



THE TORONTO AND REGION CONSERVATION AUTHORITY

Watershed Management Advisory Board Meeting #3/05

Chair: Dave Ryan
Vice Chair: Nancy Stewart
Members: Gay Cowbourn
Frank Dale
Pamela Gough
David Gurin
Shelley Petrie
Michael Thompson
Dick O'Brien - Chair, Authority

July 15, 2005
10:30 A.M.

SOUTH THEATRE, BLACK CREEK PIONEER VILLAGE

AGENDA

- | | | |
|-----------|--|---------------------|
| 1. | MINUTES OF MEETING #2/05, HELD ON JUNE 10, 2005 | <u>Pages</u> |
| | (Enclosed herewith on Blue) | |
| 2. | BUSINESS ARISING FROM THE MINUTES | |
| 3. | DISCLOSURE OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF | |
| 4. | DELEGATIONS | |
| 5. | PRESENTATIONS | |
| | 5.1 A presentation by Russel White, Senior Planner, TRCA, in regards to item 7.1 - Morningside Heights Tributary. | |
| | 5.2 A presentation by Robert Messier, Regional Representative, Wetland Habitat Fund, in regards to item 8.1 - Wetland Habitat Fund. | |
| 6. | CORRESPONDENCE | |

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9. NEW BUSINESS

NEXT MEETING OF THE WATERSHED MANAGEMENT ADVISORY COMMITTEE #4/05
SEPTEMBER 23, 2005, IN THE SOUTH THEATRE, BLACK CREEK PIONEER VILLAGE

Brian Denney
Chief Administrative Officer

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TO: Chair and Members of the Watershed Management Advisory Board
Meeting #3/05, July 15, 2005

FROM: Carolyn Woodland, Director, Development Services

RE: MORNINGSIDE HEIGHTS TRIBUTARY
Overview of Project Construction and the Proposed Restoration Plan

KEY ISSUE

Update on the restoration program for the Morningside Tributary within the developing Morningside Heights Community in the City of Toronto (Scarborough Community Council Area).

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT Toronto and Region Conservation Authority (TRCA) staff continue to review the monitoring conducted by the applicants representatives on the Morningside Tributary as part of the development of the Morningside Heights Community in the City of Toronto;

AND FURTHER THAT TRCA require the incorporation of the recommendations of the monitoring program in any future restoration works to be undertaken within the Morningside Tributary.

BACKGROUND

At Watershed Management Advisory Board Meeting #1/05, held on April 15, 2005, the members requested a report on the Morningside Tributary restoration plans, and a summary of the environmental impacts of the stabilization materials used on the Morningside Tributary during the construction and restoration process.

The Morningside Tributary is located within the developing Morningside Heights Community and is part of the Rouge Park. The lands are generally bounded by the Rouge River to the east, Finch Avenue to the south, the existing CP Rail line to the west and Steeles Ave. to the north. The realignment, daylighting and restoration of this tributary was established through a lengthy planning process including a hearing and eventual settlement before the Ontario Municipal Board (OMB). The settlement included acceptance of the realignment and restoration of the Morningside Tributary by the Save the Rouge Valley System (SRVS), the land developers, the City of Toronto, Ministry of Natural Resources and the Toronto and Region Conservation Authority (TRCA). The implementation of the realignment, daylighting and restoration program was the subject of a permit application under Ontario Regulation 158 approved by the TRCA Executive Committee and Fisheries and Oceans Canada (DFO). The majority of the works are complete. There is additional restoration to be undertaken by SRVS as per an agreement between SRVS and the landowners who have contributed \$1 million for the program.

Historically, the tributary had been realigned through the development of the Brookside Golf Course (Attachment 1), had been piped in sections and was slated for elimination (by diversion of flows to the main Rouge River) as per an approved Environmental Assessment conducted as part of the original plan to develop the lands for industrial uses. The lower portion of the tributary was to be realigned with flows diverted to a large pond within the main Rouge River Corridor. Parts of the works were implemented including a large diversion structure and pond within the Rouge River Corridor, but a proposal to change the land use from industrial to residential provided TRCA staff with the opportunity to require the re-establishment of the tributary. Although initially not supported by the applicant, the settlement before the OMB resulted in the establishment of a minimum 100 metre corridor to contain a re-established tributary using natural channel design principles. These natural channel design principles were supported by the most current scientific methods for channel recreation as presented through Parish Geomorphic and Ecoplans. The tributary was also designed factoring the flood conveyance requirements and the stormwater management and servicing requirements for the adjacent developing lands. A small offshoot tributary of the Morningside Tributary known as the Neilson Tributary was also realigned as part of this project.

TRCA staff have provided several reports to the Authority on the project, during and after the planning approval. These reports are available for review and include information reports, request for direction from the Authority, the Rouge Park Alliance and permit reports for detailed design.

Through the permit process under Ontario Regulation 158, TRCA technical staff reviewed and approved detailed design and restoration drawings, sediment and erosion control plans and planting plans. As part of the sediment and erosion control program a large temporary diversion channel was constructed to allow for the recreated channel and corridor to be implemented in dry conditions. The diversion structure conveyed upstream flows through the area. In addition, after the channel and riparian zone were graded the applicant promoted the placement of a photo-degradable erosion fabric typically used in large restoration projects, in order to stabilize the soils and eliminate rill erosion from rains and streambank erosion, while the vegetation and corridor established. While TRCA staff were initially concerned with this solution, it was determined to be the best measure to secure the natural channel and stream corridor immediately after construction while allowing for vegetation growth. The works were supported by City of Toronto engineering staff.

TRCA staff have reviewed the potential impacts of the photo-degradable erosion control geo-textile blanket and note that there are potential impacts to wildlife in the short term after construction which are reduced once the valley vegetation establishes. It is noted that the material can trap small mammals and can also trap snakes and reptiles prior to its degradation. However, in order to minimize erosion downstream sedimentation during construction and during the establishment of the new stream corridor using natural channel design principles, these impacts were considered to be minimal. A recent and ongoing monitoring exercise being conducted as a requirement of DFO and the City of Toronto, has confirmed that the tributary is continuing to improve as the vegetation establishes and the watercourse moves towards a more mature stable system while retaining the natural dynamic character of a free flowing watercourse within the corridor. Fish have returned to the watercourse reach and habitat for flora and fauna is improving. A recent request has been made by the applicant to remove Beaver which are damaging the newly planted trees. Overall, staff consider the project to be moving forward to success. However, we have learned some lessons from the project which will be applied to any future project of this magnitude. It should be noted that the approval of this project was based on the historical planning and environmental circumstances and such a project is the exception rather than the practice in TRCA jurisdiction as the TRCA policies promote the insitu protection of all watercourses and habitats.

The Rouge Watershed Task Force has put together a series of draft recommendations to be considered for future projects based on the concerns perceived with the project including concerns of Jim Robb, Friends of the Rouge Watershed. These recommendations are contained in the table below for reference and will be considered as part of any works to be undertaken as a result of the monitoring exercise and any subsequent restoration works. In addition the table outlines actions that TRCA has or will take for any future projects of this type:

Rouge Watershed Task Force Draft Recommendations (2005) and TRCA Actions

Concern		Recommendations	TRCA Actions
<p>The construction practices used in Morningside Heights, though current accepted practice at the time, are inadequate in controlling sediment and temperature impacts. Silt continues to collect on channel beds and increased nutrient levels and temperatures are leading to algal blooms. Monitoring will be important to determine to what extent the system returns, post construction.</p>	<p>1</p>	<ul style="list-style-type: none"> ● minimize the construction period, through phasing, proper planning and mitigate with best practices to reduce impacts during the construction phase (e.g. water quality, thermal, hydrology, etc.). ● promote stronger erosion and sediment control criteria. ● promote improved on-site supervision during construction. 	<ul style="list-style-type: none"> ● projects of this magnitude are not the norm, however the importance of very detailed staging/phasing plans cannot be over emphasized.

<p>The synthetic geotextiles used in Morningside Heights for erosion control are designed to photo-degrade but may not degrade as efficiently as other products which may provide comparable soil stability.</p>	<p>2</p>	<ul style="list-style-type: none"> ● geotextile options should be investigated further to ensure the application of the most environmentally-friendly technologies available. 	<ul style="list-style-type: none"> ● TRCA is continuing to investigate options and limit the use of this material to extreme circumstances.
<p>Non-native species were planted on site, though native plantings are specified in the site plan.</p>	<p>3</p>	<ul style="list-style-type: none"> ● require that a biological consultant conduct construction site inspections to verify planting plan implementation, as a condition of approval of plan of subdivision. 	<ul style="list-style-type: none"> ● species were flagged removed and replaced. ● species are being mislabelled by the nursery trade, therefore it is important that qualified professionals review plant material as it is delivered.
<p>Part of the rationale for the modification of the urban landscape in Morningside Heights was to permit a functioning sewer system. With a naturally wide, shallow floodplain and a desire to have gravity-fed storm drainage systems, the tributary channel and valley floor needed to be lowered.</p>	<p>4</p>	<ul style="list-style-type: none"> ● promote alternatives to standard servicing design, or seek opportunities to change land use designations or configurations that may avoid the need for lowering the channel. 	<ul style="list-style-type: none"> ● TRCA staff concurs.
<p>Monitoring is not always required in development projects and if it is, it is often limited to within a five year time frame.</p>	<p>5</p>	<ul style="list-style-type: none"> ● require compliance monitoring financed through Development Charges and have a provision to extend the standard monitoring period to ensure adequate time for the site to show signs of stability. 	<ul style="list-style-type: none"> ● monitoring of the tributary was part of the DFO Authorization and necessary prior to the lands being assumed by City of Toronto. ● TRCA staff concur that the longer the monitoring period, the better.
<p>Success in re-establishing native vegetation on sites cleared for development is limited by the reduced fertility of the soil, which tends to favour colonization by invasive species that under these conditions are able to out-compete natives ones. Poor soil can also reduce the long term health of a species.</p>	<p>6</p>	<ul style="list-style-type: none"> ● take greater care with topsoil removal and replacement and avoid unnecessary compaction. ● investigate options for improving the fertility of soils and the potential longevity of plantings. 	<ul style="list-style-type: none"> ● TRCA staff concur.

