



THE TORONTO AND REGION CONSERVATION AUTHORITY  
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**Irene Jones**  
*Chair*

**Brian Denney**  
*Chief Administrative Officer*

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## NOTICE OF MEETING

### WATERSHED MANAGEMENT ADVISORY BOARD MEETING # 4/03

The next Watershed Management Advisory Board Meeting Meeting of The Toronto and Region Conservation Authority will be held on Friday, September 12, 2003 in the South Theatre, Black Creek Pioneer Village, at 10:00 a.m.

Enclosed please find the Agenda, Minutes of the various Boards and Committees, copies of communications, etc., that will be considered at the meeting.

Authority Members, concerned citizens, and all others receiving a copy of the Agenda and accompanying material are requested to bring them to the meeting, as additional copies will not be available.

If you are missing any attachments or copies or if you require further information regarding this Agenda, please contact Kathy Stranks, at 416-661-6600 ext. 5264 or e-mail at [kstranks@trca.on.ca](mailto:kstranks@trca.on.ca). Please also confirm attendance at the meeting.



THE TORONTO AND REGION CONSERVATION AUTHORITY

**Watershed Management Advisory Board Meeting #4/03**

<b>Chair:</b>	<b>Irene Jones</b>
<b>Vice Chair:</b>	<b>Lorna Bissell</b>
<b>Members:</b>	<b>Ila Bossons</b>
	<b>Cliff Gyles</b>
	<b>Anthony Ketchum</b>
	<b>Pam McConnell</b>
	<b>Jim McMaster</b>
	<b>Joe Pantalone</b>
	<b>Dave Ryan</b>
	<b>Frank Scarpitti</b>
	<b>Ian Sinclair</b>
	<b>Tanny Wells</b>
	<b>Dick O'Brien - Chair, Authority</b>

September 12, 2003

10:00 A.M.

SOUTH THEATRE, BLACK CREEK PIONEER VILLAGE

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**AGENDA**

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(Enclosed herewith on Blue)
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3. **DISCLOSURE OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF**
4. **DELEGATIONS**
5. **PRESENTATIONS**
  - 5.1 A presentation by Gord MacPherson, Coordinator, Coastal Ecology and Dr. Doug Dodge, Chair, Aquatic Habitat Restoration Strategy Advisory Panel re: item 7.1 - Natural Heritage Management Program.
  - 5.2 A presentation by John Sorrell, General Manager of the Geomatics Group, SeconSys, in regards to Web Based Map/Data Server.

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NEXT MEETING OF THE WATERSHED MANAGEMENT ADVISORY COMMITTEE #5/03,  
OCTOBER 17, 2003,  
TO BE HELD ON 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 #4/03, September 12, 2003

**FROM:** Adele Freeman, Acting Director, Watershed Management Division

**RE:** **NATURAL HERITAGE MANAGEMENT PROGRAM**  
Toronto Waterfront Aquatic Habitat Restoration Strategy (TWAHRS)

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#### **KEY ISSUE**

The Toronto and Region Conservation Authority (TRCA), in partnership with various agencies under the direction of an Advisory Panel, has completed a comprehensive Aquatic Habitat Restoration Strategy for the Toronto Waterfront.

#### **RECOMMENDATION**

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT the Toronto Waterfront Aquatic Habitat Restoration Strategy developed under the Authority Natural Heritage Management Program be endorsed;**

**THAT staff be directed to solicit support and endorsement of the Strategy from the Toronto Waterfront Revitalization Corporation (TWRC), the City of Toronto, Fisheries and Oceans of Canada, the Ministry of Natural Resources, Environment Canada, the Ministry of Environment, the Toronto Port Authority and other stakeholders as identified;**

**THAT staff be directed to implement the Strategy recommendations of the Advisory Panel, including the establishment of an inter-agency coordinating mechanism to deliver the strategy, as well as, the delivery of habitat restoration workshops for the public and private sector;**

**THAT the TRCA thank the members of the Advisory Panel and the Agency Stakeholder Committee for their support and contribution to the development of this Strategy;**

**AND FURTHER THAT staff be directed to provide a progress report to the Board at an appropriate future date outlining the progress on Strategy implementation, including stakeholder endorsements.**

#### **BACKGROUND**

At Authority Meeting #1/03, held on February 21, 2003, Res. #A12/03 was approved as follows:

*THAT staff be directed to proceed with the development of an Aquatic Habitat Restoration Strategy for the Toronto Waterfront under the Natural Heritage Management Program at this critical stage in the revitalization plans for Toronto's Waterfront;*

*THAT staff be directed to establish an Aquatic Habitat Restoration Strategy Advisory Panel chaired by Dr. Doug Dodge and comprised of key aquatic habitat experts;*

*THAT staff be directed to establish a stakeholder committee, chaired by the TRCA, consisting of selected representatives from the Toronto Waterfront Revitalization Corporation, the City of Toronto, the Department of Fisheries and Oceans, Toronto and Region Conservation, Ministry of Natural Resources, Environment Canada, Ministry of Environment, and the Toronto Port Authority and other stakeholders as required;*

*AND FURTHER THAT staff be directed to report back to the Watershed Management Advisory Board at Meeting #4/03, on September 12, 2003 or at the earliest meeting thereafter upon completion of the Aquatic Habitat Restoration Strategy.*

The TRCA has initiated the preparation of a comprehensive Natural Heritage Management Program throughout its jurisdiction. This Natural Heritage Management Program has identified numerous restoration areas and significant terrestrial habitats within a bio-regional context. The Toronto Waterfront initiative will build on this bio-regional framework and deliver a pair of strategies (aquatic and terrestrial) specifically directed at the Lake Ontario shoreline and the interface with the watersheds within the City of Toronto. The Toronto Waterfront Aquatic Habitat Restoration Strategy is the completion of the first phase of this work that focussed on the aquatic ecosystem.

Historically, the Toronto waterfront was a rich mosaic of aquatic and terrestrial habitats, including bluffs and beaches, cobble reefs, estuaries and bays with productive marshes, wooded shorelines and meadows. Clear water streams and broad rivers meandered through densely forested watersheds to Lake Ontario. Diverse communities of fish and wildlife lived in these habitats, which provided opportunities for shelter, food, spawning, nesting, over-wintering and migration.

Over the past 200 years, the pressures of colonization, port expansion, industry, transportation and recreation have changed this waterfront almost beyond recognition. With these changes came serious environmental degradation, to the extent that in 1987, the Toronto waterfront was included on the International Joint Commission's list of 42 Areas of Concern around the Great Lakes.

In recent decades considerable work has been undertaken to begin the process of restoring natural habitats and improving water quality, with promising results as aquatic and terrestrial communities begin to show signs of recovery. The desire to improve the waterfront has been enshrined in recent City of Toronto plans and policies, including its new Official Plan, Natural Heritage Study and Central Waterfront Part 2 Plan. Also, the Toronto Waterfront Revitalization Corporation was established by the three levels of government in 2001 to oversee development of the downtown waterfront. In this context, this Toronto Waterfront Aquatic Habitat Restoration Strategy is a timely initiative to ensure that waterfront revitalization incorporates improvements to aquatic habitats as an integral part of creating a more livable and sustainable waterfront.

### **Goal and Objectives**

The geographic scope of the Toronto Waterfront Aquatic Habitat Restoration Strategy (Strategy) is the Lake Ontario waterfront from Etobicoke Creek to the Rouge River, extending up the estuaries of the rivers and creeks. The overall goal of the Strategy is "to develop and achieve consensus on an aquatic habitat restoration Strategy that will maximize the potential ecological integrity of the Toronto waterfront".

**To achieve this goal, the Strategy has four primary objectives:**

1. Identify the potential for self-sustaining aquatic communities in open coast, sheltered embayments, coastal wetlands and estuaries.
2. Identify limiting factors, evaluate opportunities and propose actions to protect and enhance nearshore habitats and restore ecological integrity.
3. Develop sustainability indices to evaluate the success of the Strategy, taking into account changes in land use and policy context.
4. Develop an implementation plan to restore aquatic habitats on the Toronto waterfront, including targets, actions, roles and responsibilities, public education, regular reporting and plan review.

**Principles**

The Strategy strives to create a more sustainable waterfront by using an ecosystem approach to improve ecological integrity and provide suitable conditions for the maintenance of self-sustaining aquatic communities and improve ecological connectivity. It emphasizes conservation design based on native and naturalized species. It takes into account human uses of the shoreline and nearshore waters and was developed using a consultative, consensus-based approach involving stakeholders and the general public.

Since February, the development of the TWAHRS was guided by an Advisory Panel and Agency Stakeholder Committee.

The Advisory Panel consisted of the following people:

- Dr. Doug Dodge, Chair (retired, Ministry of Natural Resources)
- Dr. Al Christie (retired, Ontario Hydro)
- Professor Walter Kehm (retired, University of Guelph)
- Suzanne Barrett.

Corresponding Members

- Dr. John Hartig (Detroit River Navigator).

The Agency Stakeholder Committee included: Toronto and Region Conservation; Toronto Waterfront Revitalization Corporation; City of Toronto - Works and Emergency Services, City of Toronto - Parks and Recreation, Waterfront Secretariat, Planning; Ministry of Natural Resources; Ministry of the Environment; Fisheries and Oceans Canada; Environment Canada and the Toronto Port Authority.

On May 15th, 2003, a habitat restoration workshop brought together a broader and diverse group of agency and community stakeholders for a preliminary discussion of approaches to restoring specific habitats. On June 10th, a public forum was held to provide an opportunity for public review and input into the draft Strategy .

This consultation with the general public, advisory panel, agencies and stakeholders helped formulate and develop the following Strategy components:

### **(1) Synopsis of Existing Conditions**

The TRCA has conducted investigations into the nearshore ecosystem for over 25 years. Efforts have been made at delineating the quality and changes in the fish community, understanding coastal processes and delineating and classifying shoreline habitat conditions. Recently, a substantive amount of effort has led to the modeling of water quality conditions along the waterfront. Collectively, this and additional bodies of work have been summarized into a synopsis which provides the foundation for a comprehensive understanding of bio-physical shoreline conditions. The synopsis of existing conditions also acts as an important foundation for directing the TWAHRS.

### **(2) Compendium of Habitat Restoration Techniques**

To date, many successful restoration techniques have been developed and deployed in areas across the Toronto waterfront. Wetlands, spawning areas, structural features, woody debris, shoals and reefs have all been built within the waterfront. The compendium has built upon this knowledge and features techniques that are ecologically appropriate to their location, provide critical habitat and have a broader application to many other areas. Over thirty different habitat techniques have been illustrated in the compendium of habitat restoration techniques. Each habitat restoration illustration is annotated with information on construction techniques and materials, and outlines the desired habitat function. Illustrations include plan, oblique and cross section views. The compendium will be a valuable tool for many agencies and will help us achieve consensus on the type, function and size of various habitat components.

### **(3) Habitat Plan**

The Habitat Plan matches habitat restoration techniques with the appropriate biological and physical characteristics of the shoreline. Critical to implementation, this plan provides direction and details the type and location of suitable habitat enhancement projects across the Toronto shoreline, from the mouth of the Etobicoke Creek to the Rouge River. The plan targets essential habitats that foster and promote the aquatic rehabilitation of the shoreline ecosystem. Emphasis has been placed on habitat structures, enhancing community function and improving centres of organizations within the system. The overall goal of this plan is to address limiting factors, restore system integrity and enhance the characteristics of the near shore habitats.

## **RATIONALE**

Our analysis of the physical processes, cultural influences and aquatic communities on the Toronto waterfront has shown that most of the aquatic ecosystems suffer from poor ecological health, while a few locations, such as the Rouge River estuary and parts of Toronto Bay, exhibit somewhat better conditions. Traditionally, urban planning, waterfront redevelopment, park development, stormwater management and shoreline management activities have not paid sufficient attention to the needs of aquatic communities. However, it is essential to recognize that aquatic ecosystems are integral to the environmental health of the waterfront, and must be given full consideration in planning, design and development processes.

Self-sustaining aquatic habitats can make an important contribution to The Living City – the TRCA's vision for sustainable human communities built on a natural foundation of healthy rivers and shorelines, greenspace and biodiversity. Aquatic habitat restoration is also a catalyst for considerable social and economic benefits because it increases aesthetic quality, recreational opportunities, public health and safety and desirability of waterfront spaces.

This Strategy provides a valuable repository of information including the biophysical attributes of the shoreline, an illustrated compendium of habitat restoration techniques and a habitat plan on a shoreline reach and site specific basis. It builds on and implements a number of key plans and policies, including the City of Toronto Official Plan, Central Waterfront Part 2 Plan and Natural Heritage Study; the Federal Policy for the Management of Fish Habitat; Lake Ontario Fish Community Objectives and the Toronto Waterfront Revitalization Corporation's Development Plan and Public Space Framework. The Strategy is a blueprint for positive change, providing guiding principles and practical tools for implementing habitat projects across the Toronto waterfront.

The overall approach to this Strategy has been supported by Fisheries and Oceans Canada staff on the Stakeholder Committee. In addition, the TWRC incorporated the Aquatic Strategy in their recently released "Parks and Public Spaces Framework" which provides the overall context for the proposed 500 acres of new and improved waterfront public spaces.

## **RECOMMENDATIONS**

The following recommendations for waterfront agencies and other landowners are intended to ensure that aquatic habitats are created and restored. The recommendations focus on endorsement of the Strategy, improving ecological health and mechanisms for implementation:

### **(1) ENDORSEMENT**

Waterfront revitalization provides opportunities for many agencies and private landowners to incorporate aquatic habitat restoration from the outset of a wide variety of projects, ranging from new building developments and environmental infrastructure to new or renovated parks and shoreline management. The Advisory Panel recommends that:

- Agencies with responsibilities for the waterfront (e.g. Toronto and Region Conservation Authority, Toronto Waterfront Revitalization Corporation, City of Toronto, Toronto Port Authority, Fisheries and Oceans Canada, Ontario Ministry of Natural Resources) should formally endorse this Strategy as the guiding document for the creation and restoration of waterfront aquatic habitats.
- Endorsement recognizes the need to achieve significant increases in aquatic habitats and restore self-sustaining aquatic communities.
- Agencies use this Strategy as a planning tool to ensure that all future waterfront projects incorporate aquatic habitat improvements.

