned under the Southeast Collector Project include Environmental, Recreational and Infrastructure Projects

Proposed Environmental Enhancements

There are a number of environmental enhancements planned for the areas of the Little Rouge, Petticoat Creek and Duffin Creek watersheds. These enhancements received a “most advantageous” ranking under the evaluation process and will receive further consideration by the project team during the technical feasibility, implementation, stakeholder consultation, approvals and property assessment stages of the project.

Environmental enhancements include aquatic ecosystem improvements, natural area reforestation and connectivity improvements, restoration of forested areas and woodlot expansions, swamp habitat enhancements, restoration of a fish ladder at the Whitevale dam, restoration of the Rouge-Duffin’s wildlife corridor, the expansion of the Cornell woodlot and assistance with funding for the Petticoat Creek watershed study. Further environmental enhancements relate to development of an ecosystem and environmental enhancements for the Durham and York separate and public school boards with an emphasis on schools in the immediate vicinity of the planned SEC project.

Proposed Recreational Enhancements

There are a number of recreational enhancements planned for the Markham and Pickering community areas in close proximity to the planned SEC project work. These enhancements have received a “most advantageous” ranking and will receive further consideration by the project team during the technical feasibility, implementation, stakeholder consultation, approvals and property assessment stages of the project.

Recreational enhancements include ongoing restoration of community facility buildings such as the Locust Hill Schoolhouse and Box Grove Community Centres, cultural heritage study/education programs concerning the Toronto Carrying Place East Trail, existing trail system extensions for Seaton Trail, new multi use trail systems on Hydro Corridor in Pickering, creation of parklands at shaft 1 and 2 in Pickering and landscaping and screening enhancements for above ground features, bike lane widening for some haul routes, creation of soccer fields in Pickering and consideration of “buy locally” tendering clauses for the project.

Proposed Infrastructure Enhancements

There are a number of infrastructure enhancements planned primarily for the Pickering community areas located in close proximity to the planned SEC project work. These enhancements have received a “most advantageous” ranking and will receive further consideration by the project team during the technical feasibility, implementation, stakeholder consultation, approvals and property assessment stages of the project.

Infrastructure enhancements include traffic flow, pedestrian and streetscaping improvements on Liverpool Road and at the Finch Avenue and Liverpool Road intersection, traffic flow improvements along Finch Ave by way of bus shelters and bus pull over lanes.

Enhancements Within Bob Hunter Memorial Park and Rouge Park are Priorities

A number of priority enhancements have been identified for the Bob Hunter Memorial Park and Rouge Park within the immediate vicinity of the Southeast Collector Trunk Sewer project. These enhancements include both recreational (trails) and environmental enhancements. (*See Attachment 1*). These enhancements include the extension of the Toronto Carrying Place Trail East from Steeles Avenue to 14th Avenue including a pedestrian bridges and trailheads for public parking, trails in the northwest area of Bob Hunter Memorial Park and a multi-use trail from Bob Hunter Memorial Park to Townline Road.

Further, key environmental enhancements have been identified in the Bob Hunter Memorial Park Master Plan in the northwest area of the park in conjunction with the planned trails with the goal of completing a portion of the park for community ecological and recreational enjoyment. Environmental enhancements will include restoration of surface watercourses (tributaries of the Little Rouge) and termination of existing agricultural practices allowing restoration of natural habitat and riparian wetlands. Wetland habitat will be further enhanced by grading berms at downstream locations to collect surface run-off and planting of appropriate native wetland species.

Meetings have been held with members of the Bob Hunter family, Rouge Park Alliance, TRCA, Town of Markham and First Nations Communities regarding these priority enhancements. There is general concurrence on the scope of these priority enhancements subject to any minor modifications at the detailed design stage. Design work is underway for these priority enhancements with the plan to start construction upon receipt of project approvals. The estimated cost for these works is approximately \$3 million.

The TRCA and Rouge Park have jointly advised York Region's Chief Administrative Officer in an August 14, 2008 letter of their commitment to assist the Region with implementation of these priority works in the Bob Hunter Memorial Park and Rouge Park. (See Attachment 2)

Given these works are on TRCA lands and of the type that is within the expertise of the TRCA construction division, it is recommended herein that the Region enter into an agreement for construction of these works. The reforestation program for key areas of the Bob Hunter Memorial Park and Rouge Park will be co-ordinated with the Rouge Park and TRCA and undertaken as part of the York Region's Natural Heritage Greening Strategy. Current estimates for ecological, recreational and infrastructure enhancements within Markham and Pickering are shown in Table 1:

Table 1
Cost Breakdown for Enhancements

Enhancement	Town of Markham	City of Pickering	Total
Ecological			
a) Ecosystem Restoration	675,000	1,023,000	1,698,000
b) Bob Hunter Memorial Park	280,000	0	280,000
c) Invasive Species Management	24,000	18,000	42,000
d) Eco-school Initiatives	112,000	136,400	248,400
e) Studies and Action Plans	0	20,000	20,000
TOTAL	\$1,091,000	\$1,197,400	\$2,288,400
Recreation			
a) Trails Development	1,462,000	1,247,000	2,709,000
b) Bob Hunter Memorial Park	2,315,000	0	2,315,000
c) Park Development	190,000	920,500	1,110,500
d) Schools	191,000	90,000	281,000
TOTAL	\$4,158,000	2,257,500	\$6,415,500
Infrastructure			
a) Improvements to Existing Intersections	0	2,850,000	2,850,000

b) Construct Public Transit Upgrades	0	150,000	150,000
TOTAL	\$0	\$3,000,000	\$3,000,000
SUB TOTAL	\$5,249,000	\$6,454,900	\$11,703,900
CONTINGENCY - 25%	1,312,250	\$1,613,725	\$2,925,975
TOTAL	\$6,561,250	\$8,068,625	\$14,629,875