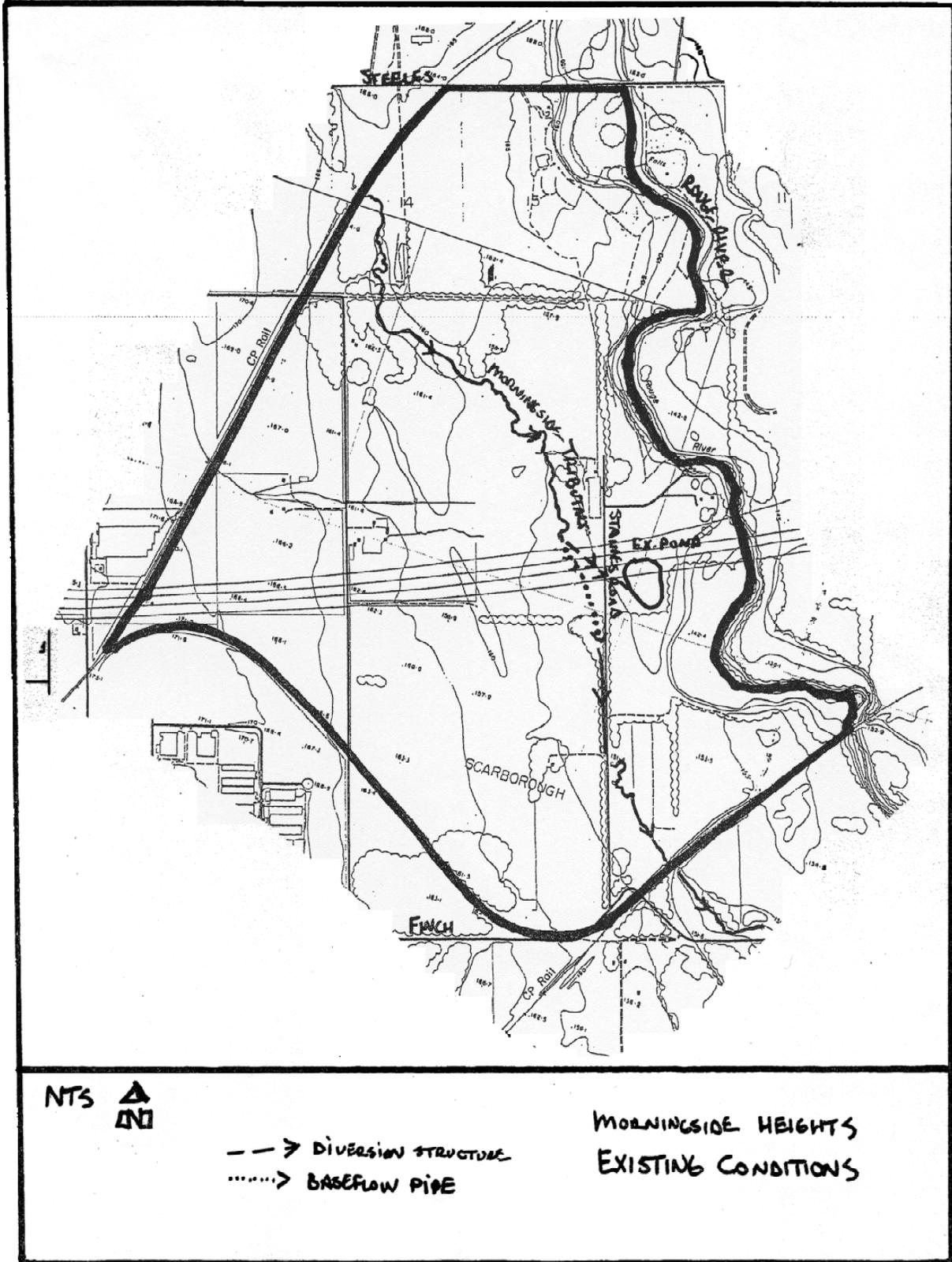
<p>Watercourses evolve over time to support complex biological systems and functions and when they are exposed to radical change such as channel diversion, they must begin the long process of re-establishing a dynamically stable channel, a supportive riparian zone and a productive, diverse instream community.</p>	<p>7</p>	<ul style="list-style-type: none"> stream diversion should be prohibited unless absolutely necessary. Where necessary, “natural channel design” principles should be applied. 	<ul style="list-style-type: none"> TRCA staff concur and note that opportunities to renaturalize the channel were an important consideration in this instance. This is the process undertaken with the Morningside Heights Tributary.
<p>The Morningside Heights development was initially approved in the eighties and the designs no longer conformed to current practice. It was only through the application for a re-zoning by the developer that opportunities for updating the design arose.</p>	<p>8</p>	<ul style="list-style-type: none"> that an agreed upon protocol be established for all agencies reviewing existing plans, using tools of negotiation/moral suasion and, in specified instances, land acquisition, to update outdated development plans that no longer meet current standards. 	<ul style="list-style-type: none"> In this instance the agencies used the planning opportunities to revisit the old approvals and seek a better solution more in keeping with current standards.
<p>More attention should have been directed at the examination of development alternatives to the Morningside Heights development.</p>	<p>9</p>	<ul style="list-style-type: none"> unapproved development projects with a large potential for altering environmental conditions should require full Environmental Assessments to allow public consultation and the examination of alternatives. 	<ul style="list-style-type: none"> The public process was served through the land use planning process and the Ontario Municipal Board.

DETAILS OF WORK TO BE DONE

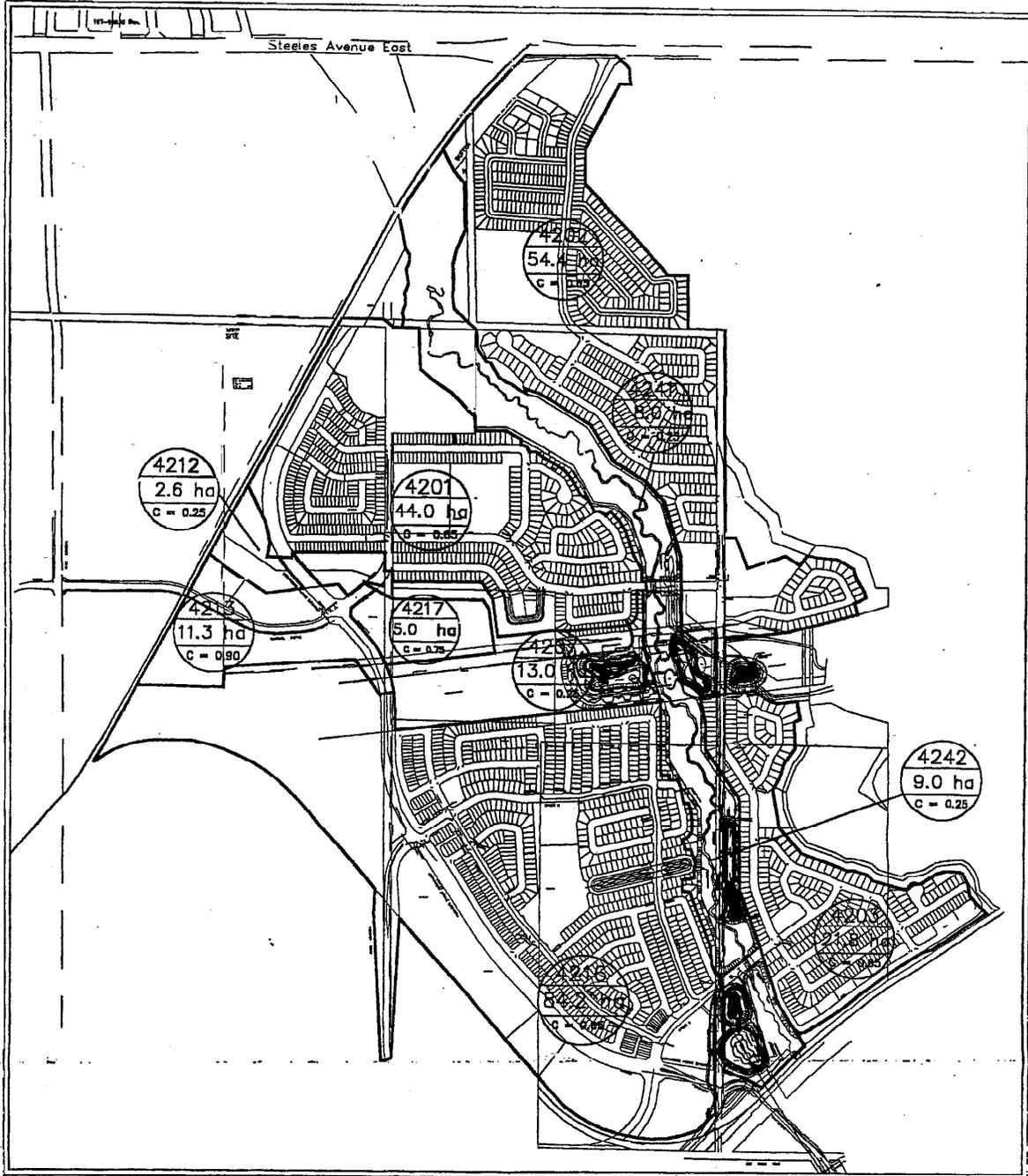
The Morningside Tributary restoration is subject to a monitoring program as a requirement of DFO approval. The applicant is also required to undertake a two year monitoring program upon completion of the works and prior to the assumption of the property by the City of Toronto. Initial monitoring to address DFO and TRCA requirements were initiated at the time of permit approval in 2002 and the monitoring requirements for the City of Toronto were initiated in January 2005, the completion date. The City of Toronto monitoring program focuses on terrestrial habitat, stormwater facility function and channel stability. The DFO monitoring program focuses on instream habitat, water quality (including temperature) and channel stability. DFO staff are generally satisfied with the performance of the watercourse and associated restoration. TRCA staff will continue to review the monitoring of the project and will provide a more detailed report on the restoration plan after the 2-year City of Toronto monitoring period which started in January 2005, is complete.

TRCA staff are of the opinion that the watercourse and the related stream corridor continues to improve as the watercourse and vegetation stabilizes. We are also of the opinion that this project will be beneficial in the longer term to the overall health of the Rouge River watershed, particularly given that this tributary was once approved for elimination. TRCA staff will continue to work with the City of Toronto, the community interest groups and the owners to implement the recommendations of the various monitoring programs and to implement the recommendations raised by the Rouge Technical Group with this and future projects.

Report prepared by: Russel White, extension 5306
For Information contact: Russel White, extension 5306
Date: April 19, 2005
Attachments: 4



Attachment 2



2000-2261 FEBRUARY 2001	SCALE: N.T.S.	CATCHMENT BOUNDARY
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MORNINGSIDE HEIGHTS
POST-DEVELOPMENT
WATERSHED BOUNDARY

Attachment 3



Attachment 4



TO: Chair and Members of the Watershed Management Advisory Board
Meeting #3/05, July 15, 2005

FROM: Adele Freeman, Director, Watershed Management

RE: **PICKING UP THE PACE TO RESTORATION - A RETROSPECTIVE AND PROSPECTIVE LOOK AT THE DON RIVER**
A Funding Request by Pollution Probe

KEY ISSUE

Direction to work with Pollution Probe and provide funding for the development of a retrospective and prospective review of the Don River watershed.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT staff enter into an agreement with Pollution Probe based on their proposal to undertake the Don River retrospective/prospective project with a proposed title "Picking up the Pace to Restoration - A Retrospective and Prospective Look at the Don River";

THAT Toronto and Region Conservation Authority (TRCA) staff be directed and authorized to execute any necessary documents to give effect thereto with terms and conditions satisfactory to TRCA staff;

THAT TRCA provide \$20,000 funding to Pollution Probe to initiate the development of the report;

THAT staff coordinate findings from the Pollution Probe report with the Don Watershed Plan Update Study which is currently underway;

AND FURTHER THAT Pollution Probe be so advised.

BACKGROUND

Pollution Probe, a national environmental organization, is proposing to lead, in partnership with TRCA and others, an initiative that looks toward re-energizing a shared vision for the Don River watershed. A report will be produced with the proposed title *Picking up the Pace to Restoration - A Retrospective and Prospective Look at the Don River*, and will draw on historical records and lessons learned over the past 35 years to review and help define strategies necessary to advance restoration and regeneration efforts in the Don watershed. The report will review the history of the Don watershed, highlighting past achievements and disappointments; it will identify current barriers (both infrastructural and institutional) to further restoration; and will assist in defining a process for achieving the shared vision within the current governance framework.

The report will be a Pollution Probe document and will follow a similar format as other reports produced as part of Pollution Probe's 'primer series'. The report is to be developed with input from key stakeholders in the Don watershed and will undergo an intensive review process to ensure that it is unbiased as well as scientifically and factually correct. Pollution Probe will hire a well-recognized researcher/writer to produce the report, however final editorial control will remain with Pollution Probe's Executive Director.

RATIONALE

This initiative is well-timed in that it has been over 35 years since the anniversary of Pollution Probe's "funeral" for the Don; 15 years since the City of Toronto created its Task Force to Bring Back the Don; and more than 10 years since the publication of *Forty Steps to a New Don*.