### **(2) MANAGEMENT TO IMPROVE THE ECOLOGICAL HEALTH OF OUR SHORELINE**

In order to restore healthy, self-sustaining aquatic communities, it is necessary to create the physical, chemical and biological conditions that are required for a balanced community of native and naturalized species. Most non-native species (e.g. carp, goby) take advantage of degraded ecosystems, and their numbers and productivity will be reduced when ecosystem health improves. To achieve the conditions required for centres of biological organization that will support self-sustaining aquatic communities, the Advisory Panel recommends that:

- To ensure improved water and sediment quality the City of Toronto's Wet Weather Flow Management Master Plan should be implemented quickly, and a similar plan be developed and implemented for the upper watersheds.
- Structural diversity be increased across the waterfront, by implementing a habitat plan on a shoreline reach basis.
  - In most cases, there is sufficient scientific knowledge to proceed with implementation.
  - In cases where there is less knowledge, scientific based experimental management approaches provide opportunities to monitor, learn and adjust as necessary.
- Consistent with Fish Community Objectives (coolwater warmwater species) for Lake Ontario, top predators especially walleye, muskellunge, should be re-introduced where appropriate and carp should be excluded from key habitats that are favourable for their reproduction (e.g. coastal wetlands).
- Emphasis for improving Aquatic Habitats should be placed on opportunities for both conservation and restoration. A number of these are existing centres of biological organization where a relatively modest investment will create significant benefits. Others are places where development is largely focussed on land, such as new waterfront parks and urban redevelopment, which can easily incorporate major improvements to aquatic habitats. Finally, there are opportunities associated with shoreline management such as erosion control and harbour maintenance.

**Existing centres of biological organization**

Examples : Mimico Estuary, Humber Estuary & Marsh, Toronto Island, Tommy Thompson Park, Bluffers Park, Highland Creek Estuary & Marsh, Rouge Marsh.

**New waterfront parks and amenities**

Examples: Canada Malting, Harbourfront, Lower Don/Keating Channel, Lake Ontario Park

**Urban Redevelopment**

Examples: Home Depot site, Ship Channel, Portlands

**Shoreline management**

Examples: Humber Bay, Western Channel, Eastern Channel, Gibraltar Point, Fishleigh, Guild Inn

**(3) IMPLEMENTATION**

The success of the Toronto Waterfront Aquatic Habitat Restoration Strategy will be measured by the extent of project implementation, reporting of improvements in aquatic habitats, the utilization of the Strategy by waterfront agencies and private landowners and the acceptance of projects by the public. To ensure success, the Advisory Panel recommends that:

- The TRCA establish an inter-agency coordinating mechanism to:
  - ensure that aquatic habitat opportunities associated with existing centres of biological organization, park development and amenities, waterfront revitalization, shoreline management, lakefilling and erosion control projects are incorporated into ecological pre-planning, design, and implementation of projects.
  - ensure a high standard of scientific rigour, use of the best tools, techniques and appropriate design of experimental habitat management projects.
  - identify potential cumulative effects of projects, oversee monitoring programs, and develop sustainability indices to determine trends over time.
  - report regularly on the Strategy implementation, including progress reports on specific projects, aquatic community trends, and other measures, the first progress report to be provided by December 2004.
  - similar strategy should be developed for the TRCA's jurisdiction within the Durham waterfront.
  
- TRCA provide aquatic habitat restoration workshops for landowners and the consulting industry to raise awareness of the goals and objectives of the TWAHRS as well as the biophysical framework, restoration techniques, restoration sites and mechanisms for inter-agency implementation.
  
- Public awareness and education should be incorporated into each project, using a variety of mechanisms (such as signage, interpretive centre(s), underwater viewing facilities, outdoor education programs, articles in newsletters and annual reports, media coverage etc.
  
- Waterfront regulatory agencies use this habitat Strategy as a mechanism for implementation.

**DETAILS OF WORK TO BE DONE**

Staff will proceed with efforts to solicit further endorsement of this Strategy. Specific efforts will be directed at the establishment of an inter-agency mechanism to implement the recommendations of the Advisory Panel. In addition, staff will sponsor an aquatic habitat restoration workshop for landowners and the consulting industry to raise awareness of the goals and objectives of the Strategy.

Staff will provide the Authority in future with a progress report on the implementation and endorsement by the Stakeholder Committee members.

**Report prepared by: Gord MacPherson, extension 5246**  
**For Information contact: Gord MacPherson, extension 5246**  
**Date: September 02, 2003**

**TO:** Chair and Members of the Watershed Management Advisory Board  
Meeting #4/03, September 12, 2003

**FROM:** Adele Freeman, Acting Director, Watershed Management Division

**RE:** **WORKPLAN TO FULFILL THE WATERSHED PLANNING REQUIREMENTS OF THE OAK RIDGES MORAINÉ CONSERVATION PLAN (ORMCP)**

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**KEY ISSUE**

Documentation of a generic watershed planning process and adoption of that process for the preparation of watershed plans and associated budgets for fulfilling the ORMCP watershed planning requirements of our partner municipalities.

**RECOMMENDATION**

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT the Integrated Watershed Planning Process described in Part 1 of the Workplan to Fulfill the Watershed Planning Requirements of the Oak Ridges Moraine Conservation Plan (ORMCP) Regulation (O.Reg. 140/02) be used to guide the preparation of work plans and budgets for individual watershed plans throughout the TRCA jurisdiction, and particularly for those watersheds draining the Oak Ridges Moraine;**

**THAT staff be directed to undertake the preparation of watershed plans, as per the planning schedule set out in this report, in cooperation with our watershed partners;**

**THAT staff promote this watershed planning process as the basis for the preparation of watershed-based source protection plans and report back on any necessary modifications, as the specific requirements of source protection plans or provincial ORMCP watershed planning guidelines become known;**

**AND FURTHER THAT all regional and local municipalities within the TRCA jurisdiction be informed of TRCA's long range watershed planning work program and of the Authority's commitment to undertaking this work in full co-operation with its watershed municipalities.**

**BACKGROUND**

The watershed planning requirements of the Oak Ridges Moraine Act and Conservation Plan (ORMCP) Regulation (O.Reg. 140/02), under section 24, require municipalities to:

- initiate the preparation of watershed plans by April 22, 2003 for each watershed, whose streams originate on the ORM;
- incorporate the watershed plan's requirements into the municipal Official Plan;
- complete the watershed plans and ensure all major development conforms with the plan, before approving any major development application that is commenced on or after April 23, 2007; and

- *in the case of York Region*, complete a water budget and conservation plan, demonstrating that the water supply required for major development is sustainable, before approving any major development application that is commenced on or after April 22, 2004 for areas serviced by the Yonge Street aquifer.

Shortly after the release of the ORMCP, York Region indicated to its two conservation authorities (CAs) its interest in continuing its long-established partnership with the CAs as a means of undertaking the watershed planning related aspects of the ORMCP. In consideration of its stringent deadlines, the Region expressed its need to ensure coordinated workplans were in place to fulfill the requirements. As the provincial watershed planning guidelines associated with the ORMCP had not yet been released [anticipated to be released for public comment in September, 2003], there was a need to develop a common outline of anticipated watershed planning requirements, based on the experience of the Region and its CAs. This common watershed planning outline was intended to ensure consistency in approach between the CAs and provide a basis for long range budgeting exercises.

A working group, consisting of staff from the planning and works departments of York Region, Lake Simcoe Region Conservation Authority (LSRCA), and the Toronto and Region Conservation Authority (TRCA), prepared a Workplan to Fulfill the Watershed Planning Requirements of the Oak Ridges Moraine Conservation Plan (ORMCP) Regulation (O.Reg. 140/02). The Workplan consists of two parts:

Part 1 (attached) recommends a generic watershed planning process and outlines key deliverables required to fulfill the ORMCP. Specific features include:

- watershed planning is recognized as one component in the overall, ongoing process of watershed management
- watershed plans will be developed in three stages: characterization, analysis and evaluation of management alternatives; and preparation of the final watershed plan
- watershed planning is a partnership; there is a commitment to involve all key players, many of whom have been active participants in previous watershed initiatives
- studies addressing ground and surface water quality and quantity, aquatic and terrestrial resources, and water supply address the watershed planning requirements of the ORMCP, but other studies are needed to address the full range of community interests in York Region watersheds (i.e. human heritage, public use)
- a chart summarizing the watershed planning component studies provides a basis for reporting on study status and budget needs.
- development of draft implementation policy will form part of the new generation of watershed plans to facilitate the transition from watershed plan to municipal policy

Part 2 outlines the watershed-specific workplans , including:

- recognition that “watershed” study areas for the purposes of fulfilling the full objectives of the ORM Act must encompass the full watershed area from crest of ORM to Lake. Within TRCA, this includes: Humber, Don, and Rouge Rivers and Duffins Creek watersheds.
- description of the current status of watershed plans and their component studies within York Region watersheds

- reference to separate, watershed-specific workplans containing more details of the planning process, tailored to the needs of each watershed
- a template for presentation of the five year budget forecast of funds needed to fulfill the ORMCP.

The generic watershed planning process described in Part 1 of the Workplan is consistent with the process generally followed by TRCA in previous watershed studies, and was drawn from the Watershed Demonstration Project “Lessons Learned and Best Practices in Watershed Planning, Implementation and Monitoring in the CVC, GRCA and TRCA” (CVC, GRCA, and TRCA, 2003). This process is being promoted by Conservation Ontario in its discussions with the province, as a basic framework for watershed-based source protection planning.

The watershed planning process and the outline of watershed planning component studies appear to be supported by other CAs on the ORM and by the Regions of Peel and Durham. A draft version of Part 1 of the Workplan was circulated to the nine CAs in the Conservation Authorities Moraine Coalition and to the Regions of Peel and Durham planning staff for comment. Overall, there was support for generic outline. All comments provided were incorporated into the final version. All members of the CAMC adopted the watershed planning outline as a means of reporting on status of their watershed plans. In June, 2003, at a meeting with the Region of Peel, TRCA, CVC, and the Town of Caledon staff, there was agreement to develop a “Peel” version of the York Region document, based on the same generic approach.

Durham Region staff have indicated their intent to host a similar meeting with the five Durham CAs. Although, in the case of the Durham/TRCA portion of the ORM, it is believed that the recently completed Duffins Creek Watershed Plan largely fulfills the ORMCP requirements.

## **BENEFITS**

Documentation of the watershed planning process provides clarification and coordination between the Region and TRCA on roles and responsibilities throughout the process. Upfront agreement on the deliverables, scope, and schedule for these planning initiatives should streamline the budget process in future years. The generic process still allows for flexibility in addressing the unique needs of each individual watershed plan, consideration of the level of previous work completed, and advancement of the science of integrated watershed planning and other innovative methodologies.

## **DETAILS OF WORK TO BE DONE**

Staff propose to use the integrated watershed planning process, described in Part 1 of the Workplan, as the basis for preparing and updating watershed plans throughout the TRCA jurisdiction. Watershed plans will be developed, or updated as necessary, according to the following schedule:

Watershed	2002	2003	2004	2005	2006	2007	2008
Duffins C.	Phase 3						
Carruthers C	Phase 3						
Rouge R.		Phase 1A/1B	PhAS 1B/2/3	Phase 3			
Highland C.		Phase 1A/1B	Ph. 1B/2	Phase 3			
Humber R.		Phase 1A	Phase 1B	Phase 2/3			
Don R.			Phase 1A	Phase 1B/2	Phase 3		
Petticoat C.				Phase 1A	Phase 1B	Phase 2/3	
Etobicoke C				Phase 1A	Phase 1B	Phase 2/3	
Mimico C.				Phase 1A	Phase 1B	Phase 2/3	

Phase 1A - Scoping

Phase 1B - Characterization

Phase 2 - Analysis and Evaluation

Phase 3 - Plan Development

Dark shade = Period of primary planning activity

Grey shade = Period of preparation or finalization work

This schedule recognizes the Regions' required timelines to address the ORMCP, the City of Toronto's priorities in implementing its Wet Weather Flow Master Plan, and the status of available watershed information and planning documents. Completion of this planning schedule is contingent upon available funding.

Staff have begun the development of more specific work plans for each watershed, with outlines for the Rouge and Humber watersheds well underway. Consultations with municipalities and other partners are underway to obtain input to these workplans. Staff are attempting to obtain provincial review of the Duffins Creek Watershed Plan, and confirmation that the plan meets the ORMCP.

### FINANCIAL DETAILS

TRCA staff are in the process of preparing 2004-2008 budget forecasts for watershed plans, using the template contained in this Workplan and which corresponds with the outline of study components. Funding requirements for watershed plans will be presented as part of the regional capital budget requests.

**Report prepared by: Sonya Meek, ext. 5253**

**For Information contact: Sonya Meek, ext. 5253**

**Date: August 22, 2003**

**Attachments: 1**

Attachment 1



**A WORKPLAN TO FULFILL THE WATERSHED PLANNING  
REQUIREMENTS OF THE OAK RIDGES MORaine CONSERVATION  
PLAN REGULATION (O.Reg. 140/02)**

**Part 1**

June 26, 2003



**A Workplan to Fulfill the Watershed Planning Requirements of the Oak Ridges  
Moraine Conservation Plan Regulation (O.Reg. 140/02)**

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**Appendix A (TRCA)** - Status of Completion of Watershed Planning Study  
Components in the TRCA Watersheds

## COMMITMENT TO A WATERSHED PLANNING PARTNERSHIP

The watershed planning requirements of the *Oak Ridges Moraine Act and Conservation Plan (ORMCP) Regulation* (O.Reg. 140/02) represent an opportunity to strengthen a long-established watershed management partnership between the Regional Municipality of York and its two conservation authorities. The ORMCP (s. 24) requires York Region to:

- initiate the preparation of watershed plans by April 22, 2003 for each of its watersheds whose streams originate within York Region;
- incorporate the watershed plan's requirements into the Region's Official Plan;
- complete the watershed plans and ensure all major development conforms with the plan, before approving any major development application that is commenced on or after April 23, 2007; and
- complete a water budget and conservation plan, demonstrating that the water supply required for major development is sustainable, before approving any major development application that is commenced on or after April 22, 2004 for areas serviced by the Yonge Street aquifer.

