



THE TORONTO AND REGION CONSERVATION AUTHORITY

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### WATERSHED MANAGEMENT ADVISORY BOARD MEETING #6/05

Friday, February 10, 2006

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THE TORONTO AND REGION CONSERVATION AUTHORITY

MEETING OF THE WATERSHED MANAGEMENT ADVISORY BOARD #6/05  
February 10, 2006

The Watershed Management Advisory Board Meeting #6/05, was held in the South Theatre, Black Creek Pioneer Village, on Friday, February 10, 2006. The Chair Dave Ryan, called the meeting to order at 10:37 a.m..

**PRESENT**

Gay Cowbourne	Member
Frank Dale	Member
David Gurin	Member
Dick O'Brien	Chair, Authority
Dave Ryan	Chair
Nancy Stewart	Vice Chair

**ABSENT**

Pamela Gough	Member
Shelley Petrie	Member
Michael Thompson	Member

**RES.#D79/05 - MINUTES**

Moved by: Frank Dale  
Seconded by: Gay Cowbourne

**THAT the Minutes of Meeting #5/05, held on October 21, 2005, be approved.**

**CARRIED**

**PRESENTATIONS**

(a) A presentation by Chandra Sharma, Specialist, Etobicoke and Mimico Watersheds in regards to item 7.1 - Greater Toronto Airports Authority (GTAA).

**RES.#D80/05 - PRESENTATIONS**

Moved by: Frank Dale  
Seconded by: Nancy Stewart

THAT above-noted presentation (a) be heard and received.

CARRIED

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## SECTION I - ITEMS FOR AUTHORITY ACTION

**RES.#D81/05** - **GREATER TORONTO AIRPORT AUTHORITY (GTAA)**  
Living City Project - Etobicoke Creek Watershed. Final report on the Greater Toronto Airport Authority (GTAA) Living City Project - Etobicoke Creek Watershed.

Moved by: Frank Dale  
Seconded by: Nancy Stewart

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT the Greater Toronto Airport Authority (GTAA) Living City Project - Etobicoke Creek Watershed final report and all associated studies be presented to the GTAA;**

**THAT the GTAA be thanked for their continued commitment and support to improving the health of Etobicoke Creek and Mimico Creek watersheds;**

**THAT staff continue to assist the GTAA with their future work on green buildings and environmental restoration on the Lester B. Pearson International Airport (LBPIA) property;**

**AND FURTHER THAT staff undertake such actions to develop new partnerships and funding to implement priority recommendations.**

CARRIED

### BACKGROUND

Toronto Lester B. Pearson International Airport (LBPIA) is the largest single land use within the Etobicoke Creek and Mimico Creek watersheds, and comprises approximately six percent and seven percent of the watersheds respectively. The GTAA and TRCA share mutual interest in Etobicoke Creek and have a good working relationship regarding its protection and enhancement. GTAA staff have contributed to the Etobicoke-Mimico Task Force and the development of the Greening Our Watersheds strategy document, and currently sit on the Etobicoke-Mimico Creek Watersheds Coalition.

At Authority Meeting #2/02, held on February 8, 2002, Resolution #A30/02 was approved as follows:

*THAT the staff report on the funding received by the Conservation Foundation of Greater Toronto's Living City Campaign, from the Greater Toronto Airports Authority, for projects on the Etobicoke Creek watershed be received;*

*THAT the Greater Toronto Airports Authority, and in particular Randy McGill, Manager of the Environment, be thanked for their support of the Living City Campaign and for their support in improving the health of the Etobicoke Creek watershed;*

*THAT staff maintain their relationship with the Greater Toronto Airports Authority for work on the Etobicoke and Mimico Creek watersheds, and extend this relationship to the Duffins Creek watershed;*

*AND FURTHER THAT staff report back to the Board regarding completion status of the projects that have been agreed to as part of the funding negotiation.*

The GTAA Living City Project is a major undertaking involving four main components:

#### **Terrestrial Natural Heritage**

- The Terrestrial System inventory and modelling for the study area was based on TRCA's Terrestrial Natural Heritage Systems Strategy (TNHSS) methodology. The study includes management recommendations identification of potential/targetted cover and priority restoration and enhancement sites to meet TRCA's local, as well as watershed, targets for the terrestrial system.

#### **Aquatic Ecosystems**

- Etobicoke Creek Watershed Fisheries Management Plan (FMP). The plan presents management recommendations for target species at a subwatershed scale (Lower Etobicoke Creek, Little Etobicoke Creek, Upper Etobicoke Creek and Spring Creek). Restoration opportunities for priority aquatic habitat improvement in close proximity to the GTAA lands have been identified.

#### **Stormwater Management**

- A Modelling Assessment of Runoff Water Quality Management in Etobicoke Creek for Catchment 219. (A representative catchment upstream of the GTAA property).
- The Etobicoke Creek Watershed Spills Mapping Study.
- Fluvial Geomorphology and Erosion Assessment of Etobicoke Creek.
- Off-Site and On-Site Stormwater Management Opportunities.
- TRCA Hydrology update

#### **Integration & Priority Implementation Recommendations**

- Key recommendations from the above studies are spatially and conceptually integrated to ensure land uses, water quality, fisheries, terrestrial and community values are prioritized within the study area. Priority concepts have been developed using TRCA's Habitat Implementation Plan (HIP) methodology. The report also includes mapping of key businesses and outreach opportunities.

In addition, during the course of the project, the studies informed various ongoing and concurrent processes including the Region of Peel Sanitary Sewer Environmental Assessment, City of Mississauga Etobicoke Creek Trail planning, GTAA Habitat Restoration planning and in-stream work, and the RAP Spills initiative. Status reporting and consultations on products and emerging issues with Randy McGill, Manager - Environment at GTAA have been ongoing throughout the duration of the project.

## KEY FINDINGS AND RECOMMENDATIONS

### Aquatic Ecosystems

A Fisheries Management Plan was developed for Etobicoke Creek that includes management objectives, target species, and various implementation strategies to improve the ecological integrity of the aquatic ecosystem at a subwatershed scale. For each of the four major subwatersheds (Lower Etobicoke Creek, Little Etobicoke Creek, Upper Etobicoke Creek, and Spring Creek), the habitat categories, management strategies, and target species are identified. The Etobicoke creek has a total drainage area of 211 km<sup>2</sup> and 16.5%, or approximately 45 km of the watercourse has woody riparian vegetation.

### Etobicoke Creek Watershed

Fifty-two fish species have historically been found in Etobicoke Creek, nine of which are introduced. Of the species historically found, 28 were captured in 2001, and only 20 in 2004. The 2004 survey also identified 3 species not previously documented in the watershed. Aquatic habitats in the Upper Etobicoke and Spring Creek are in relatively good condition while the more urbanized Lower and Little Etobicoke Creek subwatersheds are more degraded. Only two small reaches provide coldwater habitat with drainage areas less than 10 km<sup>2</sup>. Of note is the historical presence of mottled sculpin and redbreast dace as these are a sensitive species - neither mottled sculpin nor redbreast dace were present in recent surveys completed in 2000 and 2001. All of the other species found are tolerant species indicative of degraded conditions. The combination of considerable flows and reduced invertebrate diversity and density are likely contributors to the substantial decline in diversity and aquatic community. Poor riparian cover and the presence of in-stream barriers also negatively affect the quality of the habitat, and the potential for access by both fish and invertebrate species. Key findings include the discovery of coldwater habitats in the headwaters of Etobicoke Creek.

### GTAA Study Area

(GTAA study area for this project includes LBPIA property and surrounding wildlife management and control area)

**Aquatic Species:** The GTAA lands straddle three of the four Etobicoke Creek subwatersheds, (all except Little Etobicoke Creek subwatershed), with the downstream confluences of the Upper Etobicoke and Spring Creek subwatersheds, as well as the upstream origin of the Lower Etobicoke Creek subwatershed, all located upon the GTAA property. The airport's unique position as the nexus of the three major subwatersheds means that the key recommendations have special significance to the airport lands, and conversely, as do the airport's operations upon the subwatersheds both upstream and downstream. The FMP's recommendations regarding Habitat Categories and Target Species Management Zones for this area involve:

- Protection and management of small riverine coldwater habitat just upstream of the airport for the target species of sculpin;
- Protection and enhancement of Etobicoke Creek habitat (upstream and downstream of GTAA) for darters and smallmouth bass in the small and intermediate riverine warmwater management zones.

**Wetlands and Riparian Habitat:** Analyses of historic data indicate that over 7.4% of the watershed was once wetland. Presently, only two wetland complexes have been evaluated and they, combined with all other identified wetlands, comprise only 0.8% of the watershed. Historically, the airport lands contained a large area of wetland. Restoration of wetlands in this area is difficult to rationalize given the dangers that wetland birds pose to airport operations and vice versa. Key recommendations for the subwatersheds focused upon a number of issues, but perhaps the most relevant to the GTAA include:

- Riparian vegetation (dense woody vegetation to be established 30 metres on each bank);
- Natural channel design during alterations (the GTAA has already employed natural channel design during the Spring Creek realignment and it is anticipated that it will continue with future projects);
- The protection of baseflow through limiting or mitigating imperviousness in this area.

In order to begin to address the key areas of interest noted above, aquatic concept sites have been integrated at a subwatershed scale with the terrestrial component restoration sites using TRCA's Habitat Implementation Plan (HIP) methodology.

### **Terrestrial Natural Heritage - The Terrestrial System Report, Biological Inventory and Site Assessment Report**

The Terrestrial Natural Heritage (TNH) study employed TRCA's TNH methodology and modelling at a more local scale. Recommendations for protecting and restoring the target natural system within the study area, and the larger watershed as a whole have been provided. A set of twenty four priority candidate sites have been recommended for enhancement and restoration within this area.