Many efforts by government, business and community partners have contributed toward addressing the key issues found in this extremely urbanized watershed, however, it is recognized that much remains to be done to restore the Don watershed. Significant projects currently underway include the EA for the flood protection of the Port Lands and naturalization of the mouth of the Don, as well as the detailed designs and final approvals for the flood protection of the west side of the Don River. In order to overcome barriers to restoration, the local community and Don watershed stakeholders must be re-engaged and re-energized. It is also imperative to involve all levels of government in the process in order to gain greater support, resources and capacity for the continued restoration of the watershed.

The report will be completed in parallel to the TRCA's Don Watershed Plan Update which is currently underway. An executive summary of the Pollution Probe report will be produced and could form a "forward" for the Don Watershed Plan Update. *Picking up the Pace to Restoration - A Retrospective and Prospective Look at the Don River* will help to contribute to the general development of the Don Watershed Plan Update and will assist in guiding recommendations, strategies and tools for prioritizing implementation actions. This report will serve as a useful tool for stakeholders, watershed advocates at various levels and decision-makers in the Don watershed.

DETAILS OF WORK TO BE DONE

TRCA staff will continue to work with Pollution Probe to ensure the proper integration of Pollution Probe's report with work underway on the Don Watershed Plan Update.

FINANCIAL DETAILS

Pollution Probe's Proposed Budget:

\$15,000 - 20,000	Research & Writing
\$15,000 - 20,000	Project Management (includes technical & expert review, revision and approvals)
\$30,000 - 40,000	Total

Optional Expenses: \$20,000 - 25,000 for editing, graphic design, images & printing.

Funding, in the amount of \$20,000 will be provided by the TRCA to Pollution Probe to help begin the development of the report. These funds will be used to support the writer in their research and written work as well as project management within Pollution Probe. Funds will be transferred to Pollution Probe based on an agreed upon schedule of deliverables.

Pollution Probe will seek the additional \$10,000 - \$20,000 required from other partners to complete the writing and project management components of the report as well as pursuing the additional funds required for the optional components. Funding provided by TRCA will assist Pollution Probe in leveraging this additional funding.

Funds for this report are available in the Don Watershed Strategy account, 118-10.

Report prepared by: Amy Thurston, extension 5283
For Information contact: Adele Freeman, extension 5238
Date: July 06, 2005

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #3/05, July 15, 2005

FROM: Adele Freeman, Director, Watershed Management

RE: **FRAMEWORK FOR A FIVE YEAR IMPLEMENTATION PLAN FOR PICKERING WATERFRONT AND FRENCHMAN'S BAY**
City of Pickering in the Region of Durham

KEY ISSUE

Joint City of Pickering/Toronto and Region Conservation Authority report – Framework for a Five Year Implementation Plan for the Pickering Waterfront and Frenchman's Bay and its recommendations and the actions of Pickering Council at its meeting held on Monday, June 27, 2005 requesting TRCA participation in this initiative.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT the report entitled "Framework for a Five Year Implementation Plan for Pickering Waterfront and Frenchman's Bay" prepared by Suzanne Barrett and Nicole Swerhun for the City of Pickering and TRCA dated June 24, 2005 be received;

THAT the development of a Five Year Implementation Plan for Pickering Waterfront and Frenchman's Bay be endorsed as requested by the City of Pickering Council at its meeting held June 27, 2005;

THAT staff be directed to work with the City of Pickering in the development of a Five Year Implementation Plan for Pickering Waterfront and Frenchman's Bay with priority emphasis on the development of a stormwater management master plan for Frenchman's Bay watershed as a major initiative to improving watershed health;

AND FURTHER THAT the City of Pickering be so advised.

BACKGROUND

At Authority Meeting #3/05, held on April 29, 2005, staff were directed to work with the City of Pickering on a scoping exercise, involving stakeholders with an interest in Frenchman's Bay, which will result in a workplan to direct future action related to the Frenchman's Bay watershed. Consultants Suzanne Barrett and Nicole Swerhun were retained to help design and implement a stakeholder workshop to discuss the many issues and opportunities related to Frenchman's Bay and the Pickering Waterfront. Preparatory sessions were held in March 2005 with City of Pickering, Region of Durham, Ministry of Natural Resources, Toronto and Region Conservation Authority and other agency staff to share information about studies, plans and projects.

On Saturday, May 14, 2005, TRCA and the City of Pickering were host to 41 community representatives at the Ontario Power Generation Information Centre. Part 1 of the workshop focused on the need for a stormwater management master plan for Frenchman's Bay and its watershed. Participants were asked to provide advice regarding the objectives of the plan, the process for developing the plan, the studies that should be considered, and previous stormwater management recommendations. Part 2 of the workshop included discussion of other issues relating to Pickering's waterfront. Participants considered a list of current and planned initiatives and provided their comments as well as suggestions for additional initiatives.

Following the workshop the consultants prepared the attached report entitled "Framework for a Five Year Implementation Plan for Pickering Waterfront and Frenchman's Bay". This report recommends that a five year plan is needed to identify and coordinate the implementation of ongoing and planned waterfront and watershed projects. Such a plan would work towards achieving the objectives established by the Mayor Arthur's Task Force on the Pickering Waterfront (2001). It will also integrate the recommendations and conclusions of previous reports such as: the Krosno Creek Downspout Disconnection Project (2003); Krosno Creek Preliminary Stormwater Management Strategy (2002); the City of Pickering Retrofit Study (2003); and Remediation of an Urban-Impacted Watershed and Lagoon: Frenchman's Bay, City of Pickering - Final Report.

Building on the success of existing projects, the plan will link to other initiatives and create a mechanism to chart successes and report back to the community to show progress. The report suggests that the plan would include, but not be limited to, projects such as:

- Stormwater Management Master Plan;
- Harbour Entrance;
- Waterfront Trail and Signage; and
- Outreach, Education and Awareness.

City of Pickering Council at its June 27, 2005 meeting adopted the following recommendations:

1. *That Report OES 28-05 regarding a framework for a Five Year Implementation Plan for Pickering Waterfront and Frenchman's Bay be received; and that*
2. *Council endorse the development of a Five Year Implementation Plan by staff through collaboration with the Toronto & Region Conservation Authority (TRCA), as adopted by the Waterfront Coordinating Committee (WCC), based on the framework attached to this report; and that*
3. *Staff be authorized to commence preparation of the Terms of Reference, in consultation with the TRCA, the WCC and other agencies to retain a consultant to prepare the Stormwater Management Master Plan and public consultation process; and that*
4. *The Terms of Reference be brought to the Executive Committee for approval at the regular meeting scheduled for September 26, 2005; and that*
5. *This report be forwarded to the Toronto & Region Conservation Authority for endorsement and acceptance to participate with the City of Pickering on this initiative.*

RATIONALE

The TRCA, the City of Pickering and the Pickering Waterfront Coordinating Committee, are committed to working with other agencies and community stakeholders towards creating a comprehensive multi-year implementation plan for Frenchman's Bay and the Pickering Waterfront. As suggested, this plan would include development of a comprehensive stormwater management master plan for the Frenchman's Bay watershed, as well as the development of a harbour entrance project which are both consistent with TRCA's previous recommendations to the City of Pickering and the Pickering Waterfront Coordinating Committee.

Pickering Council has set as a top priority the preparation of a stormwater management master plan with terms of reference to be approved by the City of Pickering in late September 2005. This master plan will follow the first two steps in a Class C Environmental Assessment (EA), including public consultation. In the last five years TRCA and the City of Pickering have undertaken numerous studies on Amberlea Creek, Dunbarton Creek, Pine Creek and Krosno Creek which will provide a significant component of a stormwater management master plan for the Frenchman's Bay watershed.

The master plan will provide the comprehensive strategic direction towards achieving healthy watersheds, implementation priorities, agreement on phase 1 and 2 of a Class EA and major infrastructure funding partnerships.

DETAILS OF WORK TO BE DONE

By September 2005 the City of Pickering will prepare a terms of reference in order to retain a consultant to prepare the stormwater management master plan component of the Five Year Implementation Plan. The master plan will be prepared such that it addresses, at a minimum, Phases 1 and 2 of the Municipal Class Environmental Assessment process. By doing this, any projects that are Class EA Schedule B or C projects would have the supporting master plan document as its basis. Due to its nature and connectivity to stormwater management, the issue of water flow between Frenchman's Bay and Lake Ontario may be included in the stormwater management master plan. TRCA staff and the Waterfront Coordinating Committee will assist in the development of the Terms of Reference.

A Five Year Implementation Plan for Pickering waterfront and Frenchman's Bay will be prepared following the master plan completion.

FINANCIAL DETAILS

Funding is identified in the 2005 Durham Capital budget to provide for in-kind assistance in the stormwater management master plan.

City of Pickering 2005 Capital Budget includes an allocation of \$145,000 to support the development of a stormwater management master plan for Frenchman's Bay watershed and Krosno Creek.

Report prepared by: Laura Stephenson, extension 5296

For Information contact: Larry Field, extension 5243

Date: June 28, 2005

Attachments: 1

Attachment 1

FRAMEWORK FOR A 5 YEAR IMPLEMENTATION PLAN FOR PICKERING WATERFRONT AND FRENCHMAN'S BAY

Prepared by Suzanne Barrett and Nicole Swerhun for the City of Pickering and Toronto
and Region Conservation Authority
June 24th 2005

1. BACKGROUND

For over a decade, Frenchman's Bay and the Pickering waterfront have been the subject of numerous studies, plans and recommendations. Many projects have been implemented, resulting in success stories like Millennium Square, Beachfront Park, Petticoat Creek Bridge, improvements to Rotary Frenchman's Bay West Park, restoration of the OPG woodlot, the West Shore Habitat Initiative and Home Place, to name a few.

Despite progress on specific projects, serious concerns remain about the environmental health of Frenchman's Bay and its sub-watersheds. In response to these concerns, the Waterfront Coordinating Committee resolved in December 2004 to hold a strategic planning workshop with stakeholders to build a framework for an action plan for Frenchman's Bay and the Pickering Waterfront. Consultants Suzanne Barrett and Nicole Swerhun were retained to help design and implement the workshop. Preparatory sessions were held in March 2005 with City of Pickering, Toronto and Region Conservation Authority and other agency staff to share information about studies, plans and projects.

Forty one people, representing a wide range of stakeholders, attended the workshop on Saturday May 14th 2005 at the OPG Information Centre. Part 1 of the workshop focused on a stormwater management master plan for Frenchman's Bay and its watershed. Participants were asked to provide advice regarding the objectives of the plan, the process for developing the plan, the studies that should be considered, and previous stormwater management recommendations. Part 2 of the workshop included discussion of other issues relating to Pickering's Waterfront. Participants considered a list of current and planned initiatives and provided their comments as well as suggestions for additional initiatives. The workshop report, workbook and backgrounder are attached in the Appendices.

The following action framework has been developed in response to the stakeholder input received at the May 14th workshop.

2. DEVELOPING A 5 YEAR IMPLEMENTATION PLAN

2.1 What is it?

The 5 Year Implementation Plan will identify and coordinate the implementation of ongoing and planned waterfront and watershed projects.

2.2 Why is this Implementation Plan necessary?

The Implementation Plan will:

- ensure coordinated and timely action,
- focus public sector, private sector and volunteer activities on an agreed course of action,
- bring clarity to roles and responsibilities,
- establish accountability and reporting mechanisms, and
- provide a compelling and substantiated framework to assist in securing funds and other resources.