Watershed planning has been an activity that the Lake Simcoe Region Conservation Authority (LSRCA) and the Toronto and Region Conservation Authority (TRCA) have carried out in partnership with York Region, their other member municipalities, and watershed communities for a number of years. As a result, watershed plans have been initiated on all watersheds within York Region. Their status of completion varies depending on watershed.

Based on the considerable foundation of available watershed information and the expertise in watershed planning, LSRCA and TRCA are committed to assisting York Region in fulfilling its requirements under the ORMCP. The purpose of this document is twofold:

1. To recommend a generic watershed planning process and outline of key deliverables required to fulfill the ORMCP; and
2. To describe the current status of watershed plans and their component studies within York Region watersheds, identify deliverables associated with the 2003 budget request, and present a five year budget forecast of the special funds needed to fulfill the ORMCP.

This document is intended to facilitate a regular process of dialogue between the CAs and the Region staff, which will promote improved coordination and information sharing among our various study responsibilities.

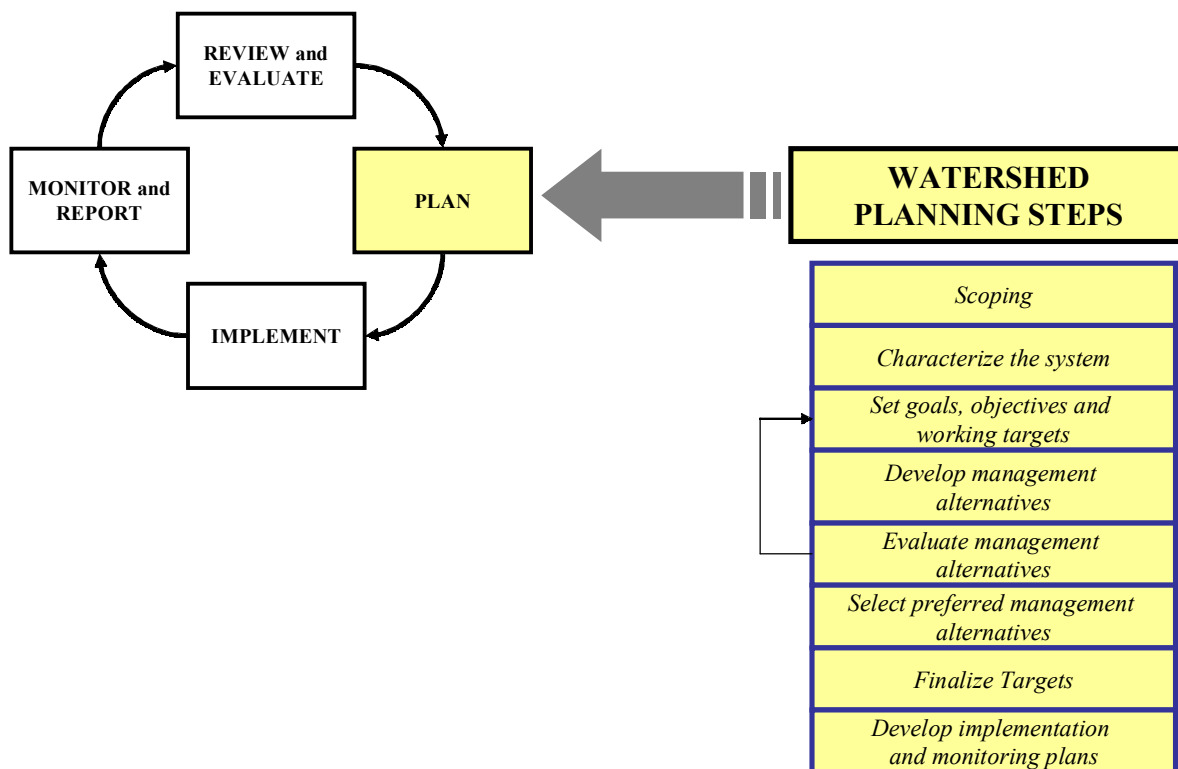
## PART 1: GENERIC OUTLINE OF WATERSHED PLANNING REQUIREMENTS TO FULFILL THE ORMCP

### 1.1 Watershed Planning Process

The watershed planning process is one stage in the ongoing process of watershed management. The basic thrust of watershed management has not changed since first formally described in 1993 (MOEE and MNR, 1993). As illustrated in Figure 1, the process of watershed management has four main stages, including plan development; plan implementation; monitoring and reporting; and reviewing, evaluating and updating the plan. This process is commonly followed by all conservation authorities in Ontario, although each CA may have slightly different terminology associated with individual steps as suited to local watershed needs.

Watershed plans are usually prepared in response to a trigger, such as public concern about environmental conditions, a municipal Official Plan requirement, or, also in this case, the requirements set out by the ORM Act and Conservation Plan.

**FIGURE 1: WATERSHED MANAGEMENT PROCESS**



Reference: CVC, GRCA and TRCA. 2002.

The steps involved in developing a watershed plan can be described according to three main phases: characterization; analysis and evaluation of management alternatives; and development of the watershed plan and implementation plan.

**Characterization** involves scoping the issues, gathering the information that is already available, and confirming resource needs. The primary focus of this phase involves the development of a detailed understanding of watershed systems and their interdependencies. Working goals, objectives and targets are defined with stakeholder input to reflect community values and sound science. Study components typically address issues associated with surface and ground water quantity and quality; aquatic habitat and species; and terrestrial habitat and species. Depending on the watershed, studies may also address a broader range of issues, such as human heritage and outdoor recreation. Although it is necessary to disassemble the complex set of watershed systems to study each one individually, the evolving science of integration enables watershed planners to define relationships and interdependencies among the systems.

**Analysis and Evaluation of Alternatives** involves the development of alternative future land or resource use scenarios and management approaches. Using modeling and analytical tools developed in the characterization phase, each scenario is studied in terms of the effects (positive or negative) it will have on the watershed. The purpose of this analysis is to understand how the watershed will respond to future stresses, determine whether management objectives will be compromised and, if so, identify the effectiveness of various management approaches. Based on a set of agreed-upon evaluation criteria, and with input from the community, a preferred management approach is recommended.

**Development of the Watershed Plan and Implementation Plan** involves the actual documentation of the management plan and its implementation framework. The plan identifies the final set of management goals, objectives and targets, which is to be used to evaluate the acceptability of future resource use proposals and track progress in implementation. The plan specifies a set of land use and resource use management strategies and associated practices and programs, necessary to fulfill the watershed's objectives. Management strategies are often tailored to specific areas within the watershed. Further study needs may be specified for the watershed scale or for smaller geographic areas, such as subwatershed or site scales. An implementation framework sets out the primary mechanisms expected to be effective means of implementing the plan, roles and responsibilities for key stakeholders, and a recommended schedule for implementation. The municipal land use planning process represents an important vehicle for implementation. The latest generation of watershed plans involve an increasingly close partnership with the municipal partners in the development of land use planning strategies and draft policies that are developed as an integral part of the implementation framework. The monitoring plan recommends the extent of monitoring, timing, responsibilities and reporting frequency.

## 1.2 Roles and Responsibilities – A Partnership Process

Watershed planning and watershed management is really a partnership involving conservation authorities, municipalities, agencies, and other watershed community interests. Conservation authorities serve as the coordinators of the plan development process, by bringing together the various interests and ensuring appropriate opportunities for input throughout the process. Experience has shown that municipalities and other stakeholders who have been involved in the development of the plan are more likely to participate in the plan's implementation. Therefore, effective involvement of all partners throughout the process is vital to the plan's success. The following table summaries the general roles of each partner.

### Roles and Responsibilities

York Region and Other Regional and Local Municipalities	Conservation Authority	Other Stakeholder Groups and Agencies, and Members of the Public
<ul style="list-style-type: none"> <li>· Ensure ORMCP is met (1)</li> <li>· Undertake or supervise component studies</li> <li>· Participate in development of watershed plans</li> <li>· Lead preparation of municipal policy to help implement plan recommendations (2)</li> <li>· Participate in and lead aspects of plan implementation</li> </ul>	<ul style="list-style-type: none"> <li>· Coordinate watershed planning process</li> <li>· Lead public and stakeholder involvement process</li> <li>· Undertake or supervise component studies</li> <li>· Lead integration of component studies and overall development of plan</li> <li>· Participate in and lead aspects of plan implementation</li> </ul>	<ul style="list-style-type: none"> <li>· Participate in the development of watershed plans</li> <li>· Promote awareness of planning process and solicit input from broader constituency group</li> <li>· Participate in and lead aspects of plan implementation</li> </ul>

(1) Unique to York Region and other ORM municipalities

(2) York Region and other ORM municipalities have legislated responsibilities under ORMCP

## 1.3 Component Studies Required to Fulfill ORM Conservation Plan

Figure 2 lists the component studies and deliverables associated with each of the three phases in the watershed planning process. Primary points of public and stakeholder input are noted. Although the overall watershed plan is a requirement of the ORMCP, references to particularly relevant sections of the plan have been shown in Figure 3 for each of the basic technical studies to facilitate an understanding of their role and application. Table 1 provides a brief description of each of the component studies and its role in the watershed planning process.

The conservation authority will coordinate the overall watershed planning process, however component studies may be led by conservation authority staff or their consultants, the Region of York or their consultants, or other groups. A central role of the conservation authority is to ensure that duplication is avoided and data are compatible and opportunities for sharing are realized wherever possible. Figure 4 identifies the typical lead agency for each of the component studies.

Further description of the specific scope and deliverables of the studies is provided in Part 2 of this workplan and illustrated by the Duffins Creek Watershed Plan and associated reports.

#### **1.4 Other Watershed Plan Components**

Some watershed plans must address a broader range of issues than is expressly required by the ORMCP in order to respond to local issues and community interest. Human heritage, public use, and air quality are examples of these other watershed planning components. It should be noted that human heritage and recreational use issues are addressed in other policies associated with the ORMCP, and therefore, the watershed planning study may provide the most efficient process for gathering additional information about existing or potential heritage and recreational use sites and for developing more integrated management plans for these features. The conservation authorities will seek opportunities to complete comprehensive watershed plans within the schedule, or will identify the outstanding areas as further required studies. It should be recognized that the watershed plans may need to be amended, if the studies are completed as follow-up exercises.

#### **1.5 From Watershed Plan to Municipal Policy**

Municipal planning tools have long been regarded as a primary means of implementing the watershed plan. Section 24 (2) of the ORMCP has formalized that mechanism by stating that “The objectives and requirements of each watershed plan shall be incorporated into the municipality’s official plan.” In its Oak Ridges Conformity exercise, York Region has already included policies committing to the completion and implementation of watershed plans and requiring area municipalities to incorporate, by official plan amendment, the applicable objectives and requirements of completed watershed plans into their planning documents. The Regions of Peel and Durham have adopted similar policies in their official plan amendments. In order to facilitate the transition from the watershed plan to municipal policy and criteria, it will be important to ensure that the watershed plan presents its recommendations in a form and level of detail that is compatible with and conducive to being easily incorporated into municipal policy.

The development of watershed policy/criteria is becoming regarded as a component of the watershed planning process, and the results form part of the plan’s implementation framework. It is envisioned that a policy development working group, tasked with the responsibility of developing the model policy framework, would be formed early in the watershed planning process (i.e. Phase 1). The working group would involve regional and local municipal planners, conservation authority staff, and other interested parties.

The group would undertake a review of existing policy tools and, in coordination with the other technical studies and their findings, would develop new policies/criteria that could be used to address watershed issues most effectively. Considerations include: determination of primary policy issues, the appropriate scale for application, user-friendly presentation of various databases, maps, and criteria needed to apply the policies, and rationalization of watershed-specific vs. municipality-wide application. The policies would need to build upon and complement existing municipal and conservation authority policy tools.

Several regional and provincial initiatives are underway, which will influence and assist in establishing consistency in the form and direction of watershed-specific policy. The province is expected to release guidelines in support of the ORMCP on water budgets, water conservation plans, hydrological sensitive features, subwatersheds, aquifer vulnerability, recreation and vegetation management, stormwater management, and sewage and water system plans. As part of the Source Protection Planning Framework for Ontario, the province is also expected to develop guidelines for risk assessment and delineation of areas of potential threat to human health. The York-Peel-Durham-Toronto Groundwater Program's Policy Group is preparing model policy and guidelines on a number of groundwater-related aspects of watershed management, including well-head protection and aquifer vulnerability. As part of its Terrestrial Natural Heritage Strategy, the TRCA is developing draft policy to address the protection of a terrestrial natural heritage system. These policy initiatives will help provide standard definitions for key terms and will form the building blocks from which watershed-specific policies and criteria can be developed.