The state of the terrestrial system within the GTAA study area was evaluated as 'poor' to 'very poor' during the landscape analysis, and is not surprising given the matrix influence (surrounding land use) of airport operations and major transportation corridors in the area. The study area incorporates several distinct terrestrial sites that have been severely fragmented by the clearing of land, initially for agriculture and more recently for urban development. Although these remnant natural areas lack connectivity, they are a part of the same landscape, functioning as a system, and thus are subject to cumulative impacts from the surrounding land uses. The impacts of proposed development on the GTAA lands are expected to affect terrestrial habitat and species both on and off the GTAA property. Therefore, the scope of the inventories and proposed restoration work extend beyond the GTAA property to surrounding areas of the Etobicoke Creek corridor. This is consistent with contemporary ecosystem management and landscape context approaches for the conservation and restoration of biodiversity.

**Natural Cover:** Natural cover is sparse and poorly distributed across the landscape. Using more recent aerial photography obtained from the GTAA and information collected via field surveys, it was determined that since 1999, a handful of natural sites have been removed and replaced by development (e.g., airport landing strips, industrial development). Due to the poor distribution of high-quality terrestrial natural cover, the abundance and distribution of species and communities of conservation concern is also poor.

**Habitat Quality and Quantity:** Within TRCA's jurisdiction, preliminary published research has shown that the size of a habitat patch is the most important indicator for the presence and absence of avian species of conservation concern. In the GTAA study area there is just one patch of forest that contains an area of forest interior beyond 100 metres from the forest patch edge. Located south of Highway 401, this forest patch supports the highest diversity of flora and fauna species of conservation concern and is the least disturbed within the entire study area. This demonstrates that even within a highly urbanized area, a patch that is large enough, and which has a favourable (compact) shape, will continue to support sensitive species and shelter them from the negative effects of the urban matrix. The majority of the L1 to L3 (a ranking system of TRCA landscape analysis modeling tool where L1 is the highest functioning forest patch and L5 is the poorest or lowest-functioning) ranking flora and fauna species within the GTAA study area are found outside of the Lester B. Pearson International Airport lands, south of Highway 401, within the larger forest patches. However, it should be noted that within an urban area L4 species are also considered sensitive and of concern. Most of the remnant habitat patches in the area are too small, or have a very linear shape. In such a highly urbanized watershed, forest patches need to be more robust to carry out proper ecological functions such as the provision of habitat, and air and water purification.

The biological field inventories conducted by TRCA staff in 2001 and 2003 revealed that a total of 85 different vegetation communities, 181 flora species and 46 fauna species are present within the GTAA study area. Of these, 13 vegetation communities, 27 flora species and 18 fauna species are considered to be of conservation concern (L1 to L3) within TRCA's jurisdiction. It is important to note that 19% of the vegetation communities, 23% of the flora species and 5% of the fauna species are non-native to the jurisdiction (exotic, L+). This number will likely increase if actions are not taken to improve the terrestrial system's resiliency by increasing the amount of native vegetation through ecological restoration, and by controlling the spread of invasive species in infested areas, such as along trails.

In terms of riparian communities of note, the reed canary grass open beach and the several willow shrub beaches on-site are ranked L2 for their regional rarity and specific geophysical requirements. Wetland communities of concern include two broad-leaved cattail mineral shallow marshes of a significant size located in the Wildwood Park area of the study area (located in Mimico Creek watershed). There is also one notable organic cattail surrounding a duckweed-mixed shallow aquatic marsh (L3) located just south of Highway #401 and east of Dixie Road. This community is the only native community occurring on organic soil in the GTAA study area, and is made even more significant for its association with another rare feature in the area—an open aquatic vegetation (pond) community.

Field studies for this work resulted in 're-discovering' the Twinleaf within its namesake Environmentally Sensitive Area (TRCA ESA #2) almost twenty years since its initial discovery and designation. One can expect that the sensitive species that are still present in the study area today will also disappear unless action is taken to implement the target Natural Heritage system.

**Connectivity:** Aside from riparian linkages, connectivity between other natural patches in the study area is insufficient for the maintenance of terrestrial species and ecological services. In addition to providing for the movement and dispersal of flora and fauna species within the study area, continuity of terrestrial habitat is particularly important when considering the opportunities for re-colonization of the study area. For instance, species in high-quality source habitats in the upper reaches of the Etobicoke watershed and in the Humber watershed can potentially disperse and recolonize newly-restored and regenerating habitats in the GTAA study area if appropriate conditions exist. Because a suitable degree of connectivity between natural systems occurs rarely within TRCA's jurisdiction, it is strongly recommended:

- that the natural corridors linking the existing patches in the GTAA study area be maintained and enhanced wherever possible;
- linkages need to be restored between the GTAA terrestrial system and natural areas surrounding the study area as suggested in TRCA's regional target system;
- special attention should be given to creating and enhancing connections between forest and wetland habitats so that species such as amphibians, which require both wetland and forest to complete their life cycles, can safely travel from one habitat to another and persist in the watershed; and
- East-west connections on suitable tableland should be a priority for restoration action.

**Restoration Constraints:** TRCA recognizes that the GTAA has an Airport Wildlife Management Control program in place, and that any future habitat restoration work should be consistent with its objectives. Fortunately, implementing the TNH approach will be consistent with, and complimentary to, the airport's wildlife control objectives and will, in several areas, reduce the number of problem bird species associated with open field and agricultural habitats. Safety concerns arising from the use of natural cover by large numbers of birds in the vicinity of airports, creating potential collision risks, should be carefully considered in any land management decision. A report on the design of bird hazard zoning criteria produced specifically for the Pickering airport site lists and ranks the various bird species that should be considered in airport design. Almost all of the species that pose a safety risk in the operation of an airport, i.e., species such as geese, gulls, and small flocking species (starlings), are associated with open habitat – areas that are used by such species for roosting, staging (during migration), and foraging. Bird species associated with forest habitat fall largely in the report's Level 6, "very small, solitary bird(s)", including warblers, vireos and sparrows, and are of the lowest concern for airport operations. This extensive list places natural habitats in the No Risk Land-uses category, where natural habitat includes forests, woodlots, hedgerows and riparian habitats, and maintains that such habitat is only of concern for airport operations if located close to airport runways. This being the case, it seems judicious to recommend:

- that within the landscape surrounding any airport, restoration of natural forested cover should take preference over manicured, open habitat and agricultural crops such as soybean and corn. It is well understood that the latter land-use types create a considerable hazard in attracting medium to large flocking species (e.g., Canada geese, ring-billed gulls) into the vicinity of an airport. In light of this management consideration, the many soybean fields and open meadows located in the western vicinity of the airport around the airstrips represent a continuing hazard to aircraft and would be better managed as forest and woodland habitat.

The GTAA study area includes almost 40% percent of the Potential Natural Cover identified within the TNHSS for the Etobicoke Creek and Mimico Creek watersheds. Restoration, enhancement and securement of terrestrial system in this area is key to meeting the minimum overall targets at least ( Minimum 12% Etobicoke Creek and 8% Mimico Creeks) for a healthy Terrestrial Natural Heritage system in the Etobicoke Creek and Mimico Creek watersheds.

Following actions are recommended:

- Restoration activities should be undertaken to increase the size, improve the shape of existing habitat patches and promote forest interior conditions to support sensitive species and important ecological processes. Several opportunities exist to restore lands within the GTAA-owned lands including the agricultural fields.
- land securement, where possible in order to meet system targets;
- expansion of the target natural heritage system;and
- mitigation of the negative effects of the matrix (surrounding land use) by ensuring that new development and expansion take into consideration the location of sensitive species and communities to mitigate all potential threats.

TRCA staff worked closely with GTAA wildlife management and environment staff in order to develop a set of recommendations and restoration priorities based on the site inventory and modelling. Restoration priorities, if implemented, will contribute towards the targeted natural heritage system for Etobicoke Creek. Several of these concept sites upstream of the GTAA property have been combined with aquatic restoration sites for short-term, large-scale implementation. The priority candidate sites have been ranked from high to low, based on ecological gains to the terrestrial system and immediacy for action. However, all areas identified in the Target System represent excellent opportunities for restoration work if opportunities arise (a list of these sites is available in the GTAA Etobicoke Creek Terrestrial Systems Report 2005).

### **Stormwater Management**

**TRCA Hydrology Update:** The current Etobicoke Creek hydrology model has been updated to an event-based simulation model. The model identifies the existing flow rates and volumes of runoff from the watershed, along with future condition rates and volumes based on projected development scenarios.

**Spills Mapping Study:** A spills study for the Etobicoke Creek watershed has been completed that included a spatial interpretation of the Ministry of Environment's spills database as well as a statistical analysis of the nature and quality of spills. The primary purpose of the study was to map spill "hot spots" on a watershed basis for the first time. This historical information, coupled with the results of the separate stormwater retrofit studies undertaken by the Cities of Brampton and Mississauga, and TRCA sewershed mapping, is being used to identify retrofit opportunities to both improve stormwater quality and manage potential spills. A complete list of the documented spills (including type, size and location) can be found in the report. The study recommended that spills be documented on an on-going basis in a spatial database so that spill prone sewersheds can be identified, mitigated, and that restoration projects and monitoring of water quality parameters such as benthic invertebrates could be more informed and better planned to account for spills. Recommendations also included that spill control plans should be developed and implemented through stormwater management pond retrofits and installation of oil and grit separators etc. Some of the study recommendations have been integrated with the of-site stormwater review carried out though this project.