The Implementation Plan will also directly contribute to the objectives outlined in the 1998 report of the Mayor's Task Force as received by Council, which made a commitment that that the Pickering Waterfront should become:

1. A Place where public access is maximized and opportunities exist for visitors to choose safe waterfront activities, compatible with the natural environment and adjacent neighbourhoods.
2. A Place that is effectively linked to commercial areas by special design themes along connector roads.
3. A Place where the waterfront trail harmonizes with the environment and links the different landscapes in a way that minimizes automobile use.
4. A Place where residents can study nature and contribute to its enhancement, as well as learn about the early settlement of our community and Port Pickering's historic role.
5. A Place where economic activities are encouraged to enhance the waterfront landscape and promote the waterfront experience.
6. A Place where development maintains a pedestrian scale that reinforces the waterfront experience, protects waterfront vistas, supports the ecosystem and remains compatible with the adjacent neighbourhood.
7. A Place that makes an important contribution to the development of a town-wide tourism strategy and helps attract future businesses and residents.
8. A Place where landscaping, public art, and other enhancements work together to mitigate the impact of existing negative land use.
9. A Place that recognizes and celebrates Pickering's multicultural mosaic.
10. Above all, a Place that fosters a healthy ecosystem, sustainable for the enjoyment of future generations.

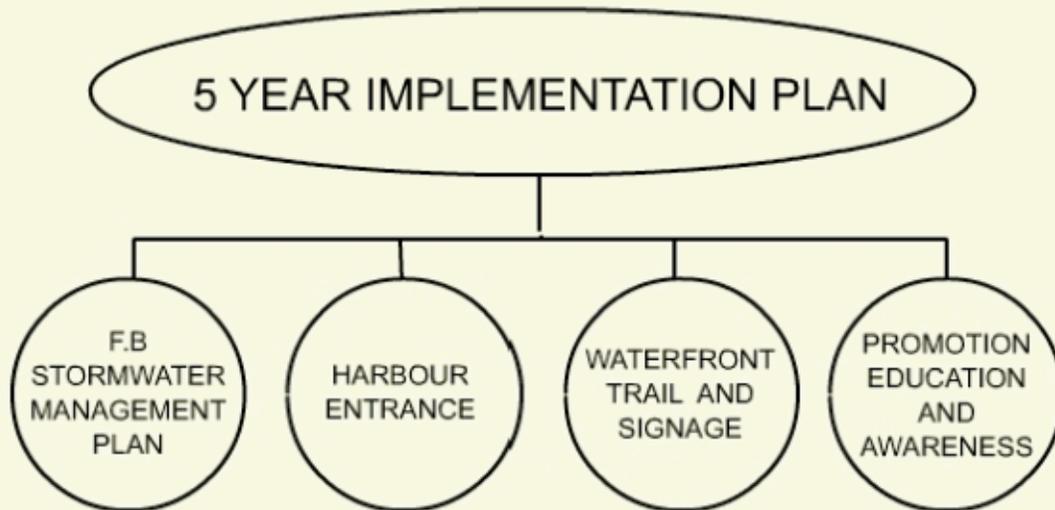
2.3 What projects will the Implementation Plan include?

The projects include, but are not limited to:

- A. Stormwater Management Master Plan for Frenchman's Bay and its sub-watersheds
- B. Harbour Entrance
- C. Waterfront Trail and signage
- D. Outreach, education and awareness

Additional details on each of these projects are included in Section 3.

Organizing framework for implementing Pickering Waterfront and Frenchman's Bay projects



2.4 Who will guide development of the 5 year Implementation Plan?

The five year Implementation Plan will be developed through collaboration between the City of Pickering and Toronto and Region Conservation Authority (TRCA), with advice from the City of Pickering's Waterfront Coordinating Committee (WCC). Recommendations may be forwarded to Council by the Waterfront Coordinating Committee.

2.5 Implementation Approach

The 5 Year Implementation Plan will:

- **Build on Existing Work.** The 5 year Implementation Plan will build on the 1998 report "Waterfront 2001 – Mayor's Task Force on the Pickering Waterfront" as well as other recent studies and completed/ongoing projects.
- **Bring Consistency to Project Implementation.** The following information will be included about each of the projects:
 - Objectives
 - Project team and responsibilities
 - Workplan and timelines
 - Budget
 - Public and stakeholder consultation plan
 - Plan to secure funding and in-kind support

- Regulatory requirements
 - Performance measures and benchmarks to assess progress
 - Reporting methods and schedule
- **Coordinate information and projects.** There are many existing and potential linkages among the individual projects in the 5 year plan. The Plan will indicate opportunities for information-sharing and collaboration among partners, reducing duplication and increasing coordination. Overall coordination will be provided by the Waterfront Coordinating committee, assisted by specific staff and/or citizen sub-committees for individual projects.
 - **Assist in securing resources.** The plan will provide the rationale and documentation required to undertake fund-raising for the entire waterfront and/or for specific projects. It will assist in identifying and securing opportunities for federal and provincial grants, public-private partnerships, in-kind support and volunteer involvement.
 - **Link to other Initiatives.** The Plan will be implemented in the context of the policies and programs of other levels of government and related initiatives by the private sector and community groups. Examples include, but are not limited to:
 - Province of Ontario's "Places to Grow" (Greater Golden Horseshoe Growth Management Plan);
 - TRCA's Terrestrial Natural Heritage Strategy, Integrated Shoreline Management Plan, Valley and Stream Corridor Management Plan,
 - OPG's Hydro Marsh Report and Biodiversity Study;
 - City of Pickering stormwater studies,
 - Ontario Ministry of Natural Resources fisheries plans;
 - Region of Durham policies including designation of Frenchman's Bay as a tourism node; and
 - Region of Durham Regional Bicycle Plan and Regional Trail Network.
 - **Include ongoing citizen participation and regular evaluations.** The City of Pickering Citizen's Report and website will be used to communicate the five year plan to the public and to provide annual reports on progress for each of the component projects. Workplans will be reviewed on an annual basis and adjusted if necessary. During the fifth year of the plan, an overall review will be conducted in order to update the plan for the next five years.

3. PROJECTS

A. Stormwater Management Master Plan for Frenchman's Bay and its sub-watersheds

The stormwater management master plan will encompass all the watersheds related to Frenchman's Bay, including the sub-watersheds of Krosno Creek, Amberlea Creek, Pine Creek, Dunbarton Creek and Hydro Marsh.

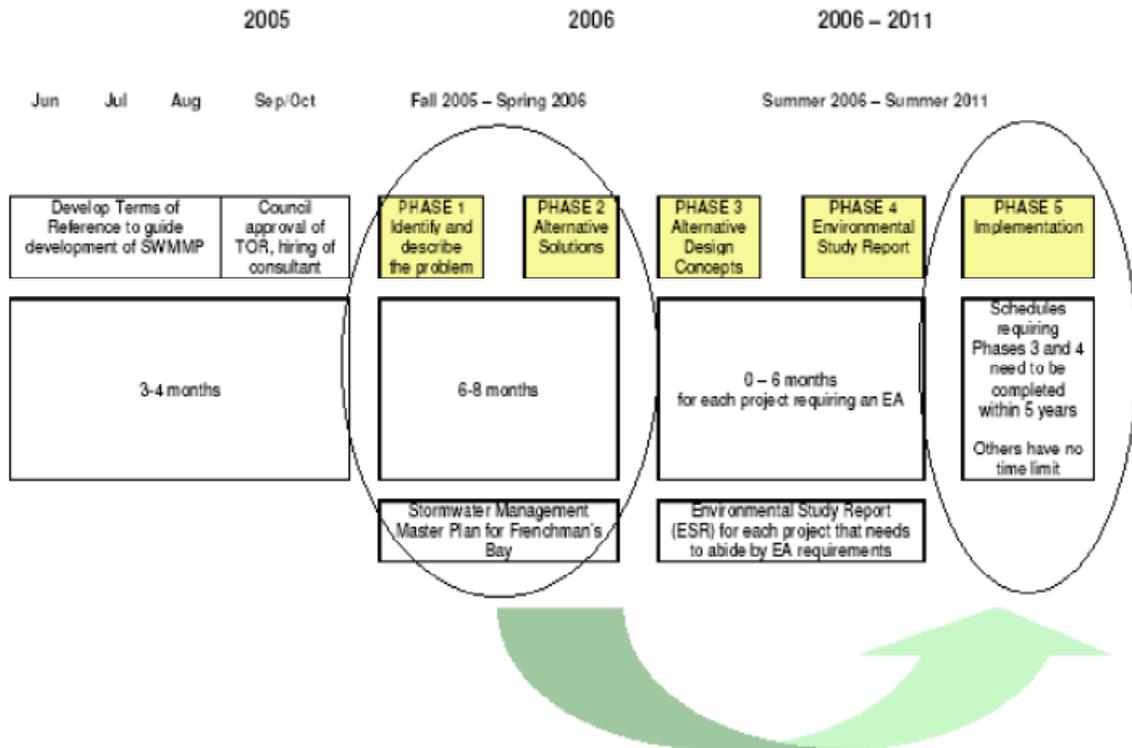
The stormwater management master plan will be undertaken to fulfil the requirements of Phases 1 and 2 of a municipal Class Environmental Assessment which include identifying and describing the problem and assessing alternative solutions. The many existing studies for Frenchman's Bay and its watersheds will be incorporated into the environmental assessment. Terms of reference will be developed by City of Pickering staff, in consultation with other agencies, by September 2005. Consultants will be retained to prepare the Plan and public consultation will be an important part of the process.

Following the completion of the stormwater management master plan, individual projects may be implemented immediately, others will require further environmental assessment (Phases 3 and 4) to consider alternative designs and develop an environmental study report.

While the plan is being prepared, efforts should be initiated to secure sources of funding for project implementation.

The following diagram illustrates how the stormwater management master plan will be developed. It illustrates a timeline of approximately 1 year to complete the overall plan (Phases 1 and 2) plus up to 6 months to undertake Phases 3 and 4 for specific projects.

Stormwater Management Master Plan Development Process



B. Harbour Entrance

TRCA has initiated a multi-year waterfront development project that will achieve sustainable marine function for Frenchman's Bay. It will include construction of a new harbour entrance, a long-term plan for dredging and improvements to public access. This project will require approval by all marine interests and all levels of government.

C. Waterfront Trail and Signage

The City of Pickering has prepared a Waterfront Trail plan and is implementing it in collaboration with the TRCA and the Waterfront Coordinating Committee. Immediate priorities include:

- Finalizing trail alignment in the Marksbury Road area;
- Design and implementation of Monarch Trail;
- Rouge Gateway; and
- Connections between west and east spit of harbour entrance.

The Mayor's Waterfront Task Force recommended a series of interpretive signs across the waterfront. The Waterfront Coordinating Committee has prepared some preliminary signage concepts. Further discussions between the Committee and Pickering staff are required to finalize design, locations, budget and fundraising strategy.

D. Outreach, education and awareness

The Pickering waterfront and Frenchman's Bay have tremendous potential for ecotourism and environmental education.

The Frenchman's Bay Watershed Rehabilitation Project is already undertaking excellent work to engage residents, increase environmental awareness and encourage sustainable living practices. The project began in 1998 and plays a strong role in the community as an environmental leader. It is a collaboration between the Toronto and Region Conservation Authority and the City of Pickering, with a number of other partners. The project delivers innovative habitat restoration projects on public and private lands.

In addition, the 1998 Mayor's Waterfront Task Force report recommended establishment of an education facility and programs on the Pickering Waterfront. The June 2003 report *Remediation of an Urban-impacted Watershed and Lagoon* (Universities of Toronto and McMaster) also recommended public education, including signage and an interpretive pavilion with a meeting room, demonstration laboratory and environmental library. The Waterfront Coordinating Committee needs to discuss these ideas further in order to develop a project description.