Figure 2: Watershed Planning – Component Studies Required to Fulfill ORM Conservation Plan

Figure 3: Component Studies with references

Figure 4: Watershed Planning – Lead Agency Responsibilities for Component Studies

**Copies of Figures 2 - 4 are available on request**

**Table 1 – General Description of Watershed Planning Study Components**

Watershed Study Components	Description
<b>CHARACTERIZATION PHASE</b>	
<p><b>Water Budget</b></p> <ul style="list-style-type: none"> <li>-Surface Water Budget Model</li> <li>-Groundwater Budget Model</li> <li>-Water Use Effects Analysis</li> <li>-Water Conservation Projections</li> <li>-Low Flow Measurements</li> <li>-Water Takings Verification</li> <li>-Infiltration Rate Mapping</li> </ul>	<p>A Water Budget study provides an overall accounting of the volume of water in the various components of the natural hydrologic cycle, including precipitation, evapotranspiration, overland runoff, infiltration, and surface and groundwater storage. The study also estimates the current volume of water use (ground and surface water) and provides an assessment of any impacts from this use. Low flow measurements, needed for calibration of the surface water budget model, are also used in other studies, including aquatic habitat studies.</p> <p>A water budget model is needed in order to undertake an assessment of the impacts associated with potential changes in future land use, rates of water use, or climate scenarios. Changes in a watershed water budget are interpreted in terms of their impact on other watershed systems, such as baseflow, water quality, stream stability, aquatic habitat, and terrestrial habitat (particularly wetlands).</p> <p>Key input data include local watershed meteorologic data, soils, land use/cover, long term flow data for calibration, and volumes of water use. Key deliverables include surface and ground water budget models, and maps showing spatial variation in watershed infiltration rates, which can be used to set management criteria.</p>
<p><b>Water Use Assessment</b></p> <ul style="list-style-type: none"> <li>-Current Water Use (PTTW, et al)</li> <li>-Future Water Use Projections</li> <li>-Wellhead Delineation</li> <li>-Aquifer Vulnerability Mapping</li> </ul>	<p>The Water Use Assessment identifies all primary users of ground and surface water within the watershed (i.e. municipal, commercial, agricultural, etc.), except for environmental uses which are addressed under other studies. The study estimates the current and future volumes of water use and identifies any water quality restrictions associated with the intended use. With particular focus on potable water supplies, wellhead delineation and aquifer vulnerability mapping is prepared. All of this information provides a basis for setting watershed management goals and objectives; identifying key stakeholders who should be involved in the planning process; defining future water use scenarios; and setting criteria against which to evaluate impacts.</p> <p>Key input data include the Ministry of the Environment’s PTTW database and associated field verification updates, land use mapping, and other related databases used to generate estimates of water use (i.e. including users exempt from PTTW). Key deliverables from this work include updated water use databases, wellhead delineation and aquifer vulnerability mapping, recommended management goals/objectives/targets, and water use scenarios for further analysis.</p>

<p><b>Surface Flow Modelling Study</b></p> <ul style="list-style-type: none"> <li>-Hydrology Model Dev't</li> <li>-Hydraulics Model Dev't</li> <li>-Floodline and Regulation Line Mapping</li> <li>-Flood vulnerable area/roads</li> </ul>	<p>The primary purpose of the surface flow modeling study is to provide a basis for establishing or updating floodline mapping, used to delineate floodplains; to determine the appropriate stormwater management criteria for flood control; and to identify sites of flood risk where remedial action should be undertaken. A watershed hydrology model provides a tool for the assessment of impacts of future land use/cover and water use scenarios on watershed hydrology, including instream flows. The model is also used to evaluate alternative flood flow management strategies. The hydraulics model simulates flows within the channel geometry and estimates water level elevations for mapping purposes.</p> <p>Key input data include digital elevation model, soils, land use/cover, meteorologic data, and database of structures. Key deliverables include: recommended stormwater management criteria for flood control, floodline maps, flow databases, and flood vulnerable sites databases for flood warning programs and remedial works purposes.</p>
<p><b>Groundwater Study</b></p> <ul style="list-style-type: none"> <li>-3D Geological Mapping</li> <li>-Well record compilation</li> <li>-Groundwater Flow Model Dev't</li> <li>-Groundwater Use Effects Analysis</li> <li>-Aquifer Mapping and Flow Connections</li> <li>-Groundwater Discharge Mapping</li> </ul>	<p>The groundwater study develops a watershed based groundwater flow model which is used to establish an understanding of groundwater flow directions, water levels, and discharge areas, and which puts the watershed within a broader regional groundwater system context.</p> <p>The groundwater model is used as a basis for evaluating impacts to the groundwater flow system in response to an altered water balance associated with future land or water use scenarios. Changes in the groundwater system are interpreted in terms of their impact on other watershed systems, such as water use potential, baseflow, water quality, aquatic habitat, and terrestrial habitat (particularly wetlands).</p> <p>Key input data include geological mapping, borehole data (e.g. from well records), groundwater use data, infiltration rates (from surface water budget), and stream baseflow data (for model calibration). Key deliverables include: a conceptual geological model of the watershed, a 3-D groundwater flow model tool, and an interpretation of the existing groundwater system.</p>

<p><b>Surface Water Quality Study</b></p> <ul style="list-style-type: none"> <li>-Surface Water Quality Assessment</li> <li>-Water Quality/Contaminant Modelling</li> <li>-Point/Non-point source Identification</li> <li>-Spills Inventory and Mapping</li> <li>-SW Retrofit Opportunities Assessment</li> </ul>	<p>The Surface Water Quality Study reports on current water quality conditions in streams and waterbodies, and assesses the contributions from point and non-point sources of pollution. Water quality assessments are usually based on a combination of chemical and biological indicators. This study assists in setting water quality and aquatic resource targets.</p> <p>Surface water quality models are developed and later used to evaluate the water quality impacts of future land or water use scenarios and the effectiveness of alternative management strategies. Depending on the nature of pollutant sources in the watershed, further studies may include nutrient budgets or assimilative capacity studies.</p> <p>Key input data include: water chemistry, flow data, land use/cover, agricultural practices data (e.g. fertilizer application rates, crop types, livestock types, etc.), stormwater management practices, and a digital elevation model, depending on the sophistication of studies deemed necessary. Key deliverables include: water quality modeling tool(s), an interpretation of current conditions, and recommendations for water quality targets.</p>
<p><b>Groundwater Quality Study</b></p> <ul style="list-style-type: none"> <li>-Groundwater Quality Assessment</li> <li>-Potential Contaminant Inventory</li> <li>-Contaminant Risk Assessment</li> </ul>	<p>The Groundwater Quality Study reports on groundwater chemistry in the various aquifer systems and provides an interpretation of issues associated with current or anticipated future groundwater use. This study component also involves the development of a potential groundwater contaminant database and an approach to undertake a risk assessment in vulnerable areas.</p>
<p><b>Aquatic Resource Study</b></p> <ul style="list-style-type: none"> <li>-Fish Habitat Survey</li> <li>-Fish Community Survey</li> <li>-Benthic Invertebrate Survey</li> <li>-Riparian Zone Survey</li> <li>-Regional Reference Community Assess.</li> <li>-Water Temperature Survey</li> <li>-Fluvial Geomorphic Assessment</li> </ul>	<p>This study evaluates current and historic data on physical habitat conditions (i.e. geomorphologic, geologic, flow, water chemistry, temperature, etc.) and species presence to determine the historic aquatic community types found within the watershed. Regional reference sites (i.e. aquatic communities found in other similar, unimpacted, watershed reaches) are reviewed. Finally, human influences, such as in-stream barriers and altered water quality or thermal conditions, are considered as an additional layer of analysis to help set aquatic community management directions.</p> <p>The aquatic community management targets are used to evaluate the acceptability of impacts associated with future land or water use scenarios (e.g. changes in baseflow, water temperature, etc.), as modeled by other studies. The development of predictive tools that can be used to evaluate the response of the aquatic community to changes in watershed hydrology is an evolving science.</p>

<p><b>Terrestrial Natural Heritage Study</b></p> <ul style="list-style-type: none"> <li>-Natural Cover and Land Use Mapping</li> <li>-Field Data Collection/mapping</li> <li>-Terrestrial Natural Heritage Modelling</li> </ul>	<p>This study reports on the health of the terrestrial natural heritage system, including current flora and fauna type, distribution, quality of habitat, and an identification of management issues. A set of indicators and measures are used to evaluate conditions at a site through landscape scale. Data are compiled using a combination of air photo interpretation and field surveys. A Terrestrial Natural Heritage Modelling Approach, based on principles of conservation biology and landscape ecology, is applied to predict the impact that future losses of natural cover or restoration strategies will have on the health of the regional natural heritage system.</p> <p>There are important inter-relationships between natural cover and watershed hydrology, which need to be understood and considered in setting watershed management directions. This study will recommend terrestrial natural heritage management targets, which can be used to determine the acceptability of changes in watershed hydrology caused by future land or water use scenarios (i.e. impacts to wetlands). The terrestrial study may also recommend natural cover restoration strategies, which will need to be considered in terms of their potential impact to the watershed's water balance and associated surface and groundwater flow systems.</p>
<p><b>Land Use Map Consolidation</b></p> <ul style="list-style-type: none"> <li>-Current and Future</li> </ul>	<p>Current land cover and future (e.g. as per approved municipal Official Plans) land cover mapping is compiled from all watershed municipalities and consolidated into one mapping product that can be used in modelling exercises.</p>
<p><b>Characterization Report</b></p> <ul style="list-style-type: none"> <li>-Summary of Existing Conditions</li> <li>-Existing policy review</li> <li>-Set goals, objectives, Working Targets</li> </ul>	<p>This report documents the existing conditions and issues within the watershed. It presents a summary of existing policies and programs available, which could be used as a basis for implementation. The report identifies watershed management goals, objectives, and working targets, as developed with input from stakeholders. This information is used as a basis from which to evaluate changes due to future land and water use scenarios and the effectiveness of alternative management strategies.</p>
<p><b>ANALYSIS AND EVALUATION OF MANAGEMENT ALTERNATIVES</b></p>	
<p><b>Define Alternative Land Use, Water Use, and Management Scenarios</b></p>	<p>Selected future scenarios are defined for analysis, with the intent of benchmarking the watershed response and providing guidance for establishing an effective management plan.</p>
<p><b>Model Watershed Response to Alternative Scenarios</b></p>	<p>The various models developed in the Characterization phase are applied to the scenarios in order to predict watershed response. In some cases, the output from one model will be needed as in input to another.</p>
<p><b>Evaluate and Integrate Findings</b></p>	<p>Evaluation criteria, including effectiveness, ability to meet targets, public acceptability, cost, etc., are established and used to evaluate the results. A preferred management approach is determined.</p>
<p><b>Summarize Results and Finalize Targets</b></p>	<p>Results are summarized and targets finalized with stakeholder input.</p>

**DEVELOPMENT OF WATERSHED PLAN AND IMPLEMENTATION PLAN**

**Formulation of Plan and Implementation Framework**

Land use and water use management strategies are developed, discussed and negotiated with stakeholders. A final Watershed Plan and Implementation Framework are prepared. Supporting documentation, databases, maps, policies, guidelines and criteria are finalized and published in an accessible format.

**TO:** Chair and Members of the Watershed Management Advisory Board  
Meeting #4/03, September 12, 2003

**FROM:** Adele Freeman, Acting Director, Watershed Management Division

**RE: CONSERVATION ONTARIO'S WATERSHED-BASED DEMONSTRATION  
PROJECTS**

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#### **KEY ISSUE**

Completion and public release of five Watershed-Based Demonstration Projects and comparison to Toronto and Region Conservation Authority's (TRCA) current practices.

#### **RECOMMENDATION**

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT this staff report, including information on how to obtain copies of the five Watershed-Based Demonstration Project reports, be distributed to member municipalities;**

**AND FURTHER THAT staff incorporate lessons learned from these demonstration projects into TRCA's watershed planning and overall watershed management activities.**

#### **BACKGROUND**

Five watershed demonstration projects were initiated by the province prior to the release of the Walkerton Inquiry Part 2 Report (O'Connor, 2002), in response to recommendations contained in the provincial government-commissioned report "Managing the Environment: A Review of Best Practices" (Executive Resources Group, 2001). That report called upon the province to embrace a number of strategic shifts in environmental management including moving toward a more place-based approach based on boundaries "that made environmental sense"; balancing the use of regulatory and non-regulatory tools; striving for continuous performance improvements; improving the sharing and coordination of jurisdictional responsibility; and becoming more transparent and inclusive in involving the public and stakeholder interests. It specifically highlighted watershed management as the leading example of what was already working well in the province and was increasingly being adopted elsewhere in North America and on other continents.

The province invited proposals for watershed-based demonstration projects, and subsequently five such projects were initiated in late 2001, under the leadership of Conservation Ontario (CO) and/or individual conservation authorities (CA). The projects were aimed at demonstrating, documenting and transferring watershed-based best management practices with particular emphasis on protecting water quality, sustaining water resource availability and facilitating public and stakeholder involvement for better watershed stewardship. Provincial oversight for the projects was provided by the Ministry of Natural Resources, while the Ministry of the Environment provided seed funding to match CO/CA financial and in-kind contributions. Each project was led by a multi-agency steering committee. Projects were completed early in 2003 and reports can be obtained from the CO website ([www.conservation-ontario.on.ca](http://www.conservation-ontario.on.ca)) or from the TRCA website ([www.trca.on.ca](http://www.trca.on.ca)).

The following section provides a brief description of each of the projects. It should be noted that TRCA was involved in the first two projects listed below.

**REPORT #1: Watershed Management in Ontario: Lessons Learned and Best Practices in Watershed Planning, Implementation and Monitoring in the Credit Valley Conservation (CVC), Ganaraska and Region Conservation Authority (GRCA), and TRCA, 2003.**

This report examines the lessons learned by the Credit Valley Conservation Authority (CVC), the Ganaraska Region Conservation Authority (GRCA), and TRCA in the past 10 years and identifies best practices currently being used in watershed management. To assist in the transfer of these best practices to other practitioners, the three CAs developed a generic framework for describing their common approach to watershed management, including a breakdown of the steps involved in the development of a watershed plan. Watershed planning is one component in the overall process of watershed management, which also includes implementation, monitoring and reporting and periodic reviews and plan updates.

Conservation Ontario is promoting this generic watershed planning process to the province as a reference tool for the development and implementation of watershed-based source protection plans. TRCA, Lake Simcoe Region Conservation Authority (LSRCA) and York Region have used the process as the basis for outlining their plans to fulfill the watershed planning requirements of the Oak Ridges Moraine Act and Conservation Plan.