**Fluvial Geomorphology Study and Erosion Assessment** : A fluvial geomorphology study and erosion assessment of Etobicoke Creek has been carried out. Data from 18 detailed study sites was organized and analyzed to develop erosion threshold discharges through the Etobicoke Creek watershed. The threshold discharges reflect the minimum flows necessary to initiate sediment entrainment and transport. The study found that in the upper part of the watershed, the critical discharge values represented flow conditions well above bankfull conditions, while the lower reaches of the watershed experience erosive flow conditions much more frequently. The results of the fluvial geomorphology study and erosion assessment will be used for a number of different purposes including siting of valleyland restoration projects, assessing erosion prone areas for remediation works, and in the short term, this information can be used to prioritize stormwater management retrofit opportunities to maximize erosion control benefits. Reaches in the vicinity of the LBPIA have seen substantial alterations (relocation and hardening) resulting in reduced channel length and an increase in gradient and stream energy. These reaches were classified as sensitive or unstable.

**Stormwater Management in the Watershed - On-Site and Off-site Opportunities:**

Discussions with GTAA staff have revealed that there are very limited additional stormwater retrofit opportunities on GTAA lands. As a result, the study of on-site retrofit projects was not advanced. Approximately \$150 million has already been invested over the last several years on numerous water quality enhancement projects, including state-of-the-art underground treatment tanks, a two-celled treatment wetland and many other associated structures. TRCA's work has shown green roofs to be effective in managing stormwater and opportunities for this technology should be evaluated.

Within the Etobicoke Creek watershed there are approximately 30 stormwater management ponds (not including ponds on the GTAA lands) as summarized below:

- 8 quantity control ponds (6 in Brampton and 2 in Caledon)
- 9 quality control ponds (2 in Mississauga and 7 in Brampton)
- 13 quantity and quality control ponds (7 in Mississauga and 6 in Brampton)

Upstream of the LBPIA lands, one pond was identified as suitable for retrofit within the City of Mississauga and 3 ponds were identified within the City of Brampton. In addition, 15 outfalls have been identified for retrofit within the City of Brampton.

The Cities of Brampton and Mississauga have both undertaken retrofit studies that identify existing stormwater management ponds and uncontrolled storm sewer outfalls where it is feasible to implement works to enhance quality and quantity. The list of feasible retrofit projects are prioritized based on a number of environmental, social and economic criteria. For the current study, the feasible retrofit project sites have been cross-referenced with the results of the spills study, fluvial geomorphology study and the fisheries management plan to identify priority retrofit projects and constraints to habitat implementation plans.

### **Catchment 219 Stormwater Management Modelling, Assessment, and Characterization**

**Study:** A catchment study, focussing on a 'characteristic' sewershed within the study area, was completed in order to develop recommendations for the other upstream sewersheds in an economical and efficient manner. The specific recommendations stem from a modelling exercise that determines the relative utility and environmental impact/gain of implementing various stormwater management scenarios, technologies and strategies. This modelling tool was first developed for the City of Toronto's Wet Weather Flow Master Plan and was refined and tailored to the more local subwatershed catchment. Catchment 219 was 'characteristic' in that it includes various elements from a variety of similar industrial catchments, and therefore the results (and scenarios) could be implemented in other areas of the watershed. The study produced 9 scenarios of increasing stormwater quality and quantity management and its impacts on water quality and quantity and offered feasibility estimates for each scenario. Specific program and capital recommendations with estimated costs for each of the 9 scenarios was produced and their respective impacts upon water quality and quantity parameters modelled. Specific recommendations were then developed regarding the residential and industrial areas, conveyance, end-of-pipe, and source controls, as well as spills control and monitoring.

### **Integration & Implementation**

The Integration and Implementation Report was added to the original Terms of Reference in order to bring all of the separate studies together, to offer a more powerful analysis, to develop strategies for implementation that combine terrestrial, aquatic, stormwater and stewardship concepts and move beyond the science to the planning and implementation stages. The integration report assists the TRCA, GTAA, municipalities, and other landowners in identifying priority retrofit, habitat and outreach investment sites. The report includes strategies for engaging the industrial and commercial business community and several examples of ongoing projects and future plans. Several ongoing business outreach projects, such as the Pratt & Whitney valleyland restoration/wetland creation, are supported and enhanced through the GTAA project.

Prospective businesses, strategically located near major restoration project sites were mapped. Businesses are potential community development partners and valued long-term stewards with a mutual interest in environmental protection around the business facility for improved profile, employee morale, and community outreach and service. The GTAA Living City project, with its emphasis on science and monitoring will provide the needed 'business case' and follow-up evaluation model to attract business leaders and their staff to contribute to environmental restoration in Etobicoke Creek watershed.

**Habitat Concepts:** Finally, a Habitat Implementation Plan (HIP) was completed for several large-scale sites within the area around the airport in order to offer immediate, high impact, aquatic/terrestrial restoration sites for implementation. The HIP prioritizes these sites, offers vegetation communities, estimated costs and a restoration concept. The HIP, candidate terrestrial restoration sites, target species management zones and stormwater summary report key findings were combined to offer an interdisciplinary assessment and implementation plan.

### **ADDITIONAL BENEFITS OVER THE LIFE OF THE PROJECT**

Several benefits of the partnership between the GTAA and TRCA beyond the original terms of reference and project deliverables include:

- ongoing consultation on the GTAA's new fire training facility LEED building design and green roof given the TRCA's ongoing projects and expertise with sustainable building design and stormwater management.
- review and detailed comments on the *GTAA Etobicoke Creek and Spring Creek Rehabilitation Plan* prepared by Dillon Consulting
- development of the Catchment #219 study, a sewershed characterization study based on the City of Toronto wet weather flow modelling methodology, with specific recommendations that can be applied to other industrial catchments within the area
- Integration report and mapping of priority recommendations resulting from various studies.
- Business eco-park concept and an integrated restoration project on the west branch of Etobicoke Creek with the City of Mississauga, City of Brampton, local businesses and the Region of Peel.

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

- Present final studies and report to the GTAA.
- Develop partnerships and raise funds to initiate priority implementation recommendations.
- Work with municipal and other partners to address the multi-faceted stormwater, terrestrial, and aquatic habitat issues identified through this project.
- Continue to work with GTAA and provide technical support for their future green building and environmental restoration work on LBPA property.

#### **FINANCIAL DETAILS**

Funds for the development of the GTAA Living City project - Etobicoke Creek Watershed has been provided through a \$270,000 grant from the Greater Toronto Airports Authority. Matching funding (in-kind and cash) was provided by the TRCA. Total value of this project (including In-Kind and cash is approximately \$ 500,000.

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

**For Information contact: Chandra Sharma, extension 5237**

**Date: January 20, 2005**

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#### **RES.#D82/05 -**

#### **KLEINBURG NEW FOREST PROJECT**

Highway #27 and Islington Avenue, Kleinburg, Ontario. Toronto and Region Conservation Authority proposes to strategically place approximately 350,000 cubic metres of clean surplus soil on TRCA-owned tablelands located on the east side of Highway #27 and Islington Avenue in the Community of Kleinburg and the City of Vaughan.

Moved by: Nancy Stewart  
 Seconded by: Dick O'Brien

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT the Toronto and Region Conservation Authority (TRCA) request formal proposals from contractors to supply and place clean surplus soil on TRCA-owned lands as a means to enhance wetland interpretive habitat features and create sound and visual attenuation barriers, subject to regional and municipal approvals;**

**THAT the funds received as compensation for receiving the surplus soil be set aside exclusively to offset project costs, for future restoration and habitat enhancements within the property, long term management of the property and general TRCA purposes;**

**AND FURTHER THAT the appropriate TRCA officials be authorized and directed to execute all the necessary documentation required.**

**CARRIED**

### **BACKGROUND**

The Kleinburg Area Ratepayers Association (KARA) requested that TRCA and the City of Vaughan explore opportunities to enhance the natural habitat potential of a vacant portion of tablelands in the community of Kleinburg. The 14 hectare property located on the east side of Highway #27 and Islington Avenue in the community of Kleinburg consists of grass covered vacant tablelands with areas of recent fill deposition. The 14 hectare property has recently been conveyed to TRCA from the City of Vaughan.

TRCA staff in conjunction with KARA and the City of Vaughan have completed detailed design drawings showing how the existing tablelands will be enhanced significantly by importing and strategically placing clean surplus soil. It is the opinion of staff that this is an opportunity to create wetland and interpretive opportunities while creating the foundation for diverse habitat and public features. The soil placement will also provide the desired sound and visual attenuation structures for the neighboring residential community. Upon completion of the fill placement and grading phase of the project and subject to available revenues, TRCA staff will complete all site trails, plantings and associated landscaping as shown on the attached layout plan.

A stewardship agreement between TRCA, KARA and the City of Vaughan has been completed in which TRCA will assume the long term management responsibilities associated with the 14 hectare property. The agreement is similar to the stewardship agreement implemented in 1992 between TRCA and the City of Vaughan for the Foster Woods property in Kleinburg.

An archaeological assessment of the property was completed on behalf of the City of Vaughan in 1987 by Mayer, Pihl, Poulton and Associates Inc. and no sites of significance were found. TRCA staff has reviewed the assessment and concurs that the site is considered cleared from an archaeological perspective.

It is the opinion of staff that multiple sources of clean surplus soil will be available to complete the regeneration objectives and generate the necessary revenue to offset project costs and future costs associated with the management of the property. TRCA will implement a soils quality control program to ensure and confirm that all soils placed on TRCA-owned property meet Ministry of Environment Residential Parkland criteria.

**RATIONALE**

TRCA staff has completed similar projects in other areas with considerable success. Examples of these successful projects include: the recently completed berm on Kortright Centre for Conservation table lands off Pine Valley Drive; Boyd North Pit rehabilitation off Rutherford Road; berming along Intermodal Drive and Highway 407 within Claireville Conservation Area; the berming along the new Markham By-Pass east of Ninth Line; and, berming and wetland complex development at Boyd North (along Islington Avenue north of Rutherford Road).

Staff see this regeneration work as a benefit to all involved as the surplus soil along with the financial compensation will allow for the creation of habitat opportunities and public features on the property.