4. WATERFRONT COORDINATING COMMITTEE - TERMS OF REFERENCE

The Waterfront Coordinating Committee (WCC) was established by Pickering Council in 2000 to assist with the implementation of the Mayor's Waterfront Task Force 1998 recommendations.

In 2006, appointments to the WCC will be reviewed. Therefore it is timely, in conjunction with the preparation of the 5 year plan for the waterfront, to establish specific terms of reference for the committee. Suggestions are provided below.

4.1 Suggested WCC Role

The suggested roles of the WCC are to assist the City of Pickering Council and staff by providing:

- Oversight for implementation of the five year plan to ensure accountability and progress as measured against the benchmarks established in the 5 year plan;
- Coordination to improve effective use of resources and avoid duplication;
- Clearing house for information exchange;
- Network with the broader community;
- Establishment of community priorities; and
- Assistance in securing funding and in-kind support.

4.2 Membership

Membership of the WCC is currently comprised of the Mayor, two other Members of Council, eight persons appointed from the community, and representatives from relevant agencies and landowners. The WCC is chaired by a member of City Council.

The WCC needs to review its membership to ensure that it is structured effectively for its work on the 5 year plan and individual projects. For example, at the May 14th workshop, it was suggested that representatives from school boards and universities should be added to the Committee. Another recent suggestion is that agency staff should participate as dedicated resource people on the WCC and appropriate sub-committees (rather than being members of the WCC).

Term of appointment is three years.

4.3 Meeting schedule

The WCC will meet on a quarterly basis, subject to need. Additional meetings may be scheduled by the Chairperson if required.

4.4 Public and stakeholder consultation

The WCC will assist the teams responsible for specific projects to engage stakeholders and the general public in meaningful and timely discussions. It will also assist with overall consultation for the implementation plan, progress reporting and plan review.

APPENDICES

Appendix A. Backgrounder for May 14th Workshop - Addressing Stormwater Impacts on Frenchman's Bay

Appendix B. Workbook for May 14th Workshop - Addressing Stormwater Impacts on Frenchman's Bay

Appendix C. Workshop Report - Addressing Stormwater Impacts on Frenchman's Bay, May 14th 2005, OPG Information Centre

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #3/05, July 15, 2005

FROM: Deborah Martin-Downs, Director, Ecology

RE: REVISION OF THE WEST NILE VIRUS STANDING WATER COMPLAINTS
PROCEDURE FOR TRCA

KEY ISSUE

Revision of an existing protocol to better assist in dealing with complaints surrounding standing water on authority property, participation in the West Nile Virus Advisory Committee, monitoring populations of mosquitoes on TRCA property.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT the updated protocol to address public complaints about standing water and West Nile Virus (WNV) related inquiries on TRCA property be received;

AND FURTHER THAT staff be directed to continue to participate in the West Nile Virus Advisory Committee for the Regions of Peel, Durham, York and Toronto and continue to monitor mosquito larval densities on TRCA property.

BACKGROUND

To minimize the risk of WNV infection in humans, Public Health Units of Ontario have set out to identify and eliminate preferred breeding sites of the two key enzootic vectors. In February 2003, the TRCA was asked by the Regional Health Departments of Peel, Durham, York and Toronto to assist in the monitoring of larval mosquito populations in natural areas. At Authority meeting #3/03, held on April 25, 2003, resolution #A64/03 was approved as follows:

THAT staff develop and implement a larval mosquito monitoring program across the Toronto and Region Conservation Authority's (TRCA) jurisdiction;

THAT staff be directed to participate in the City of Toronto West Nile Virus Advisory committee;

AND FURTHER THAT staff be directed to request funding assistance from the TRCA's Municipal partners and health departments.

An addendum was included to the Authority report (meeting #3/03) that outlined the protocol for responding to standing water complaints on Authority lands.

In 2003 and 2004, TRCA conducted an Authority wide monitoring program to characterize the mosquito species of marshes, ponds and woodland pools and to identify breeding sites for the two key WNV vectors (*Culex pipiens* and *Culex restuans*). The results from this study showed that healthy, functioning wetlands pose little to no risk to the public in terms of breeding high densities of WNV vectors. However on a few occasions, WNV vectors could be found in exceedingly high numbers in isolated pockets of stagnant water. The TRCA is committed to identifying these high risk sites on our property and managing them appropriately.

To help assist in the management of WNV in natural areas, the TRCA will continue to be involved in:

1. Public Education. By continuing to respond to public inquiries on WNV and to reports of standing water on TRCA property in addition to providing information for both the public and TRCA staff.
2. Regional Collaboration. Staff will continue to participate in WNV advisory committees for each of the Regions of Peel, Toronto, York and Durham.
3. Surveillance and Source Reduction. Staff will continue to identify sites of concern for WNV on TRCA property through larval monitoring and by performing housekeeping duties to reduce the number of potential breeding sites for the major WNV vectors.

RATIONALE

Staff anticipate aggressive requests from neighbouring private property owners for actions to be taken on Authority lands to address perceived mosquito breeding potential in standing water. It will be important for staff to have a protocol to follow to ensure consistent responses and avoid a major commitment of staff time to respond to complaints. The protocol also establishes the review and approval process to be followed in the event that WNV vectors are found in sufficient densities to warrant control measures by the Ministry of Health and Long Term Care (MOHLTC). The protocol has been updated from the addendum previously received by the Authority and contains additional detail regarding follow up and monitoring of WNV vectors on lands managed by TRCA.

Specifically the protocol details the process for receiving, documenting and screening complaints to determine the appropriate follow-up actions. The actions include determining whether or not the lands in question are owned and managed by the TRCA, and if not the provision of the appropriate contact information. The protocol, which was developed in consultation with the various municipal Health Departments, also outlines the standardized sampling procedures (developed by the Province) for collecting mosquito larvae at the site. Although mosquito controls have not been previously undertaken on TRCA lands, the protocol also outlines the approval process if control measures are required from the Medical Officer of Health.

If the investigation reveals that there are high numbers of vector species (ie. *Culex pipien*, *Culex restuans*) the complaint is forwarded onto the appropriate health unit for review by the local Medical Officer of Health (MOH). The local MOH will determine if control measures are needed and if they will both achieve a reduction in the threat of WNV to the human population and fits in with their WNV program. Should treatment be required, the TRCA will be notified. This process is reinforced in the "2003 West Nile Virus Preparedness and Prevention Plan for Ontario" put out by the Ministry of Health and Long-term Care where it states that:

Wetlands must not be drained or altered in any way, unless there is an exceptional circumstance of significant human health risk from disease-vector mosquitoes. Consultation with, and permission from, the MNR and the appropriate Conservation Authority will be required.

At the time of notification, funding issues, if any, will be discussed. All proposed control measures on TRCA land, along with any funding issues, will be recommended to the Authority for approval. If time does not permit due to a set compliance date being prior to a board meeting, approval will be granted by the Director, Ecology at TRCA and a subsequent report will be brought to the board for information.

DETAILS OF WORK TO BE DONE

Staff will continue surveillance activities at 30 sites on TRCA-owned lands and will continue to liaise with Regional Health Units throughout the 2005 field season. Complaints will be reviewed following the protocol. A report summarizing the results of the WNV surveillance program will be compiled in the Fall of 2005.

FINANCIAL DETAILS

Funding for the TRCA's 2005 WNV surveillance program is available from TRCA's municipal funding partners as part of the Regional Watershed Monitoring Program (124-34). This funding is sufficient to support the 2005 surveillance field work and staff support to liaise with the Regional Health Units and to respond to complaints. The funding will not cover costs associated with any control measures if deemed necessary. Staff are continuing to discuss funding options with the regional and provincial health departments in the event that control measures are required.

Report prepared by: Nicole Lauro, extension 5665
For Information contact: Nicole Lauro, extension 5665
Date: June 29, 2005
Attachments: 1

Attachment 1

Title: West Nile Virus Standing Water Complaints Procedure for TRCA

Step 1. Complaint

Complaints about standing water are received either directly or indirectly from the public, staff or regional health units. Complaints will be forwarded to the Authority's lead WNV staff (Nicole Lauro, Boyd Office – 416-661-6600 ext. 5665) Complaints should be handled promptly and with every incidence given serious attention. All complaints will be logged to determine potential breeding sites for WNV vectors for future years.

Step 2. Screening

The person receiving the complaint should conduct a brief interview with the caller using a standard set of questions and messages.

- Take information on the caller's name, address and phone number and location of the complaint
- Take information on the nature of the complaint
- Advise the caller that TRCA has previously and is currently monitoring a representative sample of natural areas within our jurisdiction
- Provide the caller with information about WNV
- Advise the caller that the results from TRCA's monitoring has consistently shown that healthy functioning wetlands pose little to no risk to the public in terms of breeding high densities of WNV vectors. On a few occasions, WNV vectors could be found in high numbers in isolated pockets of stagnant water
- Advise the caller that the TRCA is committed to identifying these high risk sites and will manage them appropriately
- Advise the caller that the Regional Health Departments are the lead agencies dealing with WNV and that the TRCA will be following the directions provided by the Regional Medical Officers of Health (MOH) and that larvacides will only be applied to an area by the Regions or City under an order from the MOH.

Step 3. Property Ownership Investigation

All complaints should be processed through our Property Management division to verify that the property in question is owned by the TRCA. **IF** the property is not in ownership by TRCA refer the caller to the appropriate regional health unit. **IF** the property is TRCA's but under a management agreement, direct the caller to the appropriate regional health unit. TRCA staff will investigate sites of concern on lands they directly manage and take appropriate remedial action if required (see Step 4)

Step 4. Standing water complaints on property directly managed by TRCA

Staff should be sent out to investigate standing water complaints on property directly managed by TRCA using the following standardized sampling:

1. At each site information on the date, time and location should be recorded on a standard field sample form
2. Use a standard white plastic mosquito dipper (sampler diameter = 13 cm) to take samples of mosquito larvae
3. At each site under investigation take up to four samples with each sample consisting of 10 dips of the mosquito dipper
4. Mosquito larvae should be transferred to specimen containers using an eyedropper and the number of larvae per dip should be recorded
5. At no time should samples be taken if there is rain falling
6. Samples should be transported back to Boyd Field Centre in coolers for species identification

Based on the average number of mosquito larvae, a site is ranked as:

nil if no larvae are collected in 10 dips

low if the average number of larvae collected in 10 dips is between 1-2

moderate if the average number of larvae collected in 10 dips is between 2-30

high if the average number of larvae collected in 10 dips is greater than 31

If the investigation reveals that there are high risk indicators (ie. *Culex pipiens*, *Culex restuans*) the complaint is forwarded onto the appropriate health unit for review by the local Medical Officer of Health. The local MOH will decide if the proposed measures will achieve a reduction in the threat to WNV to the human population and fits in with their WNV program. Should treatment be indicated, the TRCA will be notified. This is reinforced in the "2003 West Nile Virus Preparedness and Prevention Plan for Ontario" put out by the Ministry of Health and Long-term Care where it states that:

Wetlands must not be drained or altered in any way, unless there is an exceptional circumstance of significant human health risk from disease-vector mosquitoes.

Consultation with, and permission from, the MNR and the appropriate conservation authority will be required.

At the time of notification funding issues, if any, will be discussed. All proposed control measures on TRCA land, along with any funding issues, will be recommended to the Authority for approval. If time does not permit due to a set compliance date being prior to a board meeting, approval will be granted by the Director, Ecology at TRCA and a subsequent report will be brought to the board for information.