The report concluded that watershed management as practiced by CVC, GRCA, and TRCA is consistent with Ontario's "strategic shifts" that have been adopted for managing the environment. Watershed management is comprehensive in that it considers all facets of the natural environment, addresses social and economic issues, includes both protection and restoration of the environment and includes a full range of strategies from source control to "end-of-pipe". It was noted, however, that to date, social and economic issues have not been as thoroughly addressed as issues relating to the natural environment.

The report also found that the science of watershed planning is fairly mature, and although implementation of watershed and subwatershed plans is carried out extensively, it is not always in a rigorous manner. Although there are good examples of each in CVC, GRCA, and TRCA, it is fair to say that monitoring and reporting and periodic review are less well developed as concepts and in practice. Detailed observations of barriers, challenges and trends in each aspect of watershed management are summarized in the report's conclusions. Case studies of the Don Watershed Regeneration Strategy and the West Humber Subwatershed Study, prepared by TRCA staff, are included in the report.

**REPORT #2: A Framework for Managing Water Allocation and Water Use on a Watershed Basis (CVC and GRCA, 2003)**

This project was undertaken in consideration of escalating water demands associated with population growth and economic expansion, which are projected to exceed locally available supplies in some parts of Ontario, and the low water, "drought" conditions that have been becoming more commonplace. The report recommends a watershed-based framework for making sustainable water allocation and water use management decisions with an emphasis on local participation in problem-solving.

Current Ontario practices were documented and critiqued for various components of the water allocation and water use management decision-making process, including: legal and policy frameworks; priorities of use; available science and information; linkages with growth and development planning; water efficiency and demand management practices; the role of supply management; drought contingencies and institutional arrangements. Current and emerging practices of other jurisdictions were reviewed.

Recommendations for Ontario were provided within a framework that focused on: water use and allocation principles; effective planning and response and program administration and support. Factors deemed to be critical for success included having:

- strong policy and legal frameworks;
- a good understanding of ground and surface water availability and variability on a watershed basis;
- effective monitoring and reporting systems on current water use and for forecasting future demands across all sectors;
- well documented and calibrated models and analytical tools for determining water budgets; and
- prior experience and cooperative institutional arrangements for bringing diverse water-use mandates and interests together around shared use and management of water and related resources within a watershed.

TRCA staff is using this report as a key reference document in designing the work program and approach for the preparation of the Rouge Watershed Strategic Plan and other related watershed planning activities.

### **REPORT #3: A Guide to Watershed Reporting (UTRCA and RVCA, 2003)**

This “guide” developed by the Upper Thames Region Conservation Authority (UTRCA) and the Rideau Valley Conservation Authority (RVCA) provides advice on what environmental information to report and how to design data collection and analysis systems that are the precursors to good reporting, with an emphasis on improving public access to information. The report was intended to foster standardized reporting across watersheds, which will assist in broader regional and provincial evaluation. The guide addresses nine components of reporting, including: purpose, audience, scale, format, frequency, key resource/environment elements, indicators, evaluation and scoring, and stressors/causal factors.

TRCA’s watershed report cards and the Regional Watershed Monitoring Network, designed to gather the necessary data for reporting, are entirely consistent with the recommendations of this report, and in fact go well beyond the level of detail that is being recommended as a “minimum” basis for reporting.

**REPORT #4: Using Web-based Interactive Communications to Share Information to Protect the Health of Our Environment (LSRCA and GRCA, 2003)**

This “guide” is a product of lessons learned by LSRCA and GRCA in their interactive web site projects. Interactive websites have been found to be important methods of disseminating information to a wide range of audiences and educating and involving the local watershed public in various watershed management activities. The “guide” provides insight into the project management aspects of website development and provides listings of helpful reference sources.

TRCA is in the process of improving its web site in this regard.

**REPORT #5: Phosphorus Management and Water Quality: Economic Incentives and Multi-Stakeholder Watershed Management in the South Nation River and Lake Simcoe Watersheds (SNC and LSRCA, 2003)**

While “water quality trading” is not a common practice in Ontario, it has been sanctioned for use in some areas, particularly in relation to nutrient enrichment concerns and the imposition of phosphorus controls. One such area is the South Nation River watershed where municipal and industrial dischargers are able to partner in the reduction of total phosphorus loadings across the watershed by diverting monies they otherwise would be required to expend on more advanced and expensive effluent control measures, to fund non-point source pollution controls within the agricultural community at a smaller unit cost. These costs can be in the range of 7-10 times cheaper.

The goal in the South Nation is to reduce ambient total P levels that are now typically 3-5 times provincial objectives. LSRCA is working on a similar model for application in their watershed, aimed at achieving a 25% reduction to total lake loadings. This report summarizes the experience of these CAs and identifies factors for success of a water quality trading program.

TRCA staff will consider opportunities to employ this approach in the delivery of watershed plans.

*Information contained in this staff report was summarized from: Fox, B. and J. Kinkead, 2003. Source Protection Planning in Ontario - Linkages to Selected Watershed Initiatives of Conservation Authorities. Proceedings of the 56th Annual Conference "Water Stewardship: How Are We Managing?" of the Canadian Watershed Resources Association, held June 11-13, 2003, Vancouver, BC.*

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**Date: August 26, 2003**

**TO:** Chair and Members of the Watershed Management Advisory Board  
Meeting #4/03, September 12, 2003

**FROM:** Adele Freeman, Acting Director, Watershed Management Division

**RE: ENVIRONMENTAL ASSESSMENT FOR THE NATURALIZATION AND FLOOD PROTECTION OF THE LOWER DON RIVER**  
Lower Don River West Remedial Flood Protection Project

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**KEY ISSUE**

Establishment of a Community Liaison Committee as per the requirements of the Conservation Authority Class Environmental Assessment for the Naturalization and Flood Protection of the Lower Don River.

**RECOMMENDATION**

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT a Community Liaison Committee (CLC) be established as per the requirements of the Conservation Authority Class Environmental Assessment for Remedial Flood and Erosion Control Projects, to assist the TRCA and consultants in reaching out and maintaining contact with community residents, groups, associations and organizations, and that the CLC provide community input to the Toronto and Region Conservation Authority (TRCA), for the Lower Don River West Remedial Flood Protection Project, as required;**

**THAT the Terms of Reference, including the membership be approved;**

**THAT any costs incurred by the TRCA in establishing the CLC be attributed to the Lower Don River West Remedial Flood Protection Project;**

**THAT Cynthia Wilkey, Ron Fletcher and John Wilson be thanked for assisting in identifying members for the CLC;**

**AND FURTHER THAT staff report back to the Board as required on the final list of members in October 2003.**

**BACKGROUND**

At Authority Meeting #9/02, held on October 25, 2002, Res.#A246/02 on the Toronto Waterfront Revitalization - Naturalization and Flood Protection for the Lower Don River - Delivery Agreement was approved as follows:

*WHEREAS the Toronto Waterfront Revitalization Corporation (TWRC) has requested that the Toronto and Region Conservation Authority (TRCA) enter into a delivery agreement with TWRC to undertake certain works for the Naturalization and Flood Protection for the Lower Don River;*

*AND WHEREAS it is in the interest of TRCA under its authority and mandate as set out in the Conservation Authorities Act (R.S.O. 1990, c. 27) to enter into such an agreement;*

*THEREFORE LET IT BE RESOLVED THAT the Authority agrees to enter into the Toronto Waterfront Revitalization - Naturalization and Flood Protection For The Lower Don Delivery Agreement, subject to all terms and conditions being finalized in a manner satisfactory to Authority staff and the Authority's solicitors, Gardiner Roberts LLP;*

*AND FURTHER THAT Authority officials be authorized and directed to take all necessary actions as may be required, including the signing of documents, for the execution of the Delivery Agreement.*

In December 2002, the TRCA and TWRC signed the Toronto Waterfront Revitalization - Naturalization and Flood Protection for the Lower Don River - Delivery Agreement. This Delivery Agreement calls for the TRCA to conduct two separate projects near the mouth of the Don River. This resolution pertains to the first project, the Lower Don River West Remedial Flood Protection Project.

The objective of this project is to determine the best solution to permanently remove 210 hectares of downtown Toronto, west of the Don River, from the Regulatory Floodplain using a coordinated approach to meet the requirements under the provincial and federal environmental assessment processes. The Conservation Authority Class EA for Remedial Flood and Erosion Control Projects will be used to address the provincial EA process.

The TRCA established a Technical Advisory Committee (TAC) to ensure agency stakeholders, regulators and the three levels of government funding the project were involved throughout the process.

Included in the TAC are three citizen representatives with a long history of involvement in community issues and in particular issues relating to the Don. These community members have reviewed an initial list of possible groups to be represented on the CLC and provided a verbal summary of these recommendations at TAC meeting #2 held on Friday, August 29, 2003. In addition, Councillor Pam McConnell's office has been requested to suggest groups/organizations to be represented. The three community representatives have now contacted potential members of this committee.

Attached to this communication are the Terms of Reference for the CLC, including the proposal membership to date of the Committee. Approval of these Terms of Reference at this time and the list of potential groups/organizations will enable staff to organize an initial meeting in late October/early November.

#### **DETAILS OF WORK TO BE DONE**

The community representatives will continue their work in identifying members for the CLC. Staff will confirm the membership with the individuals and arrange an introductory meeting. A further report will be provided when the name of additional members are available.

**Report prepared by: Ken Dion, extension 5230**  
**For Information contact: Ken Dion, extension 5230**  
**Date: September 03, 2003**  
**Attachments: 1**

## **Attachment 1**

### **TERMS OF REFERENCE COMMUNITY LIAISON COMMITTEE (CLC) FOR A CLASS EA FOR THE REMEDIAL FLOOD PROTECTION PROJECT FOR DOWNTOWN TORONTO, WEST OF THE LOWER DON RIVER**

#### **PURPOSE OF THE CLC**

The main purposes of the CLC is to:

- assist the TRCA in obtaining public input;
- identify issues of concern regarding a remedial project;
- review information and provide comments to the TRCA to be utilized during the planning and design process; and
- disseminate information.

#### **FUNCTIONS OF THE CLC**

Specifically, the functions of the CLC will:

- identify items of public concern and interest with regard to the impact and design of proposed flood reduction alternatives;
- provide direct input on the proposed flood reduction alternatives to the Conservation Authority throughout the planning and design process;
- co-host, with Authority Staff, meetings organized by the Authority to facilitate the resolution of concerns relating to a proposed remedial work;
- review any Part II Order requests made by the public and attempt to resolve the issues of concern between the Part II Order requesters and the Conservation Authority before the request gets referred to the Minister of the Environment for a decision; and
- where appropriate, submit an assessment to the Conservation Authority, upon project completion, commenting on the effectiveness of the Class EA process for meeting public concerns for the specific project and, where relevant, identify possible improvements.

#### **MEMBERSHIP OF THE CLC**

The TRCA has long been involved with issues along the Lower Don River and the West Don Lands. During this period of involvement, the TRCA has established relationships with many of the key community associations, groups and interests within the study area. The TRCA will invite representatives from these interest groups to participate on the CLC.

A preliminary listing of CLC members is provided below.

The Task Force to Bring Back the Don - Tija Dirks  
Don Watershed Regeneration Council  
Tattle Creek Initiative - Eduard Sousa  
Toronto Field Naturalists -  
Corktown Residents and Business Association - Alan Marsh  
Gooderham & Worts Neighbourhood Association – Julie Beddoes  
Distillery District - David Jackson (Cityscape) or Kim Jones (Artscape)  
West Don Lands Business Community - Food Share or Studio Works  
Southeast Downtown Economic Redevelopment Initiative – Frank Burns  
Port Lands Partnership - Paul Young  
Toronto Cycling Committee - Frank Baldassini (To identify citizen member)

Citizens for the Old Town - Rollo Myers  
Regent Park Tenants -  
Queen-Broadview Village BIA - Ron Fletcher or Terry Lee  
St. Lawrence Neighbourhood Association - George Millbrand  
West Don Lands Committee -  
South Riverdale Revitalization Project - Reid Henry  
Mississauga's of New Credit -  
Councillor Pam McConnell, Ward 28  
MPP George Smitherman, Riding 13  
MP Bill Graham, Riding 13

Members of the CLC are permitted to recommend additional groups to participate on the Committee if they believe key members of the community are missing.

#### **APPOINTMENT OF CLC MEMBERS**

Staff will formally invite the persons identified by the three community TAC members to form the CLC during October and a final list of members will be provided to the Authority at a subsequent meeting.

#### **MEETINGS**

It is anticipated that the CLC will meet on weekday evenings approximately six times a year and will be established for the duration of the Class EA process commencing in October 2003. TRCA staff will request an extension should the Class EA require additional time. Meetings will be held at an appropriate centralized facility within Ward 28, or as near as possible.

The formality of a CLC's structure and composition will be proportional to the amount of public interest in an undertaking. Given the high level of public interest and exposure for this project, rules of order will be established, including the election of a Chair, and a spokesperson and facilitator (if it is deemed necessary by the CLC).

**TO:** Chair and Members of the Watershed Management Advisory Board  
Meeting #4/03, September 12, 2003

**FROM:** Brian Denney, Chief Administrative Officer

**RE: GTA TASK FORCE ON THE FUTURE OF THE ONTARIO MUNICIPAL BOARD**

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**KEY ISSUE**

Toronto and Region Conservation Authority's (TRCA) presentation to the GTA Task Force on Ontario Municipal Board reform.