**DETAILS OF WORK TO BE DONE**

Subject to project approval, TRCA staff will begin the process of requesting proposals from qualified contractors to supply and place the required soil. TRCA staff also need to obtain various municipal and regional approvals.

**FINANCIAL DETAILS**

TRCA staff anticipate that fill revenue from this project will offset direct project operating and restoration costs.

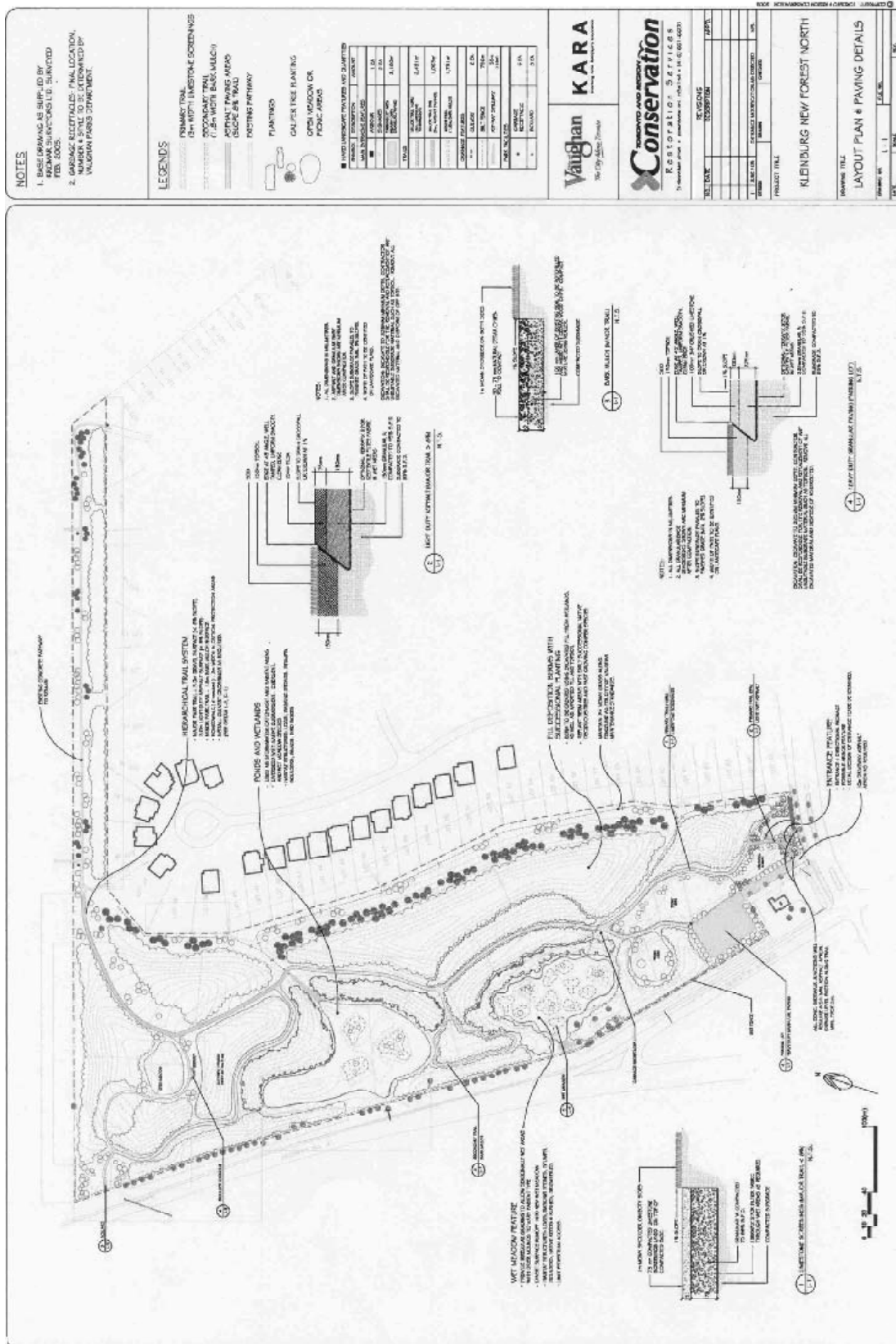
Report prepared by: David Hatton, 416-392-9725

For Information contact: David Hatton, 416-392-9725, or Nick Saccone, extension 5301

Date: November 18, 2005

Attachments: 1

# Attachment 1



**RES.#D83/05** -

**GREAT LAKES CHARTER ANNEX 2001**

Great Lakes - St. Lawrence River Basin Sustainable Water Resources Agreement. Status report on the recent actions of the Province of Ontario and the partners (Province of Quebec and eight Great Lakes states) with regards to the Great Lakes-St. Lawrence River Basin Sustainable Water Resources Agreement under the Great Lakes Charter Annex 2001.

Moved by: Nancy Stewart  
Seconded by: Gay Cowbourne

**WHEREAS** Conservation Ontario, along with other partners/stakeholders (50) is participating on the “Great Lakes Charter Annex Advisory Panel” created by Ontario’s Minister of Natural Resources;

**WHEREAS** Conservation Ontario, by its letter of November 25, 2005 to Kevin Wilson, Assistant Deputy Minister indicating support for the Province of Ontario being a signatory to the “Agreement” as negotiated as part of the 30 day jurisdictional review ending December 8, 2005;

**AND WHEREAS** the Minister of Natural Resources advised that the Province of Ontario along with the Province of Quebec and the eight Great Lakes states signed on December 13, 2005 the Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement;

**THEREFORE LET IT BE RESOLVED THAT THE BOARD RECOMMENDS TO THE AUTHORITY THAT** the Toronto and Region Conservation Authority (TRCA) endorse Conservation Ontario’s support of the Province of Ontario being a signatory to the final “Agreement”;

**AND FURTHER THAT** Conservation Ontario be so advised.

**CARRIED**

**BACKGROUND**

The Great Lakes Charter was signed on December 13, 2005 improving the Great Lakes Basin (Attachment 1). The Great Lakes Charter was signed in 1985 by Great Lakes governors and premiers (Ontario and Quebec) as a good-faith agreement to guide the regional management of the Great Lakes Basin. The principles set forth in the 1985 agreement included:

- integrity of the Great Lakes Basin;
- cooperation among jurisdictions;
- protection of the water resources of the Great Lakes;
- prior notice and consultation; and,
- cooperative programs and practices.

In 2001, the Great Lakes Charter Annex, a supplementary agreement to the Great Lakes Charter, was signed to reaffirm the commitment to the five broad principles set forth in the 1985 agreement. Annex 2001 put forth directives to further the principles of the charter. These directives included the:

- development of a new set of binding agreements;

- development of a broad-based public participation program;
- establishment of a new decision making standard;
- project review under the Water Resources Development Act of 1986 (US);
- development of a decision support system that ensures the best available information; and,
- further commitments including the implementation of legislation as well as undertaking a planning process for protecting, conserving, restoring and improving the Great Lakes Basin.

At Authority Meeting #7/05, held on September 30, 2005, the Resolution #A295/05 was approved as follows:

*WHEREAS the revised draft Great Lakes Basin Sustainable Water Resources Agreement and Great Lakes Basin Water Resources Compact dated June 30, 2005 were released in a form suitable for the 60 day public comment period ending August 29, 2005 but without consensus among the two Great Lakes provinces and eight Great Lakes states;*

*WHEREAS Conservation Ontario along with other partners/stakeholders (50) is participating on the "Great Lakes Charter Annex Advisory Panel" created by Ontario's Minister of Natural Resources since its inaugural meeting of December 15, 2004;*

*AND WHEREAS Conservation Ontario through its 36 members, including Toronto and Region Conservation Authority (TRCA), formulated their position and recommendations based on review by Upper Thames River Conservation Authority, Credit Valley Conservation, Sault Ste. Marie Conservation Authority, Kettle Creek Conservation Authority and TRCA;*

*THEREFORE LET IT BE RESOLVED THAT TRCA endorse Conservation Ontario's position of "strongly supporting the Province of Ontario being a signatory to the Great Lakes Basin Sustainable Water Resources Agreement based on the June 30, 2005 draft being the minimal acceptable package" and other recommendations as adopted at their August 29, 2005 meeting;*

*THAT TRCA support the position of being advised of the progress of the negotiations and circulation of the final form and wording of the agreement prior to signing by the two Great Lakes provinces and eight Great Lakes states;*

*AND FURTHER THAT the Minister of Natural Resources, the Council of Great Lakes Governors, Environment Canada, the International Joint Commission and Conservation Ontario be so advised.*

On November 23, 2005, the Minister of Natural Resources announced that Ontario was releasing the draft (November 2005) Great Lakes Annex Agreement and Compact which were under a 30 day jurisdictional review ending on December 8, 2005.

Conservation Ontario's letter of November 25, 2005 to Kevin Wilson, Assistant Deputy Minister outlined the key provisions of the "Agreement" that were maintained or strengthened, including changes needed to secure consensus. Changes and enhancements to the U.S. Compact are also summarized including key elements from the "Agreement" to the "Compact". This information was provided to the Great Lakes Charter Annex Advisory Panel, of which Conservation Ontario is a member.

**Maintained provisions:**

- ban on diversions with limited, strictly regulated exceptions to address specific challenges to communities straddling or near the Basin boundary;
- bulk water transfers considered a diversion;
- new environmental standard for water use regulation;
- overarching principles for ecosystem protection, cumulative impact assessment, need for caution in the face of uncertainties such as climate change;
- authority of federal government, International Joint Commission under Boundary Waters Treaty reaffirmed;
- regional oversight and collaboration;
- cumulative impact assessment;
- enforcement and judicial review; and
- input of public, First Nations on Great Lakes basin diversion proposals.