TO: Chair and Members of the Watershed Management Advisory Board Meeting #3/05, July 15, 2005

FROM: Adele Freeman, Director, Watershed Management

RE: **TORONTO AND REGION REMEDIAL ACTION PLAN (RAP) 2005/06 WORKPLAN**

KEY ISSUE

Receipt of the Toronto and Region Remedial Action Plan Workplan for the 2005/2006.

RECOMMENDATION

THAT the 2005/06 Workplan for the Toronto and Region Remedial Action Plan Memorandum of Understanding be received;

AND FURTHER THAT Environment Canada and the Ministry of the Environment be thanked for their continuing support.

BACKGROUND

At Authority Meeting #4/02, held on April 26, 2002, Resolution #A100/02 was approved as follows:

THAT staff be directed to develop, in conjunction with Environment Canada and the Ontario Ministry of the Environment, a multi-year agreement for the implementation of the Toronto and Region Remedial Action Plan with the TRCA.

The Toronto and Region Conservation Authority (TRCA) has entered year four of a five-year Memorandum of Understanding (MOU) between Environment Canada and the Ministry of the Environment as the lead implementation coordinator for the Toronto and Region Remedial Action Plan (Toronto RAP).

The Stage 2 document for the Toronto RAP, *Clean Waters, Clear Choices*, details specific goals and objectives for the Toronto RAP to move towards restoring impaired uses in the Area of Concern (AOC). The Toronto RAP Team (consisting of staff representatives from Environment Canada, Ministry of the Environment, Ministry of Natural Resources and TRCA) have taken these goals and objectives and developed Interim targets to guide activities under the 2002-2007 Toronto RAP MOU.

The 2005/2006 Toronto RAP MOU budget is composed of \$530,000 provided from Environment Canada (\$250,000 annually) and the Ministry of the Environment (\$280,000 for 2005/2006). These funds are used to implement key projects in association with the goals and objectives of the Toronto RAP. In many cases funding from this MOU is used to provide seed funding in order to leverage support for RAP projects and initiatives from other key stakeholders and the Great Lakes Sustainability Fund.

FINANCIAL DETAILS

2005/2006 Toronto RAP MOU Budget

CLEAN WATERS

Development of Improved Design Criteria for Construction Sediment Ponds - \$30,000

The objectives of this project are to enhance and assist in the development of guidelines for effective control of sediment and other run-off pollutants from construction sites. A performance analysis of the Richmond Hill sediment control pond will be conducted that incorporates a continuous simulation model with ongoing field data, to increase awareness of erosion and sediment control, and to implement an Erosion and Sediment Control By-law.

Greenroofs - \$30,000

The Greenroofs for Stormwater Management Project will continue to assess the potential of greenroof infrastructure to reduce the quantity and improve the quality of stormwater run-off. Model simulations of a greenroof scenario applied to the Markham Branch of the Highland Creek will be summarized and documented in a report. A technical brief on water quality leachate testing results for selected greenroof substrates will be completed. A monitoring protocol will be developed for the anticipated monitoring to be undertaken at the Earth Rangers Centre greenroof at Kortright. Updates to the sustainable technologies website are planned and the TRCA will host a workshop on stormwater best management practices to highlight the findings of this and other innovative stormwater technologies being developed.

Porous Pavement - \$30,000

TRCA installed porous pavement in one of the student parking lots at the Seneca College King Campus last year. Incorporating monitoring considerations into the construction of this parking lot provided an opportunity to conduct a demonstration project that will assess the performance of this type of pavement and its ability to contribute to improvements in stormwater management. An interim report including all monitored data observations, conclusions and recommendations will be completed this year. A workshop on stormwater best management practices will be hosted by TRCA to discuss the key findings of this and other studies exploring stormwater management technologies.

Technology Transfer Workshop - \$9,000

Three technology transfer workshops are planned for this year. The focus for these workshops will include:

1. Stormwater Monitoring and Maintenance Technology transfer between agency representatives (topics to be covered will include Regional Monitoring Network/Juturna, SWAMP results, Sustainable Technologies Evaluation Program (STEP), Vaughan Stormwater Maintenance Plan, Richmond Hill Monitoring Plan and Mississauga Stormwater Pond Sediment Management Strategy).
2. Community Involvement in Stormwater Management - The purpose of this workshop is to promote community awareness of stormwater management issues and the technologies being developed to help mitigate stormwater impacts.
3. Climate Change - the intent of the workshop is to build a consensus and knowledge base on climate change issues, identifying research gaps and highlight and encourage, if necessary, new research linking to watershed management techniques and climate change.

Spills Management- \$23,000

In Clean Waters, Clear Choices, the Stage 2 report for the Toronto and Region RAP, “improvement of spills response and prevention” was identified as a priority action under the Stormwater criterion. In 2004, the RAP supported activities to develop and implement a multi-stakeholder constituency-building process to enhance watershed and waterfront spills prevention, responses and understanding of the issue.

Plans for 2005/2006 are:

- to continue the development of this initiative by producing a baseline of spills data to be used for monitoring purposes;
- to help facilitate the coordination of data sharing among agencies;
- the continual support of a technical advisory committee on specific spill related issues;
- to outreach to other groups and further relationship building with involved groups;
- to host a follow-up workshop; and
- to produce a Toronto AOC spills Action Plan.

HABITATS ACTION

Terrestrial Natural Heritage Program/Terrestrial Natural Heritage System Strategy - \$35,000

The Terrestrial Natural Heritage (TNH) Program team has been synthesizing data and inventory work into the formulation of the targeted natural heritage system. The draft Terrestrial Natural Heritage System Strategy TNHSS was released in the spring of 2004. Comments and feedback received from the consultation process will be incorporated as the draft is revised and finalized this year. Consultation with each municipality to refine target system mapping will be carried out; these consultations will also explore opportunities to integrate the TNHSS into the existing policies and planning frameworks of each municipality.

In addition, further testing of the science-based Landscape Evaluation Model will be completed and a report based on the findings will be made available. Field inventories will be undertaken to support the TNHSS and inform watershed plans. The timing is opportune for the TNHSS to be considered by the municipalities as they are required to conform to the province's Greenbelt Plan, 2005, which could lead to increased support for incorporation of the strategy.

Habitat for Migratory Shorebirds - \$10,000

In order to establish a protocol for improving shorebird management practices, this project will create a baseline study of current use and opportunities of existing habitat in urban areas. The methodology will identify potential wetland sites and monitor them for shorebird activity. The project will employ methodology's from the Canadian Shorebird Management Plan in support of increasing the general understanding of factors affecting shorebird population dynamics, ecology and migration systems. The project will focus on the Don River watershed.

EDUCATION AND NGO/COMMUNITY ACTION

Stewardship Projects - \$75,000

Multicultural Environmental Stewardship

The TRCA promotes community participation in stewardship based planning and monitoring. The emphasis is on new Canadians and multicultural groups to participate in these activities through the Multicultural Environmental Stewardship Program. Since 1998, this unique program has been facilitating an active outreach program by engaging new Canadians in habitat restoration and providing opportunities for environmental education.

In 2005, in consultation with stakeholders, an outreach and communication strategy will be developed to address the cultural practice of river offerings by various ethnic communities. Representatives of the program will attend and provide environmental education materials at several cultural celebration events. The development and securement of funding for the Environmental Ambassador program is a priority for this year; this program provides employment experiences for new Canadians in community environmental initiatives. Work to develop the Environmental Experience Program, which brings new Canadians to conservation areas throughout the Greater Toronto Area will be carried out. The Multicultural Environmental Stewardship Program will also develop a demographic opportunities map as a corporate planning tool to ensure new Canadians are engaged in TRCA corporate implementation activities.

Rural Clean Waters Program

This program works with rural landowners to increase their awareness of why and how to undertake stewardship opportunities that will reduce nutrient, bacteria and sediment loadings from their property to the Great Lakes. Workshops and training opportunities will be offered regarding issues of source water protection, new farming technology and nutrient management legislation. Communication materials will also be developed and distributed.

Watershed on Wheels

TRCA delivers a wide array of exciting hands-on, outdoor educational experiences through multiple facilities. Programs focus on natural systems and the consequences of our social and economic interactions with the environment. Through life-long learning opportunities individuals gain the knowledge and skills necessary for making wise environmental decisions. Two new educational components in support of science and technology curriculum for grades 8 and 10 which focus on mercury and source water protection are being developed.

Highland Creek Stewardship Program

In 2005/06, the Highland Creek Environmental Stewardship Program (HCESP) will continue to build capacity within this priority urban watershed in support of the City of Toronto's Wet Weather Flow Management Master Plan. The HCESP engages businesses, residents, schools and the overall community, in hands-on restoration and sustainable living activities which target three Community Action Sites (CAS) within the watershed. A Highland Creek Steering Committee has been established to reflect the various interests of the community and further direct and support the outcomes of this program.

Stewardship Forum

Each year the Toronto RAP works with TRCA and the City of Toronto to host an annual Stewardship Forum. Topics for the forum change yearly with the main focus of the day being capacity building, training and networking opportunities for more than 100 environmental stewardship groups across the Toronto region. This year's Stewardship Forum titled "Our Great Lake" was held on March 5th, 2005 at the Harbourfront Centre. 175 people were in attendance and the key note address was given by the Commissioner of the Department of Environment for the City of Chicago, N.Marcia Jiménez.

MONITORING AND RESEARCH

Regional Monitoring Program - \$50,000

The Regional Watershed Monitoring Program has been developed in order to provide a comprehensive, integrated and coordinated approach to environmental monitoring in the Greater Toronto Area, that fulfills the watershed monitoring and reporting needs of the Toronto RAP, the TRCA and those of the individual watershed and waterfront councils and alliances, while furthering the interests of municipal, provincial and federal partners. This annual monitoring program was initiated in 2001 with a focus on four primary areas: aquatic habitat and species/fluvial geomorphology (the physical features and processes of rivers); terrestrial natural heritage; surface water quality; and, flow and precipitation. The Toronto RAP Team has established environmental recovery targets. These targets provide a benchmark against which monitoring results can be compared. A review of these targets is necessary to evaluate their current relevancy in relation to improvements in the Area Of Concern and the state of the science. This review will be undertaken in 2005/06.

Progress Report for 2002-2007 - \$15,000

As the five year Memorandum of Understanding between the TRCA, Environment Canada and Ministry of the Environment begins to wrap up, the TRCA, as lead implementation coordinator for the RAP is required to produce a progress report. This report will capture the work completed through the RAP program over the five year period.

Urban Contaminant Fate and Effects: Toronto Catchment Study - \$30,000

This study will provide data and evidence which will be used to construct an understanding of the sources, transport mechanisms, fate and effects of chemicals found in an urban environment. The chemicals of concern include nutrients, suspended solids, persistent organic pollutants and mercury. A major aim of this study is to initiate an integrated study of an urban catchment by looking at all environmental media including air, surface water soil, as well as ecosystem and human health. The study will involve monitoring two catchments; one as the urban catchment (Etobicoke Creek) and the other as the "control" (in the Town of Caledon). The report produced will provide a reference for the current state of the catchment area(s) as well as provide a preliminary understanding as to the impact of urban watersheds on the nearshore waters of the lake relative to other sources of contaminants (i.e. the atmosphere, sewage treatment plants).

SUSTAINABILITY

Sustainable Communities - \$10,000

In 2004 a new program was launched to create a framework of best practices aimed at benchmarking and raising the bar for what can be achieved in sustainable community planning and design. The framework will be grounded in actual applications in use by the various projects, and developed in consultation with corporate leaders from builders and developers along with their counterparts from municipal and regional governments. Structured interviews will be conducted with the leaders of sustainable community projects to better understand the state of current practices. The framework and results from these interviews will be used to establish a sustainable communities website as a knowledge base for defining and monitoring practices, progress and outcomes. 2006 will see the development of the website that will allow community leaders to see what initiatives are underway across the Toronto region, communicate with their counterparts and learn from best practices. This website will be a primary resource for municipalities and developers interested in sustainable community design and development. It will provide options, case studies and contacts to help provide additional ideas for projects already underway, and practical solutions around technologies and practices for those in the early stages of community planning.