**RECOMMENDATION**

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT the GTA Task Force recommendations on Ontario Municipal Board reform be endorsed;**

**THAT staff continue to monitor the progress of the GTA Task Force in affecting change to the Ontario Municipal Board process and report at a later date;**

**AND FURTHER THAT the Minister of Municipal Affairs and Housing and the Attorney General be so advised.**

**BACKGROUND**

The Greater Toronto Area Task Force (see membership list in Attachment 1) organized a series of panel discussions to solicit opinions on the Ontario Municipal Board process and to receive recommendations for its reform. The Task Force received presentations from many stakeholders including all municipalities within TRCA's jurisdiction, the Greater Toronto Homebuilders Association, Ontario Liberal Party (David Chaplan), the Pickering East Shore Community Association, the Ontario Professional Planners Institute and representatives for the TRCA. The GTA Task Force has subsequently released a report on Ontario Municipal Board reform.

Many planning decisions and actions by the municipality can be appealed to the Ontario Municipal Board. The OMB decisions are generally final with the exception of arguments on points of law which can be appealed to the courts. There are many criticisms of the Ontario Municipal Board process by various groups including those of the TRCA which are highlighted in the following paragraphs.

**RATIONALE**

TRCA staff through legal counsel, produced recommendations for reform which it shared with the GTA Task Force in January 2003, as follows:

### Need for a Comprehensive Approach to Planning

It has been the experience of the TRCA that the current planning process appeals to the Ontario Municipal Board is not particularly well adapted to respond to dealing with the cumulative impacts to the ecology as a result of ongoing development. There is a need for much stronger and clearer legislative and policy direction to address Natural Heritage Strategies through the planning process, specifically:

- the OMB decisions are based on the evidence presented at a site specific level from individual appeals rather than considering cumulative impacts associated with ongoing development.
- there is no effective means for the Board to monitor the results of its decisions. As a result assumptions arising from the evidence presented at the hearing involving mitigation of impacts, is never subsequently verified.
- certain appeals should be considered premature pending completion of comprehensive studies which assess impacts on the natural environment.

### Time Frames Associated with Appeals

It is unrealistic to expect the proper review of development proposals within a 90 day appeal period legislated under the Planning Act. Many of the cases with which the TRCA are involved raise complex scientific issues. Therefore, staff are required to respond to applications where information is incomplete or not forthcoming prior to the appeal. The current appeal period should be lengthened and the requirements for perfecting an application be toughened. The TRCA also believes that there should be greater emphasis placed at the OMB level on screening appeals in advance of the hearings to afford an opportunity for resolution prior to the hearing.

### Recovery of Costs

There are substantial costs involved with the OMB proceedings. Where appeals are forwarded to the OMB by developers, there is pressure exerted on the TRCA to respond in short time frames on complex issues. Since the appellant is often able to compel an expedited review of their application by staff, the TRCA believes that there should be some responsibility on the part of the appellant to indemnify the TRCA for these additional costs.

The above comments were received by the GTA Task Force and the Task Force has prepared its recommendations for change.

### **GTA TASK FORCE RECOMMENDATIONS**

The GTA Task Force released a report on March 7, 2003 entitled "Recommendations for Reforming the Ontario Municipal Board and Ontario's Planning Appeal Process". The report recommends reforms and seeks endorsement of its recommendations. The Task Force recommendations focus on four key areas of improvement:

1. The need to update the role of the OMB
2. Enable timely municipal decisions based on complete information
3. Support citizen participation through intervenor funding
4. Promotion of an independent and fair tribunal

1. Update the Role of the OMB

The Task Force recognizes that municipalities and legislation have matured since the OMB was created and that the Board should also be modified to reflect this maturing. As a result the Task Force recommends a two stage process where the first stage would be to review reasons for an appeal to determine if such an appeal should be granted. Only then will an appeal proceed to a full Ontario Municipal Board hearing as a second stage.

2. Enable timely municipal decisions based on complete information

The Task Force recommends amending the Planning Act to create a definition of complete application, to mandate preconsultation and to create a mechanism by which a dispute with what constitutes a complete application could be brought to the Board. Further the Task Force recommends giving the OMB jurisdiction to stay any appeal process if there is insufficient information or the municipality has not had enough time to consider the application. Finally the Task Force recommends a 150 day appeal period and not 90 days which is the current practice.

3. Support citizen participation

The Task Force recommends the province establish a program to fund third party public participation which citizen groups will need to qualify to obtain.

4. Promote an independent and fair trial

The Task Force recommends several changes to enhance reality and perception on this matter. Highlights include, increasing the term of appointments to the OMB, providing a job description of Board Members, an open process for applicants to the OMB and an open performance evaluation process for Board Members.

The Task Force believes that if the above recommendations are implemented they will substantially address the criticisms of the current planning appeal process. TRCA staff concur with the Task Force recommendations as they directly relate to our criticisms. The TRCA's endorsement of these recommendations will support the Task Force's promotion that the province act to make the suggested changes.

**Report prepared by: Russel White, extension 5306**  
**For Information contact: Russel White, extension 5306**  
**Date: September 02, 2003**  
**Attachments: 1**

**Attachment 1****GTA TASK FORCE ON OMB REFORM**  
**Membership List**

Roger Anderson Regional Chair Region of Durham	Steve Parish Mayor Town of Ajax
Mark Holland City/Regional Councillor City of Pickering	Nancy L. Smith Assistant Corporate Counsel City of Hamilton
Don Sinclair Director, Development Law Corporate and Legal Services Department Region of York	Paul Mallard Manager, Development Planning Section Planning and Development Department City of Hamilton
Frank D'Amico Councillor City of Hamilton	William Bell Mayor Town of Richmond Hill
A.L. Georgieff Commissioner of Planning Region of Durham	Kevin Daniel Flynn Regional Councillor Ward 1 - Oakville Region of Halton
Patrick O'Connor Director of Legal Services Corporate Services Department Region of Peel	Arvin Prasad Director of Planning Policy and Research Planning Department Region of Peel
Stan Floras Assistant Corporate Counsel Office of the Chief Administrative Officer Legal Services Region of Halton	Gary Muller Senior Planner Planning and Development Town of Ajax
Jody Wellings Manager of Current Planning Planning and Transportation Services Region of Halton	Ann Mulvale Mayor Town of Oakville
Councillor Howard Moscoe City of Toronto	Andrew Allison Senior Solicitor Region of Durham

**TO:** Chair and Members of the Watershed Management Advisory Board  
Meeting #4/03, September 12, 2003

**FROM:** Adele Freeman, Acting Director, Watershed Management

**RE: GENERAL IMPACTS OF CLIMATE CHANGE ON FLOOD RISK IN THE  
GREAT LAKES BASIN, AND TRCA WATERSHEDS**

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**KEY ISSUE**

Review of the staff report on the potential impacts of climate change on flood risk.

**RECOMMENDATION**

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT staff be directed to continue to work with Environment Canada in an attempt to further research and evaluate the potential impacts of a changing climate on flood risk.**

**BACKGROUND**

Flooding in the Toronto Region has historically occurred as a result of typically four types of meteorological events. These are rainfall on snow, tropical storm, large synoptic storms and severe thunderstorms. With the onset of climate change, we can expect that a warmer climate will result in changes in the types and frequency of weather systems which currently pose a risk to the creation of flooding within the Great Lakes Basin, including watersheds within our jurisdiction.

The first type of event, rainfall on snow, tends to result in high flows in all river systems and ice breakup. This type of flood event occurs generally in early spring or mid-winter with varying levels of flooding due to ice jamming. This type of event represents some of the earliest recorded flooding in the region, dating back to 1850. While the risks with this type of flooding have been significantly reduced by TRCA flood prevention works, localized flooding due to ice jamming continues to exist at a number of areas within our watersheds. The impacts of a changing climate on this form of flooding are anticipated to be two-fold, as with milder winters due to a warming climate in the Great Lakes Basin, it is anticipated that spring runoff will be occurring earlier and it is possible that less snowfall with more mid winter melt periods could occur. Depending upon the individual winter weather, the results will range from less spring flooding to more frequent ice jamming conditions.

The second type of meteorological event which has resulted in flooding within the region is that of tropical storms during late summer and during the fall. While the records of flooding in our watersheds note flooding as early as 1857 due to storms typically associated with these types of events, September of 1878 is the earliest recorded flooding that can be directly associated with a tropical storm which impacted the region. An analysis of tropical storms which have reached sufficiently inland to affect the Great Lakes Region reveal that since the recording of such events began in 1872, a total of 54 have occurred. The impacts of these systems varies depending upon the type, severity and storm track, with the most severe recorded in October of 1954 (Hurricane Hazel). It is unclear as to what impact climate change will have on these types of storms, but an analysis by staff of the storms that have affected our region since 1954 reveals that between 1954 and 1988, a total of 10 events impacted our region over the 34 year period. Since 1988, a total of 9 events have occurred over the 14 year period, with the majority

(8), occurring during the 1990's. The decade of the 1990's represented the warmest on record. While detailed analysis and modeling will be required to verify the impacts of climate change on these types of storms, the data collected to date tends to support the position that a warmer climate tends to generate more of these types of storms. Given this, these types of events will continue to present a significant and most likely an increasing risk to creating major flooding within our region.

The third type of meteorological event that can result in flooding within our region are the large synoptic type of storms typically experienced in early spring and late fall. These types of systems are usually large, slow moving systems which can affect the entire province and typically generate moderate rainfalls that last for 12- 36 hours. Flooding can result from these storm systems as a result of the cumulative impact of runoff over long periods occurring on existing, very wet or saturated soils. The Mississippi flooding in 1993 and the flooding experience in north western Ontario in 2001 were a result of a series of these type of events. The nature of our watersheds tends not to make this type of event a significant risk to major flooding, however the extended periods of very high flows created by these types of storms do generally create safety issues for extended periods along all our watersheds. The impacts of climate change on these types of storms will also need to be studied, however, the general aspects of a changed climate with a greater amount of water vapour held within the atmosphere will tend to provide for larger amounts of precipitable water being available for these systems.

The fourth and perhaps the type of meteorological event which poses the most frequent risk to our region is that of severe weather (thunderstorms). Our watersheds and in particular our urban communities are particularly susceptible to these types of events. These events often occur with little warning and can deposit significant amounts of rain within very short time frames, resulting in flash floods, street flooding and sewer surcharging (flooded basements). Over the last 16 years, the majority of our flooding has been associated with these types of storms. During the summer of 1986 our area was hit with three major events of this type with widespread flooding and thousands of flooded basements. Similar storms created major flooding in Essex County during the Harrow Storms of 1989. The Saguenay River flood in 1996 was a result of similar types of storms. The storms of May 12-13 of 2000 (now known as the Walkerton Storms) also resulted in significant flooding in our region. Similar storms throughout the summer of 2000 created flooding throughout most of the southern portions of the province. This summer, similar storms recently resulted in localized flooding in Mississauga and in Pembroke, Ontario. It is these types of storms that may be the most impacted by changes within our climate. It is generally held that one of the most significant changes we can expect will be more severe local storms. Initial works by climate specialists have referred to the potential for a doubling of the risk that these types of storms represent by 2050. Consequently, these types of storms will continue to be the systems which present the greatest frequency of flood risk in our region.

Environment Canada has recognized that a great deal of more detailed analysis is required to definitively address the changes in risk that climate change represents. Staff of the TRCA are currently working with the Meteorological Services Branch of Environment Canada in a Climate Change Action Fund request to try and move this research forward. This research is needed to confirm the changes in risk's we will be dealing with to allow both ourselves and our municipal partners to adapt to an increased flood risk. A shift in frequency such as that presently being discussed would result in a doubling of existing risk by 2050. The impacts of this type of change could mean a 5-year storm occurring at a frequency closer to that of a 2 year storm, and the 1/100 year storm at the 1/50 year return period. This shift would have the impacts of significantly reducing the level of protection of existing flood control works and increasing the frequency and severity of urban flooding problems. In addition to the change in risk to flooding that a changing climate creates, the potential for more frequent smaller storms will also create runoff events which will result in changes to stream morphology through increased erosion.

While the detailed research to clearly establish the degree of anticipated hydrologic change is still required, the general consensus and initial data would tend to reflect that a changing climate will and is resulting in greater severity and frequency of meteorological events resulting in an increased flood risk.

**Report prepared by: Don Haley, extension 5226**  
**For Information contact: Don Haley, extension 5226**  
**Date: September 04, 2003**

**TO:** Chair and Members of the Watershed Management Advisory Board  
Meeting #4/03, September 12, 2003

**FROM:** Adele Freeman, Acting Director, Watershed Management Division

**RE:** **2003 - 2006 SNELGROVE REACH HABITAT REGENERATION PLAN**  
Etobicoke Creek

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**KEY ISSUE**

Approval of the 2003 - 2006 Snelgrove Reach Habitat Regeneration Plan and direction to proceed with implementation in concert with the development and implementation of the Snelgrove Community Action Area Plan.

**RECOMMENDATION**

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT the 2003 - 2006 Snelgrove Reach Habitat Regeneration Plan be approved;**

**THAT staff be directed to develop partnerships, seek funding and initiate implementation of the Snelgrove Reach Habitat Regeneration Plan in concert with the development and implementation of the Snelgrove Community Action Area Plan;**

**AND FURTHER THAT staff report back on the progress of the implementation of the 2003 - 2006 Snelgrove Reach Habitat Regeneration Plan.**

**BACKGROUND**

At Authority Meeting #5/92, The Metropolitan Toronto and Region Conservation Authority approved Resolution #72, granting a permanent easement on 0.309 hectares of Authority owned lands to the Corporation of the City of Brampton to facilitate construction of a stormsewer that would service new development. Due to the increases in level and frequency of stormwater discharge that would result from this, Toronto and Region Conservation Authority (TRCA) staff were directed to undertake terrestrial and aquatic habitat enhancements in the valley and any necessary erosion control work.

Pursuant to this, in 1994 the Valley and Stream Corridor Reach Plan for Snelgrove was developed to guide future terrestrial and aquatic habitat enhancements in this area. The Snelgrove reach plan was updated in 1999 to be consistent with new water quality, aquatic habitat, flora and fauna surveys and land use information, and incorporated information about regeneration efforts in the area that were carried out between 1994 and 1999.