**Strengthened provisions:**

- straddling community and straddling county exceptions to the prohibition of diversions strengthened further including:
  - new "substantive consideration" of whether community is using groundwater interconnected to Great Lakes Basin water;
  - restriction of water use to within community;
  - new overarching ecosystem integrity principle for regional review of exceptions in context of uncertainties; and,
  - modified "straddling community" definition further restricts potential growth (i.e. water use cannot extend beyond the county boundary, even if a straddling community grows beyond the divide).
- even stronger commitment to water conservation, including setting of regional goals and objectives, as the basis for state/provincial programs;
- new requirements for regional review of water management, conservation programs every five years to ensure accountability;
- stronger commitment to science, including regional science strategy;
- new commitment enabling dialogue, input of First Nations, Tribes to Regional Body; and,
- earlier implementation of key agreement provisions (i.e. conservation, water use regulation).

**Changes needed to secure consensus:**

- increased state/provincial flexibility in how states, provinces will manage and regulate consumptive uses within the basin, based on the environmental standard:
  - thresholds for regulation replaced with environmental criteria;
  - regional review for large consumptive uses (19+ million litres per day) replaced with prior notice and comment by 10 jurisdictions;

- modified environmental standard (more restrictive standard maintained for diversions) introducing a “reasonable use” concept that balances environmental, social and economic factors. Among the factors to be considered is the restoration of hydrological conditions and functions (modified from earlier “resource improvement” concept and not applied to diversions to address public concern); and
- effect of changes minimized through stronger accountability provisions (i.e. regional review of programs, authority of "Regional Body" to recommend program changes).
- modified return flow provisions to address public water supply or wastewater systems that “co-mingle” basin and non-basin water only on condition that discharges are treated to prevent invasive species, meet water quality standards and that basin water portion of return flow is maximized;
- elimination of the terminology “precautionary approaches”, while retaining descriptive language that gave the term meaning. Descriptive language maintained or added to the purposes of agreements, cumulative impacts assessment, straddling counties exception, new overarching ecosystem integrity principle;
- climate change terminology modified in some places, retained in others; and,
- new definitions to clarify terminology, i.e. diversion, conservation measures, product, public water supply (effect neutralized through Ontario amendments).

#### **U.S. Compact**

- important elements of "Agreement" migrated to "Compact"- e.g. regional review, science, bulk transfers, Lakes Michigan-Huron one hydrologic unit;
- voting – veto maintained (i.e. any proposed straddling county proposal, intra-basin transfer proposals 5+ mgd);
- public trust returned to purposes section; and,
- enforcement- rights of aggrieved persons to hearing, judicial review; Party/Council may take action to compel compliance; aggrieved person, Party or Council may commence civil action.

#### **RATIONALE**

Conservation Ontario, through its letter of November 25, 2005 to Kevin Wilson supported the Province of Ontario being a signatory to the Great Lakes Basin Sustainable Water Resources Agreement as being consistent with Conservation Ontario Council’s recommendations of August 29, 2005. With the changes negotiated above, Conservation Ontario was satisfied that “there is no erosion to the principles and provisions of the draft document dated June 30, 2005”.

On December 13, 2005 the Minister of Natural Resources announced that the Province of Ontario signed along with the Province of Quebec and eight Great Lakes states the “Great Lakes – St Lawrence River Basin Sustainable Water Resources Agreement”. At the same time, the eight Great Lakes states signed the Great Lakes – St. Lawrence River Basin Water Resources Compact with similar provisions. The “Agreement” will compliment other initiatives of the province such as source water protection. The agreements can be viewed on-line at following web address: [www.mnr.gov.on.ca/mnr/water/greatlakes](http://www.mnr.gov.on.ca/mnr/water/greatlakes) .

**DETAILS OF WORK TO BE DONE**

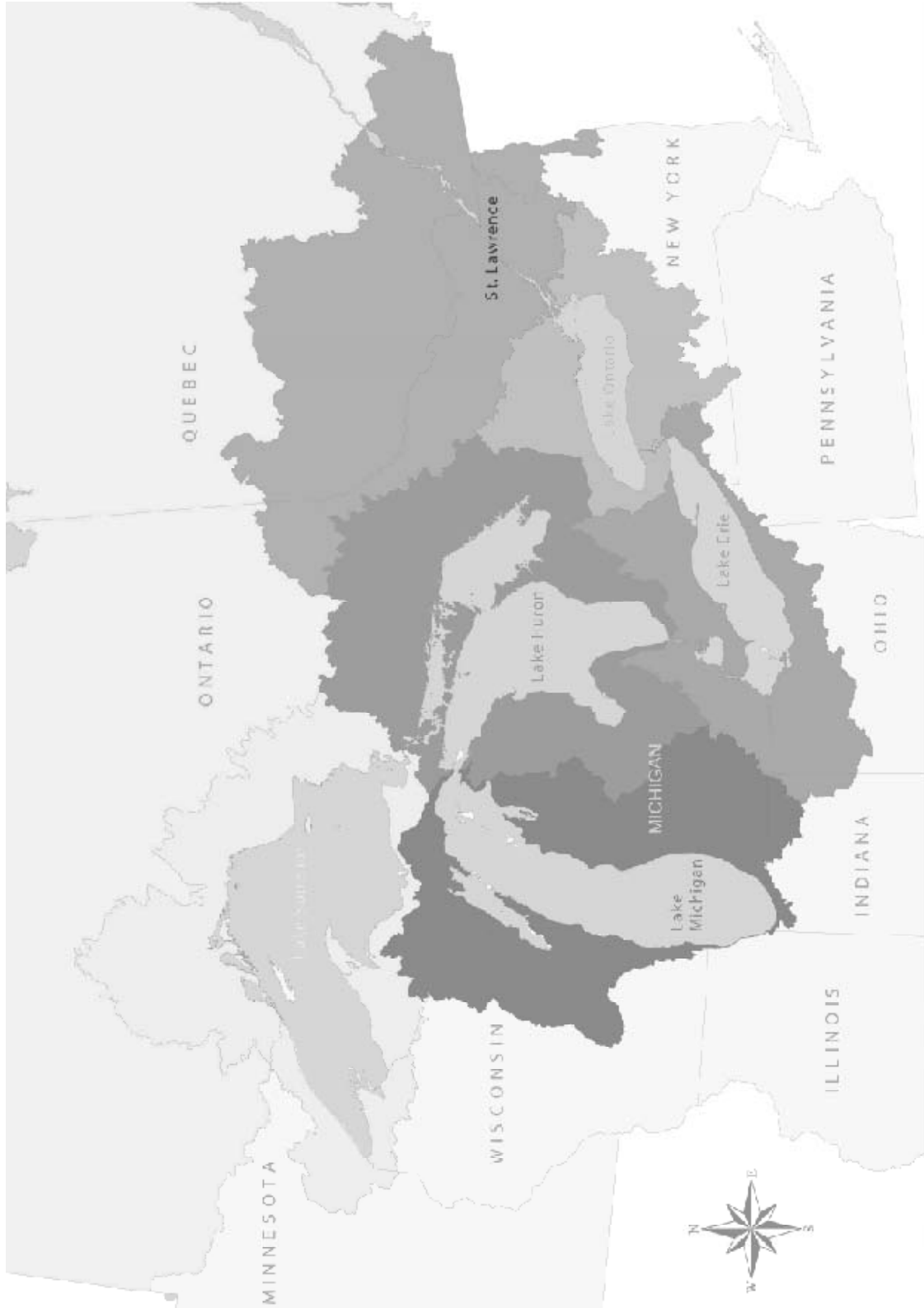
It is our understanding that the Ministry of Natural Resources is proceeding to detail the “Agreement” implementation activities and the role of the Great Lakes Charter Annex Advisory Panel. The “Agreement” also calls for the establishment of a “Regional Body” whose roles and responsibilities are currently under discussion. Conservation authorities provide an opportunity to assist the province, in support of the “Regional Body”, in such areas as the collection of baseline information and monitoring. The assistance of conservation authorities will be further discussed as Ontario articulates its implementation strategy in the coming months.

**Report prepared by: Larry Field, extension 5241**

**For Information contact: Larry Field, extension 5241**

**Date: January 25, 2006**

**Attachments: 1**



# Great Lakes Basin



Information for this report was prepared by the Ontario Ministry of Natural Resources and Forestry. It is a public document. Published July 2024. © 2024 Ontario Ministry of Natural Resources and Forestry.

**RES.#D84/05 - TOWN OF AJAX FIVE YEAR RESTORATION/NATURALIZATION PLAN  
2006-2010**

To endorse the Town of Ajax Five Year Restoration/Naturalization Plan covering the years 2006 to 2010.

Moved by: David Gurin  
Seconded by: Gay Cowbourne

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT the Toronto and Region Conservation Authority (TRCA), in principle, endorse the "Town of Ajax Five Year Restoration/Naturalization Plan" and the commitment to naturalize public lands in the Town of Ajax;**

**THAT TRCA staff be directed to work with the Town of Ajax to develop the plan more fully and begin implementing on-the-ground projects;**

**THAT staff report back to the Authority on progress on implementation;**

**THAT, based on the success of plan implementation, TRCA encourage similar arrangements with other watershed municipalities;**

**AND FURTHER THAT the Town of Ajax be so advised.**

**CARRIED**

**BACKGROUND**

In 2004, a recommendation was made to Town of Ajax Council directing Operations and Environmental Services to work with TRCA to develop a five year restoration plan for properties in the Town of Ajax. The *Town of Ajax Five Year Restoration/Naturalization Plan* is a result of that partnership.

Both the Town of Ajax and TRCA have several guiding documents that recommend naturalization and restoration efforts on public lands. Until the development of the restoration/naturalization plan, the Town of Ajax and TRCA carried out their restoration and naturalization work in a fragmented manner. Through the proposed plan, the Town of Ajax and TRCA will restore and naturalize public lands in the Town of Ajax in a coordinated manner by sharing resources and expertise.