Watershed Strategy Implementation - \$100,000

Since 1989 the TRCA has been in the process of developing and implementing individual watershed strategies for each of its watersheds. The Comprehensive Basin Management Strategy for the Rouge Watershed was finalized in 1992, with Forty Steps to a New Don in 1994, Legacy for the Humber watershed in 1997, and the Greening our Watersheds strategy adopted in 2002 for the Etobicoke Creek and Mimico Creek watersheds. Toronto RAP funding has been utilized for the development of these strategies, and to support their implementation. This work has contributed within the Area of Concern in developing a watershed constituency interested and committed to protection and restoration of the watershed resources including water quality, and aquatic and terrestrial habitats, within these watersheds. Public advisory groups have been developed and regularly participate in, and contribute to, enhanced water management efforts including recent support for the adoption of the Wet Weather Flow Management Master Plan.

Public outreach through events, publications and the development and publication of watershed report cards has established a unique approach to fostering watershed protection and restoration. In addition, strategy implementation increases upstream understanding and attention to resource protection.

Watershed strategy implementation will continue with specific attention in the Waterfront, the Etobicoke, Mimico, Humber and Don watersheds, on facilitating planning for implementation of projects that will contribute to the objectives of wet weather flow, and further planning efforts on the Highland Creek.

RAP Implementation Mechanism - \$83,000

This allocated funding ensures the coordination of Toronto and Region RAP activities. It supports senior staff time, a RAP project manager and part-time administrative costs for the RAP MOU. This also includes support to RAP team meetings, communications and project work expenses, including budget details. In order to provide current information to the public about RAP issues, this funding also supports updates to the website which will be completed on an as needed basis throughout the year.

Report prepared by: Kelly Montgomery , extension 5576

For Information contact: Adele Freeman, extension 5238

Date: April 27, 2005

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #3/05, July 15, 2005

FROM: Nick Saccone, Director, Restoration Services

RE: COATSWORTH CUT MAINTENANCE DREDGING

KEY ISSUE

Implementation of maintenance dredging at Coatsworth Cut, in the City of Toronto.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT staff be directed to proceed with maintenance dredging of Coatsworth Cut at Ashbridge's Bay, in the City of Toronto.

BACKGROUND

Coatsworth Cut is located in a sediment deposition zone and due to the continual siltation and corresponding reduction in offshore capacity for accumulated sediments, on-going maintenance dredging is required on an annual basis to maintain a safe and navigable channel for use by the public, local boating clubs and to provide for emergency access, as required. Staff are continuing to investigate options for a long term solution to address this problem. Maintenance channel dredging was undertaken in 2004 with the removal of approximately 4,000 cubic metres (in-situ volume) of material. Material was disposed of off site at Tommy Thompson Park for use in habitat and site restoration projects.

DETAILS OF WORK TO BE DONE

TRCA staff performed a sounding survey of Coatsworth Cut channel in May 2005. Based on this survey a total estimated volume of 4,500 cubic metres of deposition has occurred within the channel boundaries since completion of dredging operations in 2004.

The total budget allocated for anticipated dredging requirements in 2005 is presently \$115,000. Based on this amount staff recommend dredging of approximately 2100 cubic metres of material in Coatsworth Cut. Due to the total estimated quantity of dredging required, as indicated by the recent sounding data, staff will be investigating opportunities for additional funding to complete the balance of the dredging for 2005.

FINANCIAL DETAILS

Funding in the amount of \$115,000 is available in the 2005 Toronto Waterfront Capital budget.

Report prepared by: Mark Preston, 416-392-9722
For Information contact: Mark Preston, 416-392-9722
Date: June 15, 2005

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #3/05, July 15, 2005

FROM: Adele Freeman, Director, Watershed Management

RE: **2005 PEEL CHILDREN'S WATER FESTIVAL AT HEART LAKE
CONSERVATION AREA**

KEY ISSUE

To provide an overview of the 2005 Peel Children's Water Festival's educational activities, ecological restoration project and participation.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT the Chair send a letter to the Regional Municipality of Peel congratulating them on the success of the 2005 Peel Children's Water Festival.

BACKGROUND

The Toronto and Region Conservation Authority (TRCA) works with regional, municipal, conservation authority and other community partners in order to deliver educational and sustainable communities components to the children's water festivals within York, Durham and Peel regions. The Peel Children's Water Festival has been held at Heart Lake Conservation Area for the last four years.

The 2005 Peel Children's Water Festival (May 26-June 1, 2005)

Over 8,500 people (5,242 elementary students, 1,097 teachers and parent chaperones, 500 high school volunteers, and 2,000 community members) participated in the 2005 Peel Children's Water Festival. Fifty-six activity centres, staffed by high school volunteers, partners, staff and volunteers delivered various water-related messages within a broad range of themes including source protection, conservation, habitat, local watersheds and features, natural and human heritage aspects.

EcoFair (May 25, 2005)

The 2005 festival season began with the EcoFair, an interactive and action-oriented conference of school groups sharing their experiences. EcoFair is one part of a larger TRCA / Region of Peel initiative that includes the Peel Water Story teacher's guide and curriculum. This year's EcoFair saw 15 groups attend and the pavilion with the individual school group displays remained open over the course of the water festival as a place where students and their teachers could gain inspiration, ideas and tools on how to implement environmental action projects in their schools and communities.

Community Day (Saturday, May 28, 2005)

Community Day drew approximately 2,000 members of the general public. Community Day featured the following TRCA / Coalition activities: *Trout Release*, *All's Well That Ends Well*, *Water Less or Waterless*, *It's Up To YOU - Water Conservation Gardening*, and *Heart Lake Master Plan*. Greetings were brought by TRCA's Chief Administrative Officer.

TRCA's Healthy Watersheds Circuit - Education and Action

A collection of four systems-based activities (*Butterflies, Birds and Biodiversity, Match the Track; Three Strikes You're Out;* and, *Just Passing Through*) comprised the "TRCA Healthy Watersheds Circuit". The activities are sensitive to curriculums, ages and audience. The meadow restoration project (*Butterflies, Birds and Biodiversity*) involved planting 3,000 wildflowers (15 species) and 500 shrubs with approximately 750 students per day in order to enhance biodiversity, the forest / wetland edge and habitat types within Heart Lake Conservation Area. The TRCA Healthy Watersheds Circuit is delivered at the York, Durham, and Peel Children's Water Festivals. Its activities are connected in theme, correlated to the Ontario curriculum, and were developed by the TRCA Education Section. The activities, and their educational messages, were delivered by volunteers trained through TRCA's Environmental Volunteer Network (environmental educators program) as well as high-school volunteers who were mentored by the educators.

Kortright Centre - New Solar Activity and Resources

The Kortright Centre for Conservation also contributed a new activity to the 2005 festival called *Plug Into the Sun* featuring solar energy devices. A large solar panel powered two festival tents. Perhaps the most popular new addition this year was the solar-powered bubble machine that connected energy, water and science issues. The Kortright Centre's involvement expanded the boundaries of the festival and it is anticipated that the centre's role will increase next year because of the positive feedback from region organizers and festival patrons alike.

CONCLUSIONS

The festival represented an opportunity to reach thousands of people on sustainable community and water issues. In addition, the festival accelerates ecological restoration projects within Heart Lake Conservation Area and provides a focus for environmental issues. Finally, the festival highlights the Etobicoke-Mimico Watersheds Coalition's objectives of protecting, restoring and celebrating Heart Lake Conservation Area - one of the largest, most significant greenspaces within the Region of Peel.

FINANCIAL DETAILS

Financial support for TRCA's development and delivery of educational and regeneration projects is provided to TRCA from the Peel capital budget (Sustainable Communities) with additional funding for the restoration project provided by the Ministry of Natural Resources CFWIP program. In-kind support is provided through the Etobicoke-Mimico Watersheds Coalition, the Environmental Volunteer Network and the Heart Lake Master Plan Advisory Committee.

Report prepared by: Paul Willms, extension 5316

For Information contact: Renee Jarrett, extension 5315, Paul Willms, extension 5316

Date: June 22, 2005

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #3/05, July 15, 2005

FROM: Adele Freeman, Director, Watershed Management

RE: **ETOBICOKE-MIMICO WATERSHEDS COALITION**
Extension of Term of Appointment

KEY ISSUE

Extension of term of appointment for Etobicoke-Mimico Watersheds Coalition members.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT the term of appointment for the Etobicoke-Mimico Watersheds Coalition members be extended for one year to December 31, 2006.

BACKGROUND

The Authority, at its meeting held on May 24, 2002, adopted the Terms of Reference for the Etobicoke-Mimico Watersheds Coalition wherein the duration of the term of office of the members is from 2002 to 2005.

In order to be consistent with the terms of office for members of the other watershed groups such as the Don Watershed Regeneration Council and the Humber Watershed Alliance, as well as to coincide with the term of the municipal councils, a one year extension to the term is being recommended.

Since the inception of the Etobicoke-Mimico Watersheds Coalition in 2002, many projects have been initiated which will require additional time to complete. One of the major projects is the report card for the Etobicoke Creek and Mimico Creek watersheds which the current members would like to see through to its publication. In addition, some of the other committees are in the midst of their projects.

The members of the Etobicoke-Mimico Watersheds Coalition have expressed an interest in extending their term and at meeting #3/05, held on June 16, 2005, adopted the following resolution:

THAT the Etobicoke and Mimico Creek Watersheds request that The Toronto and Region Conservation Authority extend the term of the current members of the Coalition by one year to December 31, 2006.

FINANCIAL DETAILS

The TRCA Etobicoke and Mimico watershed management budget will fund the expenditures related to the one-year extension of the term of appointment.

Report prepared by: Lia Lappano, extension 5292

For Information contact: Chandra Sharma, extension 5237

Date: June 22, 2005

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #3/05, July 15, 2005

FROM: Adele Freeman, Director, Watershed Management

RE: WETLAND HABITAT FUND

KEY ISSUE

Receipt of the staff report on the Wetland Habitat Fund projects and future opportunities.

RECOMMENDATION

IT IS RECOMMENDED THAT the staff report on the Wetland Habitat Fund be received.

BACKGROUND

Since 1997, the Wetland Habitat Fund (WHF), through a team of professional field representatives, has provided financial and technical assistance to landowners in planning and implementing habitat projects. This non-governmental program is led by Wildlife Habitat Canada, a non-profit conservation organization dedicated to habitat stewardship across Canada. It is a stewardship project of the Eastern Habitat Joint Venture of North America Waterfowl Management Plan, sponsored by Wildlife Habitat Canada, the Canadian Wildlife Service, the Ontario Ministry of Natural Resources, the U.S. Fish and Wildlife Service, and other partners.

Some of the eligible WHF projects include establishing vegetated buffers around wetlands and waterways, enhancing natural corridors that link wetlands and woodlands, installing, monitoring and maintaining nesting structures, restricting livestock access to waterways and providing alternative watering systems. Applications for funding are reviewed 3 times per year and approved projects will receive 50 per cent of the project costs to a maximum of \$5,000. In turn, landowners must obtain necessary approvals and sign a conservation agreement to ensure the upkeep of the project site for a period of 10 years. Successful applicants are also requested to participate in a voluntary annual wetland monitoring program.