Next Steps for the Southeast Collector Enhancement Project

Detailed design work will continue for the high priority enhancement projects in the Bob Hunter Memorial Park and Rouge Park in preparation for implementation at the earliest possible date upon receipt of project approvals. It is recommended herein that an agreement be entered into with the TRCA and Rouge Park to undertake construction of these high priority enhancements. It is anticipated that the finalization of this agreement with the TRCA and Rouge Park along with the commencement of work on these priority enhancement projects will coincide with the Minister's EA approval for the Southeast Collector Trunk Sewer in 2009.

The remainder of the recommended list of enhancements in Pickering and Markham will continue to be refined with ongoing collaboration, technical feasibility, property evaluations and agency approvals with implementation planned for the 2010-2012 time period.

There may also be new projects suggested by stakeholders that may replace those already on the current recommended list if they are determined to be of a greater net benefit to the community and environment. The "Evaluation of Enhancement Methodology Document" that has been made available to the public and stakeholders will be used as the assessment tool when considering any new additions, substitutions or refinements to the present list of enhancements.

It is planned to prioritize implementation of the recommended final list and undertake the work either in conjunction with construction of the SEC trunk sewer or shortly thereafter. Like projects will be bundled to ensure efficient tendering and construction. Consideration is also being given to partnering with interest groups and local municipalities to ensure that the best local outcome is achieved for planned enhancement work. Next steps will include continuing collaboration with the public, agencies and First Nation in developing the recommended final list of enhancements.

Enhancements Planned for the "Greening Strategy" at Stage 3 of the Duffin Creek WPCP

The Duffin Creek Greening/Biodiversity Plan has been developed in concert with the TRCA and is split into four phases, (*See Attachment 3*), all of which are focussed on

natural habitat creation, enhancement and maintenance. All four phases of the plan involve soil preparation, tree planting and the acquisition and installation of recreational furniture (benches, etc.) and habitat features, such as bird houses and raptor poles. As the enhancement areas are immediately adjacent to the construction project, the phases of the plan will be implemented in coordination with the construction schedule for the treatment facilities.

Cost for the Greening/Biodiversity Plan broken down by Phases

The various phases of the Duffin Creek WPCP Stage 3 enhancements are divided according to schedule and area. The associated costs for each phase of the ecological enhancements are shown in Table 2:

Table 2
Cost Breakdown for Greening/Biodiversity Plan

Phase	Activities	Location	Cost
Phase 1	Soil preparation and placement, Planting Installation of habitat features and Site furniture	South-east area	45,000
Phase 2		North-east location	75,000
Phase 3		South-central location	200,000
Phase 4		South-west area	30,000
Total			\$350,000

Next Steps for “Greening Strategy” at Stage 3 of the Duffin Creek Project

The Greening/Biodiversity Plan is in the final stages of design and is currently ready for implementation. Further, the TRCA will begin the preparation of the site for the tree planting program in the fall of 2008.

Relationship to Vision 2026

Planned enhancements for the SEC Project and the Greening/Biodiversity Plan support the Vision 2026 goals related to sustainable development and particular the vision for enhancing the Region’s Environment, Heritage and Cultural resources.

5. FINANCIAL IMPLICATIONS

All costs associated with the enhancements for the SEC project and “Greening Strategy” for the Duffin Creek WPCP Stage 3 Expansion have been included in the 2008 Capital Plan.

The proposed \$15M enhancement program includes the highest priority work that has been identified for the Bob Hunter Memorial Park and the Rouge Park with an estimated cost of \$3 million to begin in 2009. The remainder of these costs would be spread out over the duration of the construction phase of the SEC trunk sewer and extend from 2009 to 2013 as appropriate.

6. LOCAL MUNICIPAL IMPACT

Planned enhancements for the SEC related to reforestation and habitat improvements support the Region's Greening Strategy. Recreational and infrastructure improvements planned in the City of Pickering support Durham Region's goals for sustainable development. Additionally, the ecological enhancements in the Greening/Biodiversity Plan are also in line with Durham Region's Greening Strategy.

7. CONCLUSION

York and Durham Regions have developed policies and environmental goals for planning and undertaking major infrastructure projects to advance the principals of good environmental stewardship and environmental sustainability. Consequently, a program of "enhancements" for the communities of Markham and Pickering was included in the Terms of Reference for the Southeast Collector Trunk Sewer Individual Environmental Assessment study. A similar program, for the City of Pickering on Regional lands, was also included in the Terms of Reference for the Stage 3 Expansion of the Duffin Creek WPCP.

The Terms of Reference approved by the Minister of the Environment in February 2006 included not only the requirement to develop "Enhancement Measures" aimed at providing a positive legacy for the Markham and Pickering residents impacted by the SEC Trunk Sewer Project.

It is recommended that the program of enhancements be undertaken to meet the requirements of the TOR for the SEC and the Duffin Creek WPCP Stage 3 Expansion, and leave a positive project legacy within the communities affected by these projects.

For more information on this report, contact Bala Araniyasundaran, extension 5131, Director, Capital Planning and Delivery in the Environmental Services Department.

The Senior Management Group has reviewed this report.

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