Several other plans and strategies that seek to naturalize lands owned by TRCA and the Town of Ajax formed the basis for the restoration/naturalization plan. Those strategies and plans are as follows:

- A Watershed Plan for Duffins Creek and Carruthers Creek;
- Fisheries Management Plan for Duffins Creek and Carruthers Creek;
- Ajax Waterfront Management Plan;
- Duffins Creek and Carruthers Creek Watersheds Habitat Implementation Plan (HIP);
- Ajax Integrated Ecological Study;
- Ajax Recreation, Parks and Open Space Master Plan; and,
- Greenwood Conservation Area Management Plan.

Once adopted, the Town of Ajax Five Year Restoration/Naturalization Plan will help the town and TRCA focus collective energies on specific projects and deliver restoration services in an effective manner. Identification of action sites and work at these locations will provide a tangible benefit for the natural systems in the Town of Ajax and the citizens who enjoy them.

Work is planned at the following two locations in 2006:

- Millers Creek Corridor; and,
- west side of Ajax Water Plant.

Areas for further naturalization will be jointly identified by TRCA and Town of Ajax staff through consideration of the strategies and plans listed above.

A management agreement is currently in place whereby the Town of Ajax manages portions of TRCA-owned property for use as recreational areas. Locations covered by the management agreement include Rotary Park, Greenwood Conservation Area and Paulynn Park. TRCA and the Town of Ajax currently partner on many restoration initiatives such as plantings during Environmental Affairs Week, and naturalization work in other areas of the watershed and waterfront. TRCA also partners with the Ajax Environmental Advisory Committee for community planting events. There has been very positive public support to date for these initiatives. With the restoration/naturalization plan in place, further opportunities for public and non-governmental groups to participate in events is envisioned. It is also hoped that the work on these publicly-owned sites will provide incentive for private landowners to consider naturalization efforts on their own properties.

Through cooperation with the Town of Ajax, TRCA will have the ability to leverage resources for plan implementation. This joint effort will facilitate restoration and naturalization activities by building on the mutually beneficial relationship that has already been established. This plan will also foster our ability to partner with other organizations, through in-kind and/or financial contributions, thereby further increasing our ability to naturalize public lands in the Town of Ajax.

## **RATIONALE**

In an attempt to coordinate restoration and naturalization efforts on lands owned by the Town of Ajax and TRCA in the Town of Ajax, the town and TRCA have developed a restoration/naturalization plan that will direct activities over the next five years (2006 to 2010). TRCA staff are seeking endorsement from the Authority and the Town of Ajax staff are seeking Council approval of the plan. TRCA endorsement of the plan will help ensure that the plan is approved by Town of Ajax Council and that implementation will happen in partnership. Once endorsement and approval are given, TRCA and the town can begin implementing the plan and seeking opportunities for further partnerships and funding arrangements.

## **FINANCIAL DETAILS**

Funding for work has been identified in the preliminary 2006 Durham capital budget.

**Report prepared by: Brent Bullough, extension 5392**  
**For Information contact: Gary Bowen, extension 5385**  
**Date: January 12, 2006**

RES.#D85/05 -

**YORK-PEEL-DURHAM-TORONTO GROUNDWATER MANAGEMENT STUDY**

Completion of Modelling Report and Proposed Peer Review. Completion of the Earthfx Report: "Groundwater Modelling of the Oak Ridges Moraine Area".

Moved by: Nancy Stewart  
Seconded by: Frank Dale

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT staff be directed to forward to the Ministry of the Environment the report "Groundwater Modeling of the Oak Ridges Moraine Area" in fulfillment of the municipal Groundwater Studies agreement;**

**THAT staff be directed to proceed with a peer review of the Oak Ridges Moraine area groundwater report and model;**

**AND FURTHER THAT staff be directed to make the groundwater management study website available to the public and notify partner agencies as to the site's activation.**

**CARRIED**

**BACKGROUND**

The York-Peel-Durham-Toronto Groundwater Management Study was initiated in 2000 as a partnership between the regions of York, Peel and Durham, the City of Toronto (YPDT) and the associated six conservation authorities (Credit Valley, Toronto and Region, Lake Simcoe Region, Kawartha Region, Ganaraska Region and Central Lake Ontario) with a view to arriving at consistency in groundwater management both from a technical and analytical perspective as well as from a policy and management perspective. With similar goals and objectives, staff, acting on behalf of the Conservation Authorities Moraine Coalition (CAMC), is also directing groundwater work across the entire Oak Ridges Moraine. The Province of Ontario recognized the value of this effort and through the ministries of Northern Development and Mines and the Environment contributed significant grants to the project. The Geological Survey of Canada (GSC) and the Ontario Geological Survey (OGS) have also provided technical input into this project.

A key product of this work has been the development of a regional groundwater model by Earthfx Inc. that has led to a broad understanding of the subsurface geological and hydrogeological conditions across the moraine area. The goal now is to now have the model used by the various partner agencies in every-day decision making. Towards this goal, the model and associated data have already been used for a variety of groundwater related projects, including the Rouge Watershed Plan and the York Durham Sanitary Sewer System infrastructure installation project. The model has recently been expanded to cover all of Peel Region and the Credit River watershed.

A website has been created for the YPDT/CAMC partnership, but access is currently restricted to the study partners. Given the breadth of the overall groundwater project and the number of requests for information about the various initiatives from the on-going study, it is important that the website be made available to the public.

Further details on each of these aspects are provided below.

## **Groundwater Model**

Earthfx has prepared a report that summarizes the key features of the modeling initiative. The modeling effort is unique in that it took a regional area and for the purposes of modeling, divided it into uniform 100 m sized cells. This level of detail provides a framework that allows for local scale data to be incorporated into the model as well as for local scale groundwater issues to be investigated using the “regional-scale” model.

The report confirms the significance of the Oak Ridges Moraine in terms of its function as a recharge area. The model has also shown that about 90% of the water that recharges to the groundwater system discharges into the stream network that drains the moraine. Very little groundwater discharges directly to either Lake Ontario in the south or to Lake Simcoe in the north. Steady state modeling runs with pumping from all of the large groundwater takers (municipal, golf, aggregate, etc.), shows that the current pumping rates are sustainable, that is, in the long run, the wells will not go dry and the aquifers are not being “mined” or dewatered. Water levels will recover to original levels if pumping were to stop. The abundance of groundwater found along the Yonge Street Corridor was found to be a combination of three features, a topographic depression, a tunnel channel and a bedrock valley that all serve to enhance the likelihood of groundwater being plentiful in the area.

The report has been subject to extensive technical reviews by staff at all of the partnered agencies and has been accepted by the YPDT Technical Steering Committee for submission to the Ministry of the Environment. In addition to the report, staff will also be forwarding to the Ministry all of the digital files that are to accompany the report as per the original agreement.

The report produced by Earthfx represents a comprehensive body of work that has had input from a variety of sources including partner agency staff as well as other consultants. For this reason, the report is being released under the banner of the York-Peel-Durham-Toronto Groundwater Management Study.

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

In 2005, staff from the partner agencies developed a website ([www.ypdt-camc.com](http://www.ypdt-camc.com)) aimed at introducing the project and the results of various project initiatives to the public. The site is also designed with a password protected section where partner agency staff can gain access to numerous project files. The website has not been made available to the public since the overall modeling report and the associated images were not yet finalized. With the finalization of the modeling report, the web site will be made accessible to the public as of March 1, 2006.

Given the extensive geographical coverage of the regional groundwater model and the reliance on the model by 13 partner agencies, the YPDT Technical Steering Committee has agreed that there is a need for the groundwater model to be peer reviewed prior to its further development and use. This will elevate the status of the model, allowing the partner agencies to utilize the model with confidence. Improvements to the model may also result from the peer review process. The YPDT study team have developed Terms of Reference for the peer review process, and need to select a peer review consultant to complete the work. It is anticipated that this peer review work will be undertaken during the summer of 2006.

## **Summary**

The York Peel Durham Toronto Groundwater Management Study continues to provide an example of a successful partnership initiative between the federal government, the province, municipalities and conservation authorities. The Oak Ridges Moraine provides a common physiographic link to all of the partner agencies. The modeling report brought before the board represents the largest groundwater modeling initiative in Ontario to date and sets a benchmark for others to target. The model is expected to be used for a variety of day-to-day initiatives by the various partner agencies, including source protection (i.e., water budget preparation and wellhead protection area delineation), watershed and subwatershed planning (i.e., future scenario modeling) and municipal infrastructure installation (i.e., dewatering rates and radii of influence).

## **FINANCIAL DETAILS**

There are no further costs for sending the final report to the Ministry of the Environment or for making the study website available for the public. The peer review described above can be implemented within the current 2006 preliminary budget for the YPDT study (TRCA account 115-90, with funding to be confirmed by the regional municipalities of York, Peel and Durham and the City of Toronto).

**Report prepared by: Steve Holysh and Don Ford, extension 5369**  
**For Information contact: Don Ford, extension 5369 or**  
**Steve Holysh 905-847-7430, extension 246**

**Date: January 31, 2006**

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**RES.#D86/05 - DON WATERSHED REGENERATION PLAN - WORKPLAN UPDATE**  
Revised workplan and status report for the Don Watershed Regeneration Plan.