The intent of the WHF is in keeping with The Living City objectives for Healthy Rivers and Shorelines and Regional Biodiversity. In addition, the eligible projects and the subsidies provided to assist landowners with implementation, will help to achieve terrestrial natural heritage targets for increasing natural cover and directly compliment existing Private Land Stewardship initiatives such as the Rural Clean Water, Tree and Shrub and Habitat for Wildlife programs.

In January 2005, Robert Messier, TRCA's local WHF field representative, was invited to make a presentation to Restoration Services and Stewardship staff regarding the program and explore opportunities to combine our collective interests and partner where possible on future projects. To date, the WHF has supported the Markham Fair Wetland Creation Project, in the Rouge watershed and has approved 3 applications for 2005, involving private landowners in the Oak Ridges Moraine, two which are adjacent to Provincially Significant Wetlands. This partnership complements TRCA's internal efforts to coordinate a portfolio of Private Land Stewardship Programs.

Report prepared by: Joanne Jeffery , extension 5638
For Information contact: Patricia Lowe , extension 5365
Date: June 10, 2005

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #3/05, July 15, 2005

FROM: Adele Freeman, Director, Watershed Management

RE: **SPILLS WITHIN THE TORONTO AND REGION CONSERVATION
AUTHORITY JURISDICTION**

KEY ISSUE

To update the board on the types of spills and their occurrence within the Toronto and Region Conservation Authority's watersheds.

RECOMMENDATION

IT IS RECOMMENDED THAT the staff report on spills within Toronto and Region Conservation Authority's (TRCA) jurisdiction be received.

BACKGROUND

At Authority Meeting #5/05, held on June 24, 2005, Resolution #A136/05 was approved, as follows:

THAT WHEREAS spills are a major issue impeding the water quality and aquatic habitat of Toronto and Region Conservation Authority (TRCA) watersheds and waterfront;

WHEREAS the TRCA is committed to protecting ground and surface water from spills and illegal discharges of hazardous material;

WHEREAS the Remedial Action Plan (RAP) for the Toronto Area of Concern (AoC) highlights spills prevention and response as a priority action;

WHEREAS spills are identified as a potential threat, and a strategy for addressing threats at the individual watershed level is recommended within the Interim Technical Workplan for Source Protection Planning within the CTC Region (CTC Region is comprised of the Credit Valley Conservation Authority, TRCA and the Central Lake Ontario Conservation Authority);

WHEREAS the TRCA, together with Toronto RAP, federal, provincial, regional, municipal, and non-governmental organizations, and watershed groups recently completed work on phase 1 of Toronto RAP and TRCA spills management initiative;

WHEREAS Bill 133 would strengthen environmental legislation regarding spills;

THEREFORE BE IT RESOLVED THAT staff be directed to continue working with TRCA's partners to initiate work on phase 2 of TRCA's spills management initiative during 2005-2006, including implementation of recommendations from September 2004 Spills Management Workshop Outcomes Report;

THAT the Ministry of Environment (MOE), be thanked for their current support to Toronto RAP and TRCA's spill management initiative and encouraged to continue to work towards a comprehensive program to prevent and manage spills;

THAT the City of Toronto, the regional municipalities of Peel, York and Durham and Environment Canada be thanked for their participation and support throughout Phase 1 of the spills management initiative;

AND FURTHER THAT Conservation Ontario be so advised.

At Water Management Advisory Board Meeting #2/05, held on June 10, 2005, staff were directed to provide a follow-up report on the nature of spills within TRCA's watersheds.

Spills Information Sources

MOE Spills Action Centre: The most recent analysis of spills data in some municipalities within the Greater Toronto Area is provided by James Li of Ryerson University. Spills summary reports produced by James Li are based on spills data compiled from 1988 to 2000 from the Ontario Ministry of the Environment's Spills Action Centre database. Summary reports are available for the City of Toronto, Town of Markham, Town of Richmond Hill and the City of Vaughan. Analysis of spills data for the regions of Peel and Durham have not yet been completed at this time. It is noted however that parts of Peel Region were studied through the Etobicoke Watershed Spills Report.

Municipal Spills Data: The City of Toronto and regions of York, Peel and Durham also collect spills data through their Spills Action Centres related to the activities within their jurisdiction. At present, there is no coordinated spills data set for the TRCA jurisdiction.

The Information provided in this report was compiled by TRCA staff in preparation for the TRCA /Toronto Remedial Action Plan (RAP) Spills Management initiative. A knowledge gap regarding geo-coded data (data recorded with geographical locations that could be used for mapping and spacial analysis purposes) was identified during the preparation of the Toronto & Region Spills Backgrounder and during the 2004 multi-stakeholder Spills Management Workshop. We anticipate that this knowledge gap will be addressed through TRCA's future work on the Spills Management Initiative which aims to develop a coordinated baseline, or "state of spills report," featuring a reporting protocol, database and mapping tool in partnership with the Ministry of Environment, Toronto RAP Team, Regional Spills Action Centres, lower tier municipalities, and non-governmental organizations.

What follows is a very brief summary of watershed spills information based on the best available data and analysis at this time.

Summary of Spills in the Greater Toronto Area

The discussion below summarizes the type and frequency of spills reported to the Ministry of Environment Spills Reporting Centre from 1988 to 2000. These spills can be divided into three broad categories:

1. Spills to Water;
2. Spills to Land/Soil; and
3. Spills to Air

From 1988 to 2000 there were a total of 4,626 oil and 2,310 chemical spills. This accounted for an estimated 830,600 litres of oil and 1,125,000 litres of other chemicals spilled into the natural environment within the Town of Richmond Hill, Town of Markham, City of Vaughan and the City of Toronto. This volume of spills represents the equivalent of approximately 15,000 bathtubs full of oil and 20,000 bathtubs full of chemicals, or a combined average of roughly 3,800 bathtubs per year.

The frequency and volume of spills to water, soil and air is provided in Table 1 below. There were 4,059 spills to the rivers and creeks resulting in water quality impacts. The average oil and chemical spill affecting water was approximately 336 and 710 litres respectively. The types of chemicals released into the water and soil were very diverse. Large chemical spills to water and soil included antifreeze, liquid ammonia, wastewater and oily water or waste oils. Water pollution (e.g., watercourses, surface and ground water) and soil contamination were the most frequent impacts of chemical spills.

Volume of spills to the atmosphere from chemicals has been significant according to Lames Li studies. Over one billion litres of natural gas was spilled to the air in the City of Toronto and York Region between 1988 and 2000. Natural gas, refrigerants and CFC spills were particularly significant.

Spills of other materials (i.e. sewage, sediments etc.), not included in the above discussion accounted for a very small percentage of all reported spilled material.

Table 1: The Frequency and Volume of Oil and Chemical Spills (1988-2000)

Type		Town of Markham	Town of Richmond Hill	City of Vaughan	City of Toronto	Etobicoke watershed*
Oil Spills	Water Impact	195	110	319	1851	131
	Soil Impact	53	59	98	1941	129
	Total	248	169	417	3792	260
Chemical Spills	Water Impact	51	33	129	1253	56
	Soil and Air Impact (separate data for soil and air not available)	26	18	74	726	137
	Total	77	51	203	1979	193
	% geocoded -location recorded for mapping/spacial analysis purposes	41%	38%	27%	52%	n/a
	Average Annual Spill Volume	124 L	450 L	430 L	332 L	n/a

Note: The number of spills in each of the areas evaluated is roughly proportional to their size and population.

* The Etobicoke watershed was the only watershed in the Toronto region analyzed for spills. The watershed includes parts of Toronto, Caledon, Brampton and Mississauga.

Spill Locations and Sources

Tables 2 and 3 show the generic locations of oil and chemical spills in York Region and the City of Toronto. Roads were the most common location for oil spills, usually in the form of gasoline and diesel fuel. Many of these were associated with cars from which relatively small quantities of fuel were released. In York Region, hydro related facilities were a source of a significant proportion of total spills, whereas in Toronto, service stations and parking lots were the locations for approximately half of all oil spills.

Chemical spill locations were not traced to a specific source, but rather to the general area where they were released or first observed. Releases to the air usually from fire or natural gas leaks is the most common source both in the City of Toronto and York Region. Discharges to storm sewers was also frequent.

Table 2: Oil Spill Locations (% of total number of spills)

Location	Town of Markham	Town of Richmond Hill	City of Vaughan	City of Toronto
Road	35%	43%	48%	33%
Hydro related facility	31%	26%	21%	11%
Service station	15%	19%	16%	25%
Parking lots	10%	9%	10%	16%
Storage depot	4%	3%	5%	15%
Others	5%	0%	0%	0%

Table 3: Chemical Spill Locations

Location	York Region (Markham, Richmond Hill & Vaughan)	City of Toronto
Atmosphere	20%	28%
Parking	19%	20%
Storm Sewer	15%	15%
Ground	14%	11%
Roads	11%	9%
Water	8%	7%
Assumed Parking	8%	6%
Not Sure	3%	2%
Sanitary	2%	2%

Common Causes of Spills

Leaks from containers, tanks and fuel lines made up the greatest percentage of total spills in the City of Toronto, York Region and the Etobicoke Creek watershed. These include fuel tank spills from cars and trucks which occur relatively frequently. Pipeline leaks, tank overflows and chemical discharges were also significant. In many cases, the cause of the spill was unknown. Human error and equipment failure are the two most common reasons given for spills.

Spills by Sector

From the previous analysis, the petroleum sector accounts for the largest spills by volume (including spills to air). The chemical, transportation, manufacturing and service sectors account for most of the remaining spills.

Province-wide Spills Statistics

Spills data is collected from incidents and classified as “spills” in the Ministry of the Environment’s Integrated Divisional System (IDS) which is generally used by the Spills Action Centre to provide annual spills summaries. In any given year, the Spills Action Centre receives between 35,000 and 45,000 incident reports from the public and of these approximately 3,700 in 2003 and 3,900 in 2004 were classified by SAC as “spills.” The last annual summary on spills published by the ministry was the Spills Action Centre *Summary Report on 1995 Spills*. The most recent report for the province, "Industrial Spills in Ontario, Ministry of the Environment May 5, 2005", was released as part of the recent consultation on Bill 133 - Environmental Enforcement Statute Law Amendment Act 2004. This report uses spills database information for the years 2003, 2004 and concentrates on Municipal Industrial Strategy for Abatement (MISA) facilities. According to this report, Ontario saw an approximate 5% increase in the total number of spills reported to the Spills Action Centre between 2003 and 2004. Spills from industrial sources increased by almost 24% over the same period.

**Report prepared by: Chandra Sharma, extension 5237 and Paul Willms, extension 5316
For more information contact Adele Freeman, extension 5238 or Chandra Sharma,
extension 5237**

Date: June 22, 2005

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #3/05, July 15, 2005

FROM: Adele Freeman, Director, Watershed Management

RE: **DON WATERSHED REGENERATION COUNCIL MINUTES**
Minutes of Meeting #5/05, May 12, 2005

KEY ISSUE

The Minutes of Meeting #5/05, held on May 12, 2005 are provided for information.

RECOMMENDATION

IT IS RECOMMENDED THAT the Minutes of Don Watershed Regeneration Council Meeting #5/05, held on May 12, 2005, be received.

BACKGROUND

Copies of the minutes of the Don Watershed Regeneration Council are forwarded to the Authority through the Watershed Management Advisory Board. These minutes constitute the formal record of the work of the Don Watershed Regeneration Council, and serve to keep the Authority members informed of the steps being undertaken to implement the Don Watershed Task Force's report "*Forty Steps to a New Don*" and to regenerate the watershed.

Report prepared by: Amy Thurston , extension 5283
For Information contact: Amy Thurston , extension 5283
Date: June 22, 2005