It recommended further site specific management activities to be undertaken over time as opportunities are presented. Based on this, as well as updated flora and fauna surveys (2001), a habitat regeneration plan, titled "2003 - 2006 Snelgrove Reach Habitat Regeneration Plan", has been developed for implementation between 2003 and 2006.

## **RATIONALE**

At Authority Meeting #5/03, June 27, 2003, Resolution #A131/03, was approved as follows:

*THAT this work plan be initiated for the development of four new community action area plans in 2003 in the Etobicoke and Mimico Creek watersheds be endorsed;*

*THAT staff are directed to initiate the associated stewardship groups for each of these areas as opportunities arise;*

*AND FURTHER THAT staff be directed to provide updates to the Authority as the area plans are developed and implemented.*

The Snelgrove community action area is significantly larger than the area of the Reach Plan, being located between Mayfield Road, Kennedy Road, Bovaird Drive and the western boundary of Etobicoke Creek watershed. The fall 2003 Snelgrove planting event will be used to kick-off the public participation component of the community action area planning process and to develop public support for future efforts in the broader Snelgrove community action area.

The implementation of the 2003 - 2006 Snelgrove Reach Habitat Regeneration Plan will help to achieve the 2006 targets for the following indicators of the Etobicoke-Mimico Creek Watersheds management strategy "Greening Our Watersheds": Terrestrial Habitat Quantity, Riparian Zone, and Biodiversity. It will also help to achieve the Remedial Action Plan goals of: *Rehabilitation of Fish and Wildlife Habitat Watersheds* ("Biotic corridor linkages are protected, enhanced, or rehabilitated across the waterfront and throughout the stream and valley system"), and *Ecosystem Observation* ("Opportunities should be provided for residents and visitors to study or observe a functioning, healthy ecosystem").

## **WORK TO BE DONE**

1. Submission of funding proposals to TD Friends of the Environment Foundation and MNR CFWIP funding program.
2. Coordination and implementation of the 2003 Snelgrove fall public planting event.
3. Detailed designs and costs for 2004, 2005 and 2006 planting plans and habitat enhancement features.
4. Public consultation for the development of the Snelgrove Community Action Area plan.

The fall 2003 habitat enhancement initiatives will be implemented at a large public planting event.

## **FINANCIAL DETAILS**

- Funding for the implementation of the 2003 Snelgrove regeneration projects is located in account #112-43. Further partnerships are being developed with the following groups: Brampton Scouts, Punjabi Community Health Centre, TD Friends of the Environment Foundation, MNR CFWIP funding program and others.
- Funding for the implementation of proposed 2004 - 2006 Snelgrove regeneration projects will be planned for in budgets for future years.

- Funding for the development of the Snelgrove Community Action Area Plan and the initiation and support of the future Snelgrove community stewardship group is available in account #118-70 and 118-71 for 2003 and will be accounted for in future watershed budgets.

**Report prepared by: Chandra Sharma, extension 5237**

**For Information contact: Kristin Geater, extension 5667**

**Date: August 28, 2003**

**Attachments: 2**

## **Attachment 1**

### **Snelgrove Reach Four Year Concept Plan 2003 - 2006**

The Snelgrove Reach is a 2.6 kilometre reach along the Main Branch of the Etobicoke Creek, extending from Conservation Drive in the north to Sandalwood Parkway in the south. The natural landscape is primarily a matrix of natural and managed valley land features including upland forest, floodplain forest, wetlands, old field, shrub thickets, regeneration planting, stormwater outfalls and manicured parkland. The Snelgrove Reach of Etobicoke Creek demonstrates both a naturally meandering and physically altered channel. Storm water outfalls and drainage diversion ditches are present throughout the area. Snelgrove is a high-use park that provides a variety of recreational activities which include:

- Walking and cycling along and extensive network of asphalt pathways;
- Ice skating (Loafer's Lake);
- Boating (Loafer's Lake);
- Soccer and Baseball; and
- Informal Picnicking

Snelgrove Reach is surrounded by predominantly residential land uses. A large community centre is located near the south end on the east side of the valley adjacent to Loafer's Lake. Somerset Drive Public School is located near the north end on the east side of the valley.

### **Flora and Fauna**

Vegetation communities with the Snelgrove Reach have been identified, under the Terrestrial Natural Heritage Monitoring Program, using Ecological Land Classification protocols.

Dominant vegetation cover types include the following:

- Dry-Moist Old Field Meadow
- Dry-Fresh Sugar Maple - White Ash Deciduous Forest
- Reed Canary Grass Mineral Meadow Marsh
- Manicured Park
- Native Cultural Savannah
- Exotic Cultural Savannah

Under the Terrestrial Natural Heritage Monitoring Program, fauna surveys were performed and species of concern were identified. Habitat enhancement plans will include habitat components required by these species. The following is a list of the species of concern observed in Snelgrove and areas adjacent:

- spring peeper
- mink
- northern leopard frog
- wood thrush
- common yellow throat
- eastern pheobe
- eastern wood-pewee
- swamp sparrow
- white breasted nuthatch

## **Restoration Opportunities**

The following restoration opportunities have been identified for Snelgrove:

### **Reforestation:**

Regeneration planting sites have been identified for upland, slope, floodplain and riparian vegetation communities. Tree and shrub selection should focus on promoting historical species. Within the floodplain, priority will be given to tree and shrub species that attract songbirds. Areas identified as “naturally regenerating” should be monitored and managed to promote the natural succession of native forest species. The interspersions of critical habitat features such as nest boxes and a snake hibernaculum is recommended.

### **Wetland Pockets:**

Areas have been identified within the floodplain for wetland pocket enhancement. These are pre-existing wet areas, which can be enhanced to increase habitat diversity to be used by a variety of amphibians, waterfowl, and songbirds. Actions for these wet areas should focus on increasing the wetland pocket size and diversifying water depths. This would be achieved through excavation and the manipulation of water levels. Once stabilized, the wetland pockets should be planted with native emergent and submergent aquatic flora. The interspersions of nest boxes is recommended.

### **Loafer’s Lake:**

Emergent vegetation such as cattail, sedges, smartweed, and rushes should be promoted via planting to mitigate the high nutrient content in the pond and to increase cover for fish. Due to the high population of Canada Geese around the pond, it is important that planting sites are enclosed with restrictive fencing and continually monitored to determine and promote any successful establishment. Further recommended actions include increasing cover for fish in the pond installing critical habitat features such as root wads and fallen trees. Nest boxes should be installed on the island within Loafer’s Lake, away from park users.

### **Stream Restoration:**

Originally recommended by the *Valley and Stream Corridor Reach Plan for Snelgrove*, selected priority sections of the channel reach were identified for riffle: pool enhancements and bank stabilization.

## **2003 - 2006 Project Deliverables**

<b>Habitat Type</b>	<b>Contribution</b>
Forest	1 ha
Floodplain/Songbird habitat	4 ha
Riparian	1400 m
Wetland Enhancement	19 ha
Nest boxes	22
Snake Hibernaculum	2
Critical Habitat Features (root wads, fallen trees)	12

Bank Stabilization (bioengineering)	264 m
In-stream Pools	7 pools
In-stream Riffles	2 riffles

**Suggested Time Line and Approximate Cost:**

Habitat implementation recommendations for the Snelgrove Reach have been divided into a four year schedule:

<b>Year</b>	<b>Habitat Implementation</b>	<b>Cost (\$)</b>
2003	Snake hibernaculum	4,000 - 6,000
	Floodplain forest/songbird corridor planting sites	12,000 - 17,000
		<b>16,000 - 23,000</b>
2004	Stream bank stabilization/riparian planting sites	7,000 - 11,000
	Nest boxes	4,500 - 6,500
	Planting sites (floodplain, valley, and slope)	16,000 - 22,000
	Snake hibernaculum	4,000 - 6,000
		<b>31,500 - 45,500</b>
2005	Loafer's Lake shoreline and emergent re-vegetation	20,000 - 25,000
	Loafer's Lake habitat features (root wads, fallen trees and nest boxes)	5,000 - 7,000
		<b>25,000 - 32,000</b>
2006	Wetland pocket enhancement	15,000 - 20,000
	Riparian planting sites	9,500 - 13,500
	Stream restoration (riffle:pool)	9,000 - 15,000
		<b>33,500 - 48,500</b>

**Details of the 2003 - 2006 Habitat Regeneration Plan**

As part the Snelgrove Reach Plan, the following implementation work has been identified for 2003:

***(1) Songbird Corridor Planting Sites***

In an effort to build on existing planting sites that have focussed on enhancing the floodplain forest community within Snelgrove, new sites have been selected and a plant list developed, to create a vegetation corridor for migratory songbirds containing berry producing trees and shrubs and species historically present in the area.

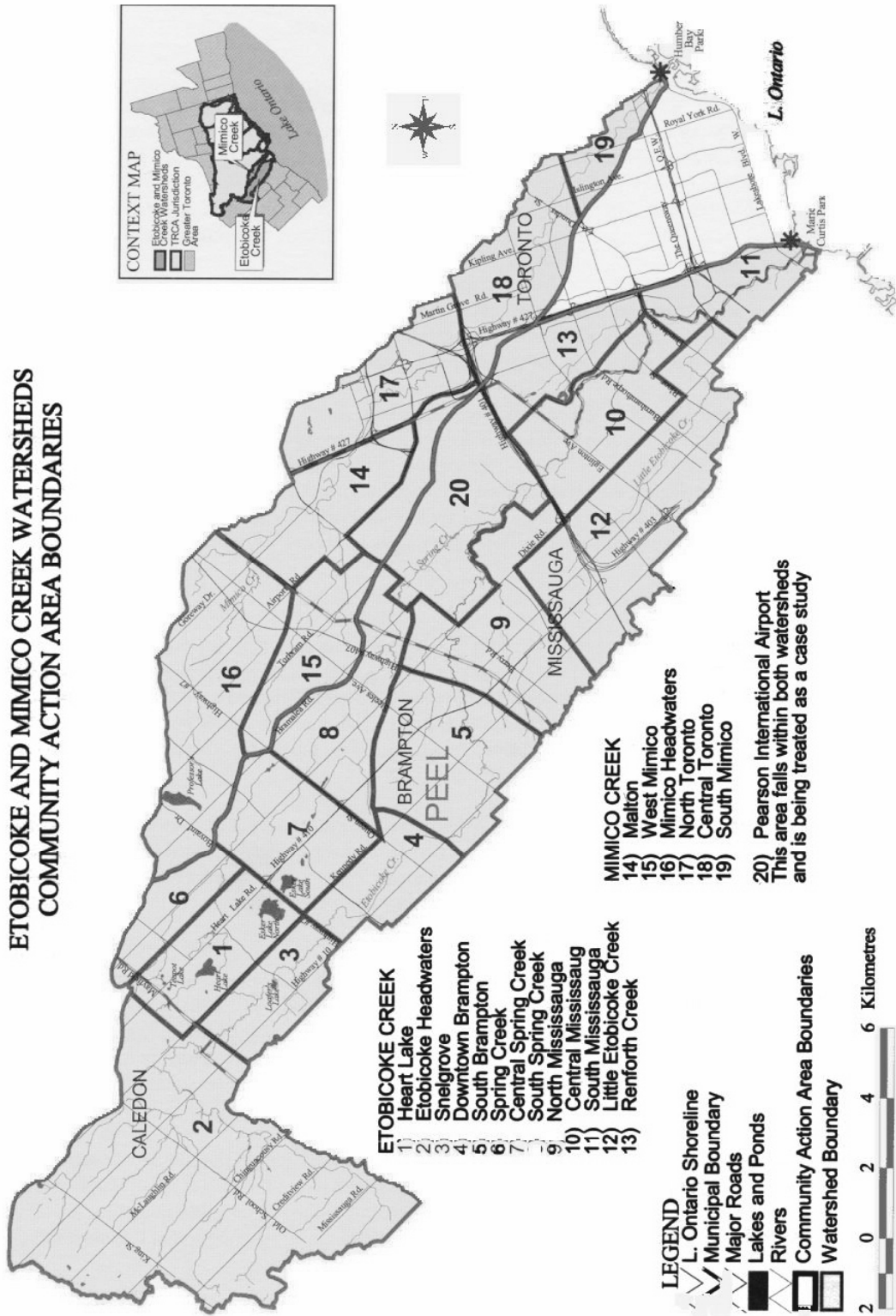
The planting will be implemented in the fall by community volunteers and TRCA staff. Prior to project implementation, the planting sites must be cleared by the TRCA archeology department. The site will be tilled and an archeological survey will be performed for all planting areas.

***(2) Snake Hibernaculum***

In order to enhance the critical habitat features within Snelgrove, a snake hibernaculum will be installed along the west side of the valley. Location requirements mandate its position on a south facing slope. Installation of the hibernaculum involves excavating approximately 4 cubic metres of soil from the valley slope and replacing it with clean stone and woody material. Material will be collected on site. Any other required material will be purchased on an as needed basis. Once completed a interpretive sign will be placed in a section on the park trail near the project location. The hibernaculum will not be visible from the trail to deter any human interference. For educational purposes a faux hibernaculum will be placed in an area that visible from the interpretive sign and that is not a hazard for the trail users. An archeology survey may be required prior to implementation.

**2003 Project Deliverables:**

- 1 ha of floodplain forest/migratory songbird habitat
- 1 Critical Habitat Feature (Snake Hibernaculum)



**TO:** Chair and Members of the Watershed Management Advisory Board  
Meeting #4/03, September 12, 2003

**FROM:** Adele Freeman, Acting Director, Watershed Management Division

**RE: ONTARIO'S LIVING LEGACY FUNDING**

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**KEY ISSUE**

Information regarding Living Legacy Funding and its administration by Durham Region.