Moved by: Nancy Stewart  
Seconded by: Gay Cowbourne

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT staff continue to develop the updated Don Watershed Regeneration Plan according to the revised workplan and report back in fall 2006 on key findings of the current conditions assessment and regeneration priority setting approach;**

**AND FURTHER THAT staff convene a community forum in March 2006 to begin the process of re-engaging the Don watershed community in the planning study.**

**CARRIED**

## **BACKGROUND**

The Toronto and Region Conservation Authority (TRCA), in partnership with the multi-stakeholder Don Watershed Regeneration Council and watershed municipalities, is developing a watershed plan for the Don River. This planning process has been initiated in response to a number of recent policy and planning developments, including the need to fulfill York Region's watershed planning requirements under the *Oak Ridges Moraine Conservation Act* and the *Oak Ridges Moraine Conservation Plan (ORMCP)* and to update the original management strategy outlined in *Forty Steps to a New Don* (1994). Recognizing the significant watershed planning work that has already been completed, and given that there are limited undeveloped lands remaining on the Oak Ridges Moraine (ORM) within the watershed boundary, this study will focus mainly on filling information gaps, guiding land use planning and approval decisions, and providing direction to advance implementation of regeneration priorities.

A draft workplan for the watershed plan was reported to the Authority in October 2004. The purpose of this report is to provide an update on study status and proposed revisions to the workplan, in response to scheduling changes in the study during 2005, a Great Lakes Sustainability Fund grant approval, and project budget deferrals from 2006 to 2007.

### ***Planning Process and Deliverables***

The watershed planning process follows the generic planning process developed by TRCA, Lake Simcoe Region Conservation Authority (LSRCA) and the Regional Municipality of York, and is based on similar approaches used by other conservation authorities in Ontario. However, it has been tailored to the critical needs of the urbanized Don watershed and has avoided duplication by drawing on direction being provided from studies in neighbouring watersheds. The planning process has been divided into three main phases over three and a half years: scoping and characterization, analysis and evaluation of options, and developing the watershed plan. The protracted schedule reflects workload issues and changes in project deliverables and scheduling.

The revised workplan proposes extension of delivery of the full Don watershed plan to 2007. However, a brief report will be prepared for May 2006 that will meet York Region's ORMCP watershed planning requirements. This tailored report will summarize current conditions and water systems for German Mills Creek and upper East Don River subwatersheds, in the context of the overall Don River watershed; the current status of development with respect to the ORMCP; and, recommended management strategies and targets, including opportunities to influence remaining development decisions and identification of preliminary regeneration and retrofit strategies.

The revised workplan schedule and deliverables for the Don Watershed Regeneration Plan are as follows:

*Phase 1 – Scoping and characterization (July 2004 – February 2006)*

- Brief written summary of current watershed conditions and issues (February 2006).
- Individual technical reports presenting current watershed conditions and management implications. This technical work will include components not undertaken as part of the original *Forty Steps to a New Don*, including groundwater modeling, a water budget, water use assessment and integration of these with updated terrestrial natural heritage information (February 2006).

*Phase 2 – Analysis and evaluation of options (September 2005 – June 2007)*

- Preliminary methodology for identification of regeneration priorities (targeted for March 2006). The Great Lakes Sustainability Fund is contributing \$30,000 to support the development of this methodology.
- HSP-F modeling and evaluation of the effects of stormwater retrofit strategies in the 905 portion of the watershed on the overall watershed, to complement the City of Toronto's Wet Weather Flow Management Master Plan (December 2006). Work on this element will proceed once the City of Vaughan has completed its stormwater retrofit study, so its results can be entered into the watershed model.
- Subwatershed scale maps identifying regeneration priorities and regeneration plans for up to 2 concept sites (June 2007).
- Updated land and water use strategies, and preliminary management recommendations (April 2006 – June 2007).

*Phase 3 – Developing the watershed plan (April 2006 – December 2007)*

- A tailored report to address ORMCP requirements in York Region (May 2006).
- Pollution Probe report, *Picking up the Pace to Restoration – A Retrospective and Prospective Look at the Don River*, reviewing the history of restoration of the Don River, and re-energizing a shared vision through development of a restoration “roadmap” (December 2006).
- Report card for the Don River watershed (2006).
- Updated watershed plan and implementation plan for the Don River watershed.

***Public and Partner Involvement Strategy***

Public and partner involvement is an integral part of each phase of the planning process. Engagement fosters a two-way flow of information and ideas, serving both to inform watershed stakeholders and also the watershed planning process. Consultation with watershed stakeholders will be sought both at key points of engagement as well as on an ongoing basis, using a variety of forums and approaches.

To date, the Don Watershed Regeneration Council has provided input to study direction, the workplan, and the public and partner involvement strategy. The Council will play a key role in development of, and participation in, engagement activities. Key mechanisms for additional involvement include management summits on key topics, broad community engagement events and the TRCA website.

Broad-based public consultation will be launched in the spring of 2006 via a community forum in March, to re-engage the Don watershed community through review of current watershed conditions and confirmation of the vision and goals; and local consultation events for input to the tailored report addressing York Region's ORM watershed planning requirements.

### ***Pollution Probe's Don Retrospective/Prospective Report***

Pollution Probe, in partnership with TRCA, is contributing to Phase 2 of the watershed planning process by producing a report, entitled *Picking up the Pace to Restoration – A Retrospective and Prospective Look at the Don River*. The report will review the history of the Don; highlight past achievements and disappointments; identify current barriers (both infrastructural and institutional) to further restoration; and, act as a call to action for developing a re-energized, shared vision for restoring the watershed. The project was described in more detail in a report to the July 15, 2005 meeting of the Watershed Management Advisory Board.

A revised delivery plan was developed for the project in December 2005. Pollution Probe is currently soliciting additional funding for the project.

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

Upcoming milestones for the Don Watershed Regeneration Plan include:

- completion of current conditions reports by mid-February;
- a proposed community forum in March to re-engage the Don watershed community;
- development of a methodology for identifying regeneration priorities (March 2006); and
- preparation of a tailored report to address ORMCP requirements in York Region, covering the upper East Don River and German Mills Creek subwatersheds, for consultation with the community in the late spring.

### **FINANCIAL DETAILS**

Funding for the Don Watershed Regeneration Plan has been provided by the Region of York and City of Toronto capital budget in 2005 and the 2006 preliminary capital budget. The complete watershed plan deliverable will be extended to 2007, in response to deferral of \$75,000 from the City of Toronto's capital budget from 2006 to 2007. As noted in this report, a Great Lakes Sustainability Fund grant of \$30,000 has been approved in support of the Don Watershed Regeneration Priorities component of the project.

**Report prepared by: Janet Ivey, extension 5729**

**For Information contact: Janet Ivey, extension 5729; Sonya Meek, extension 5253**

**Date: January 24, 2006**

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**RES.#D87/05 -**

### **OAK RIDGES MORAINÉ WATERSHED PLANNING STUDIES**

Update on 2005 accomplishments and next steps of Toronto and Region Conservation Authority watershed planning studies for fulfilment of municipal Oak Ridges Moraine Conservation Plan requirements.

Moved by: Nancy Stewart

Seconded by: Frank Dale

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT staff continue with on-going Oak Ridges Moraine watershed planning studies in accordance with the five year work plan and individual study work plans;**

**THAT staff review the draft watershed plans in the context of source water protection prior to the plans' completion, and to the extent possible make recommendations for the future integration of the source water protection planning component;**

**AND FURTHER THAT staff report back during 2006 at key stages of each plan and again in one year on status and overall 2006 accomplishments of the Oak Ridges Moraine watershed planning studies.**

**CARRIED**

### **BACKGROUND**

*The Oak Ridges Moraine Conservation Act, 2001 and Oak Ridges Moraine Conservation Plan (ORMCP)* requires upper-tier and single-tier municipalities to ensure that up-to-date watershed plans are in place for all rivers and streams originating on the Oak Ridges Moraine (ORM) by April 23, 2007, and recommendations incorporated into municipal official plans before any major development can be approved. While the Province of Ontario has not yet provided the anticipated technical guidelines in final form, the ORMCP sets out a list of minimum requirements for the completion of watershed plans:

- a water budget and conservation plan;
- land and water use and management strategies;
- a framework for implementation;
- an environmental monitoring plan;
- provisions requiring the use of environmental practices and programs; and
- criteria for evaluating the protection of water quality and quantity, hydrological features and hydrological functions.

With the introduction of the ORMCP, staff from York Region, Lake Simcoe Region Conservation Authority and TRCA, together developed a generic outline of plan components and a five year work plan to fulfill the ORMCP watershed planning requirements. This generic outline was supported by TRCA's other watershed municipal partners, including Peel Region, Durham Region and the City of Toronto. Detailed work plans have subsequently been developed for the individual watershed planning studies at the onset of each study process. These workplan schedules have taken into account the time needed for municipalities to incorporate the watershed plan recommendations into their municipal planning documents.

The four TRCA watersheds draining from the Oak Ridges Moraine are the Humber River watershed, Don River watershed, Rouge River watershed and Duffins Creek watershed. A watershed plan for Duffins Creek watershed was completed in 2003 and is deemed to fulfill the ORMCP requirements. Watershed planning studies have been completed to various degrees in all of the other watersheds, and therefore the approach to fulfilling the ORMCP requirements has been tailored to fill information gaps and address the needs of each watershed community.

New thrusts of these watershed plans include:

- integrating new information on groundwater systems, water budgets and terrestrial natural heritage with existing knowledge of the watersheds;
- modelling and evaluation of future land use and management scenarios, in an attempt to provide improved direction on effective management approaches;
- definition of a sustainable community scenario for the watershed, and evaluating the cumulative effects of sustainability practices at the watershed scale;
- development of more specific implementation recommendations, including model policies to guide municipal staff in the incorporation of watershed planning recommendations into municipal policy and regeneration priorities;
- advances in integration techniques, including improved predictive models, visual tools and evaluation methods, which will contribute to improved science and effective management recommendations.