**RECOMMENDATION**

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT the project for the Ontario Living Legacy Funds involving an investment of provincial funding of \$325,000 for habitat restoration projects within the Duffins Creek watershed and at Frenchman's Bay be approved.**

**BACKGROUND**

Ontario's Living Legacy is the largest natural heritage protection program in the province's history. It includes protection of significant lands in southern Ontario for the benefit and enjoyment of future generations. On Thursday, August 14, 2003, at Rotary Park in Ajax, the Honourable Jerry J. Ouellette, Minister of Natural Resources, along with the Honourable Janet Ecker and the Honourable Jim Flaherty, presented a cheque for \$325,000 to Uxbridge Mayor Gerri Lynn O'Connor, who accepted it on behalf of the Toronto and Region Conservation Authority (TRCA). The money has been earmarked for seven habitat creation and wetland protection projects in the Duffins Creek Watershed and the Frenchman's Bay Coastal Wetland.

Of the \$325,000, \$200,000 is for Duffins Creek watershed projects and \$125,000 is split between Duffins Marsh and Frenchman's Bay West. The following projects will benefit from these funds:

**Frenchman's Bay West Rotary Park – Wetland Creation Project**

Ontario Living Legacy funds will be applied at this site to the habitat enhancement component, specifically the development of a central wetland in the park. Future works related to habitat enhancement will include establishing coastal butterfly meadows and forest regeneration.

**Duffins Creek Marsh – Restoration Action Plan**

Work commencing in 2003 will include the construction of a water control structure/carp barrier and the implementation of habitat enhancement structures such as nesting platforms, spawning shoals, wetland buffers, shrub thickets and basking logs. Planting will commence in the Spring of 2004.

**Private Land Stewardship – Conservation Easement Restoration**

A number of landowners with conservation easements on their property have requested assistance in restoring the natural features and functions of their property. Capital funds through the Living Legacy program will provide trees, shrubs and aquatic plants for easement enhancements.

### **Timber Brothers Gravel Pit – Restoration Plan**

Living Legacy funds will be applied to wetland creation, wildlife habitat features and an increase in forest cover to meet objectives of the Oak Ridges Moraine Conservation Plan and the Duffins Creek Watershed Plan.

### **Glen Major Forest – Trail Head Creation**

A variety of native trees and shrubs will be randomly planted throughout the site and a trail head sign will be installed adjacent to the parking area. Existing trails will be extended through the old field to create a link with the new Trail Head.

### **Greenwood Management Plan – Rodar Property Enhancements**

This site provides an opportunity to develop and showcase meadow and riparian habitat in an area that is an accessible public space. It is located on the proposed route for the Trans Canada Trail up the East Duffins Creek, linking the waterfront to the Oak Ridges Moraine.

### **Paulynn Park – Riparian Enhancement Project**

Fish habitat improvements will be made through riparian plantings. The installation of an informal trail through this corridor will allow fishing and viewing opportunities for anglers and others. Habitat structures to be installed include bird boxes for small song birds and creating small brush piles and heat sinks as basking opportunities for small mammals, amphibians and birds. An information kiosk will profile restoration techniques suitable for other locations.

A Memorandum of Understanding has been signed between the Ministry of Natural Resources and TRCA. As the lead partner in Ontario's Living Legacy initiative, TRCA will administer the government funding for this project. Work on these projects will be underway in the fall of 2003 and carry over into the spring of 2004.

The Watershed Plan for Duffins Creek and Carruthers Creek is now complete and Ontario's Living Legacy funds will go a long way in contributing to its implementation and moving us towards our vision for The Living City – a vision for healthy communities where human settlement can flourish forever as part of nature's beauty and diversity.

**Report prepared by: Joanne Jeffery, extension 5392**  
**For Information contact: Gary Bowen, extension 5385**  
**Date: September 2, 2003**

**TO:** Chair and Members of the Watershed Management Advisory Board  
Meeting #4/03, September 12, 2003

**FROM:** Adele Freeman, Acting Director, Watershed Management Division

**RE: DON VALLEY BRICK WORKS**

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**KEY ISSUE**

Approval of a minor amendment to the Don Valley Brick Works Master Plan 1994 to reflect the enhanced access to the site in addition to a small off leash dog area which will help to protect the Weston Quarry Garden. These improvements will be funded through a generous donation to the City of Toronto from The Woodbridge Company Limited.

**RECOMMENDATION**

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT the minor amendment to the Don Valley Brick Works Master Plan be approved to reflect the proposed enhanced access to the site in addition to a small off leash dog area which will protect the continuing regeneration of the Weston Quarry Garden;**

**AND FURTHER THAT The Conservation Foundation of Greater Toronto be advised of the changed to the Don Valley Brick Works Master Plan 1994 by copy of this report.**

**BACKGROUND**

Toronto and Region Conservation Authority (TRCA) was approached by the City of Toronto to enter into a three party agreement with respect to a \$1 million dollar donation provided by The Woodbridge Company Limited for the creation of a new one acre park as part of the regeneration of the Brick Works. City of Toronto Council dealt with the matter in December, 2001 and had granted authority to enter into an agreement with The Woodbridge Company Limited regarding the implementation of the parkland improvements to the Brick Works.

The \$1 million dollar donation will be used for improvements at the site that links the Belt Line Ravine to Building #1.

In reviewing this agreement, we have requested that provisions be made to maintain, in good condition, the Allan Beattie tree and plaque as well as the bronze plaque awarded by the Aggregate Producer's Association of Ontario in recognition of the regeneration of the Quarry.

The City retained Envision the Hough Group to develop the landscape plan for the site improvements. The City staff have now settled on a proposed plan for the improvements to the area. Two new access points will be provided from the Belt Line Ravine to the site and a small off leash dog area, as well as general entrance improvements.

The first will be a set of steps that will replace the steep path linkage that enters the site adjacent to the Weston Quarry Garden. This trail link has required improvement as it is constantly eroding and requiring maintenance. Funding was not available in the first Phase of the work to improve this access.

The second access point will be a ramped trail providing ease of access for those unable to use the steps. The final designs for each of these points will be subject to further review of the detailed drawings by TRCA staff.

The creation of an off leash dog area is a welcome addition to the park. From the time of initial restoration of the quarry, the site has been a magnet for dog walkers and individuals wishing to exercise their dogs in a beautiful natural setting. Many of the original plantings were damaged when dogs were allowed to run off leash. City of Toronto staff erected a number of fences to prevent further damage to the site and numerous attempts have been made to address the issue. Ken Thompson, the benefactor of The Woodbridge Company Limited is a regular user of the site and has recognized the need to create a dots off leash area for the benefit of the local community and to assist in preventing the misuse of the Quarry Garden by dogs off leash. A small area (approximately 1 acre) has been identified to the south of the existing parking lot for the off leash area. Staff off the TRCA support this amendment to the Don Valley Brick Works Master Plan. The proposal has also been discussed with the Brick Works Advisory Committee, and representatives of the W. Garfield Weston Foundation.

Details of a site plan will be available at the meeting for review.

#### **WORK TO BE DONE**

TRCA staff have requested detailed drawings of both access points for approval prior to construction. Staff continue to work with the City on the proposal for adaptive reuse of the site in conformance with TRCA policies, the site Master Plan and the purposes for which the site was originally expropriated. Staff will continue to update the Board and The Conservation Foundation.

**Report prepared by: Adele Freeman, extension 5238**

**For Information contact: Adele Freeman, extension 5238**

**Date: September 04, 2003**

**TO:** Chair and Members of the Watershed Management Advisory Board  
Meeting #4/03, September 12, 2003

**FROM:** Adele Freeman, Acting Director, Watershed Management Division

**RE: ETOBICOKE-MIMICO WATERSHEDS COALITION**  
Minutes of Meeting #3/03 and #4/03

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**KEY ISSUE**

The minutes of the Etobicoke-Mimico Watersheds Coalition meetings #3/03 and #4/03, held on May 22, 2003 and July 24, 2003, respectively, are provided for information.

**RECOMMENDATION**

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT the minutes of the Etobicoke-Mimico Watersheds Coalition meetings #3/03 and #4/03, held on May 22, 2003 and July 24, 2003, respectively, as appended, be received.**

**BACKGROUND**

The Terms of Reference for the Etobicoke-Mimico Watersheds Coalition, dated May 2002, and adopted by the Authority at meeting #5/02, held on May 24, 2003 by resolution #A124/02, includes the following provision:

3.5 Reporting Relationship

*The Etobicoke-Mimico Watersheds Coalition is considered a subcommittee of the Watershed Management Advisory Board. The Watersheds Coalition Chair will report, at least, on a semi-annual basis on projects and progress. Annual work plans will be developed and submitted prior to the end of the first quarter of each year.*

**Report prepared by: Lia Lappano, extension 5292**  
**For Information contact: Chandra Sharma, extension 5237**  
**Date: August 12, 2003**

**TO:** Chair and Members of the Watershed Management Advisory Board  
Meeting #4/03, September 12, 2003

**FROM:** Adele Freeman, Acting Director, Watershed Management Division

**RE: HUMBER WATERSHED ALLIANCE**  
Minutes of Meetings #3/03 and #4/03

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**KEY ISSUE**

The minutes of Humber Watershed Alliance meetings #3/03 and #4/03, held on June 23, 2003 and July 15, 2003, respectively, are provided for information

**RECOMMENDATION**

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT the minutes of the Humber Watershed Alliance meetings #3/03 and #4/03, held on June 23, 2003 and July 15, 2003, respectively, as appended, be received.**

**BACKGROUND**

The Terms of Reference for the Humber Watershed Alliance, dated December 2000, and adopted by the Authority at meeting #11/00, held on January 5, 2001 by resolution #A266/00, includes the following provision:

3.5 Reporting Relationship

*The Humber Watershed Alliance is considered a subcommittee of the Watershed Management Advisory Board. The Watershed Alliance Chair will report, at least on a semi-annual basis, on projects and progress.*

**Report prepared by: Lia Lappano, extension 5292**  
**For Information contact: Gary Wilkins, extension 5211**  
**Date: August 12, 2003**

**TO:** Chair and Members of the Watershed Management Advisory Board  
Meeting #4/03, September 12, 2003

**FROM:** Adele Freeman, Acting Director, Watershed Management Division

**RE: REGIONAL REPORT CARD PROGRESS AND 2001 REGIONAL  
MONITORING PROGRAM STATUS REPORT**

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**KEY ISSUE**

The Toronto and Region Remedial Action Plan (RAP) Memorandum of Understanding (MoU) plans to embark on the creation of a Regional Report Card in the 2004/2005 project year to address the state of the environment in the Toronto Area of Concern (AoC). The 2001 Regional Monitoring Status Report will act as baseline data in the preparation of this report.

**RECOMMENDATION**

**IT IS RECOMMENDED THAT the update on the Regional Report Card be received;**

**AND FURTHER THAT the 2001 Regional Monitoring Program Status Report be received.**

**BACKGROUND**

The Toronto RAP understands the importance of assessing the state of the environment in the AoC to foster appropriate action and also to show how current efforts have affected environmental health. The preparation of a Regional Report Card fits well within RAP monitoring and reporting objectives. In the Five-Year Strategic Plan currently being developed for the Toronto and Region RAP, the Regional Report Card has been identified as a deliverable for the 2004/2005 project year. Costs associated with the report (excluding some of the in-kind staff time) will be funded through the RAP MoU.

At Authority Meeting #7/02, held on July 26, 2002, Res.#A202/02 was approved as follows:

*THAT staff be directed to compile an inventory of all organizations and municipalities in the GTA that prepare state of the environment reports or report cards on how governments, business or industries are doing with respect to the environment;*

*AND FURTHER THAT staff report on the potential of joining with these organizations in the development of one regional environmental state of the environment report.*

In response to this resolution Toronto and Region Conservation Authority (TRCA) staff prepared a DRAFT report in February 2003 titled: "TRCA State of the Region Background Report: Indicator Overview and Document Summaries". This document will be used to draw on the various techniques and reporting methods used by other agencies, when creating a Toronto and Region specific report.

In preparation of the Regional Report card staff intend to utilize the vast resources that are presently available in the Greater Toronto Area. An idea that will be explored is bringing in different organizations in the Toronto Region to co-author sections of the report card that reflect their areas of interest or expertise. At RAP Team monthly meetings, TRCA staff have initiated a process of inviting local interest groups to come and speak about their projects and efforts. The Team will be setting up meetings with agencies who show interest in becoming involved in the preparation of the report in September and October 2003, to further the planning process.

The RAP AoC plus the Duffins and Carruthers Watersheds will be the area of focus for the Regional Report Card. In consultation with Board Member Anthony Ketchum and the RAP Team, the following have been identified as possible areas of concentration.

- Air Quality
- Energy
- Aquatic Habitat Quality
- Drinking Water
- Urban Agriculture
- Greenspace
- Urban Sprawl/Smart Growth

Further research and consultation with interest groups and TRCA staff will be undertaken to confirm these areas and to refine the objectives of this report. A detailed Table of Contents should be ready for Board approval in December 2003.

The Regional Report Card will also incorporate baseline data from the Regional Monitoring Program. The Status Report for the Regional Watershed Monitoring Program 2001 is now finalized and a copy of the report will be available at the Meeting for interested Board Members. This report lays out monitoring data collected on the established indicators in the program. Data collected in the first three years (2001 - 2003) establishes baseline conditions. In this first phase indicators are all measures of condition and stress. Response indicators will be incorporated in future years.

The 2002 and 2003 Regional Monitoring Program has integrated smoothly into the successful pattern of data collection, analysis and management established in 2001. The 2001 report articulates that the continued collection of baseline data leading to the development of action-oriented indicators will make significant steps towards restoring beneficial uses in the Toronto and Region AoC. The completion of a Regional Report Card is another effort identified which will assist the Regional Monitoring Program in obtaining its' objectives.

#### **DETAILS OF WORK TO BE DONE**

- Meetings with interested groups;
- Agreement on authors of the sections and major themes;
- Preparation of a detailed Table of Contents (will be brought to the Board for approval in December 2003).

**Report prepared by: Lisa Turnbull, extension 5325**

**For Information contact: Lisa Turnbull, extension 5325 or Scott Jarvie, extension 5312**

**Date: August 05, 2003**