## **2005 Progress on Watershed Plans**

### ***Rouge River Watershed***

- Modelling and analysis of eight future land use and management scenarios has been delayed to January 2006 due to complications in calibrating and linking surface and ground water models. Scenarios address various urban growth forms, stormwater retrofits, enhanced natural cover and climate change.
- Terrestrial natural heritage and aquatic systems modelling and analysis is well underway.
- Convened multi-stakeholder workshops to discuss management directions for key issues, including: natural cover management and enhancement, agricultural vitality, rehabilitation of aggregate operations and the implementation of lot level sustainability practices. A “water budget/water issues” workshop is planned, pending the availability of modelling results.
- Prepared draft watershed plan outline, including a set of management strategies and implementation actions addressing all watershed objectives. Results of the modelling studies will be used to prioritize management directions and the necessary criteria for implementation.
- Began applying the generic model policy, prepared by the York-Peel-Durham-Toronto (YPDT)/Conservation Authorities Moraine Coalition (CAMC) initiative earlier in 2005, to produce recommended Rouge watershed policies for consultation with key partners.
- Convened six task force meetings and a one day workshop to guide the study.

### ***Humber River Watershed***

- Ten of eleven current conditions reports are complete (surface water quality, surface water quantity, air quality, aquatic system, terrestrial system, cultural heritage, public use, land and resource use, policy framework, and fluvial geomorphology), with the remaining groundwater report underway.
- Surface and ground water modelling has been delayed for the same calibration issues as the Rouge study, with results expected by April 2006.
- Began joint stakeholder Humber-Rouge workshops on key management issues.
- Completed second consultation with municipal partners on scenario assumptions.

### ***Don River Watershed***

- Workplan was finalized focusing on filling data gaps and setting regeneration priorities.

- Wet weather water quality monitoring and supplemental temperature, fish and benthos monitoring is complete; fisheries data, riparian and barrier assessments are complete.
- Current conditions reports for low flow, water use and aquatic systems are complete.
- Further analysis for limited scenario modelling and the development and application of an approach for identifying integrated regeneration priorities, deferred to 2006-2007.

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

During 2006, work will focus on:

### ***Rouge Watershed Plan***

- Complete modelling and analysis of future land use and management scenarios and develop preferred management strategies and draft plan by March 2006.
- Conduct consultation, formal peer review and ongoing plan refinement during April-May 2006.
- Finalize watershed plan by end of June 2006.

### ***Humber Watershed Plan***

- Complete scenario modelling by April 2006 and development of preferred management strategy and draft plan by September 2006;
- Conduct consultation and formal peer review in October-November, although attempts will be made to coordinate analysis to the extent possible during joint meetings with the Rouge watershed study;
- Final plan by December 2006.

### ***Don Watershed Plan***

- Completion of the full watershed regeneration plan update is being delayed to 2007, to allow focus on ORMCP issues in this and neighbouring watersheds.
- A preliminary plan for the two subwatersheds draining the ORM portion of the Don watershed will be completed by June 2006, thus fulfilling York Region's requirements under the ORMCP and taking advantage of any opportunity that may remain to guide ongoing land use planning decisions which in that area are well advanced in the planning process.
- A regeneration priority setting methodology will be developed and analysis initiated. The resulting recommendations will identify key actions towards achieving watershed regeneration.

### ***Anticipated Source Protection Planning Requirements***

In December 2005, the draft *Clean Water Act, 2005* was introduced into the Ontario Legislature. The proposed *Clean Water Act, 2005* is designed to protect existing and future sources of drinking water through the local identification and assessment of drinking water threats and the development of a source protection plan that addresses these threats. The Act will require that source protection plans be prepared on a watershed basis and that a multi-stakeholder committee be established for overseeing plans in each source protection planning region.

It is unlikely that the source protection legislation and regulations will have been passed and relevant committees established in adequate time to complete source protection plans concurrently with the Oak Ridges Moraine watershed plans. However, it will be important to ensure compatibility between the management strategies of the two plans and establish seamless, efficient implementation plans. Staff will therefore monitor the emerging source protection planning guidance and ensure that every opportunity is taken to facilitate the future compatibility of the two documents to the extent possible.

As the source water protection program unfolds, TRCA staff has proposed that the CTC Region use the Rouge Watershed Plan as an ongoing case study for the integration of source protection and watershed planning.

### **FINANCIAL DETAILS**

Funds for the Oak Ridges Moraine watershed planning work completed in 2005 and the work to be done in 2006 have been provided in the capital budgets approved by the Region of York, Region of Peel and City of Toronto.

Source protection planning work is currently being funded by the provincial government.

**Report prepared by: Sonya Meek, extension 5253**

**For Information contact: Sonya Meek, extension 5253 or Dean Young, extension 5662**

**Date: January 20, 2006**

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**RES.#D88/05 - IMPLEMENTATION OF A WATERSHED PLAN FOR DUFFINS CREEK AND CARRUTHERS CREEK**  
Progress Report. Update on progress made with respect to implementing "A Watershed Plan for Duffins Creek and Carruthers Creek"

Moved by: Dick O'Brien  
Seconded by: David Gurin

**WHEREAS the Terms of Reference for the Duffins and Carruthers Watershed Resource Group (DCWRG), Section 3.5 states "A DCWRG representative will report, at least on a semi-annual basis, on projects and progress to the Watershed Management Advisory Board of TRCA";**

**THEREFORE THE BOARD RECOMMENDS TO THE AUTHORITY THAT the progress report on the Implementation of A Watershed Plan for Duffins Creek and Carruthers Creek be received;**

**THAT a copy of the report be circulated to Duffins Creek and Carruthers Creek watershed municipalities;**

**THAT the watershed municipalities be thanked for their continued support for the implementation of the watershed plan;**

**AND FURTHER THAT the Duffins and Carruthers Watershed Resource Group be thanked for their contributions overseeing and coordinating the implementation of the watershed plan.**

**CARRIED**

#### **BACKGROUND**

At Authority Meeting #5/03, held on June 27, 2003, Resolution #A126/03 was approved, in part, as follows:

*....THAT the Authority adopt "A Watershed Plan for Duffins Creek and Carruthers Creek" as part of its plan input and review process;*

*THAT staff report back to the Authority regarding the steps required to implement this "Plan" into Authority practices and policy...*

In 2003, the watershed plan for the Duffins Creek and Carruthers Creek watersheds was completed and subsequently endorsed by Toronto and Region Conservation Authority (TRCA), the five local and two regional municipalities with jurisdiction in the watersheds. The following year, the Duffins and Carruthers Watershed Resource Group (DCWRG) was formed to oversee implementation of this plan. This committee is comprised of representatives from the provincial and federal governments, local and regional municipal governments, citizens and various NGOs in the watersheds. The DCWRG is a steering committee that meets three or four times a year and was established to oversee and coordinate local delivery of the watershed plan. Following the DCWRG directions, TRCA staff work directly with local and regional municipalities and watershed NGOs to implement the watershed plan on a subwatershed basis.

Recognizing that the watershed ecosystem is a complex network of interrelated features and functions, the watershed plan reduced the watershed ecosystems to a set of simpler component systems. Studies were undertaken within the following technical areas:

- groundwater quantity and quality;
- surface water quantity;
- surface water quality;
- aquatic habitat and species;
- terrestrial habitat and species;
- human heritage;
- public use – outdoor recreation; and,
- sustainable communities.

The watershed plan is a blueprint for action and includes a brief summary of current watershed conditions. It identifies the issues to be addressed and the opportunities that exist. It sets out a vision for the future, a management philosophy and a framework of management strategies, including watershed management goals, objectives and the required actions. The plan outlines effective implementation mechanisms, and provides guidance for implementation priorities at a subwatershed scale and areas within the watershed where initial implementation activities should focus.

To coordinate on-going implementation of the watershed plan, TRCA staff arranged a series of meetings with the watershed municipalities to assess the current status and their priorities for implementation as outlined below. This exercise was strategic in nature and was intended to identify areas for improvement and to gauge the success of collective efforts.

<b>Consultation with Municipal Staff</b>	
<b>Municipality</b>	<b>Meeting Date</b>
City of Pickering	September 13, 2004
Town of Ajax - Planning Staff	February 9, 2005
Town of Ajax - Parks Staff	May 26, 2005
Regional Municipality of Durham	June 9, 2005
Regional Municipality of York	June 13, 2005
Town of Whitchurch-Stouffville	June 29, 2005
Township of Uxbridge	October 7, 2005

At these consultation meetings, progress on the management actions was reviewed and a status of "No Action", "Proposed", "Underway" or "Complete" was assigned. If a management action was determined to be "Underway" or "Complete" it was assigned a value of one. A report grade was then assigned to each goal based on the number of management actions identified as being "Underway" or "Complete" ("Proposed" actions did not receive a score). A summary of implementation progress is attached ( Attachment 1). Detailed tables documenting implementation progress within the watersheds are available and have been provided to watershed municipalities. Overall, 180 of the 202 recommended management actions listed in the watershed plan are either "Underway" or "Complete".

A shortcoming with respect to the Human Heritage components of the watershed plan was identified in the initial municipal meetings. Following suggestions from municipal and TRCA staff, a workshop was organized to discuss implementation of the management actions with a broader range of stakeholders involved in human heritage activities in the Duffins Creek and Carruthers Creek watersheds. This workshop was held on September 14, 2005, at the Glen Major Fishing Club in Uxbridge. Discussions at the workshop revealed that the previous score did not fully capture the extent of human heritage activity in the two watersheds. As an outcome of the workshop, the score for the Human Heritage component of the watershed plan was revised to reflect the progress being made.

TRCA staff have made presentations on the status of watershed plan implementation to municipal councils in the two watersheds as outlined below. For the Town of Markham, which has only a small portion of the Duffins Creek Watershed within its boundary, a staff report was provided on the overall progress.

<b>Presentations to Municipal Councils</b>	
<b>Municipality</b>	<b>Presentation Date</b>
City of Pickering	June 20, 2005
Town of Ajax	June 27, 2005
Town of Whitchurch-Stouffville	July 12, 2005
Township of Uxbridge	November 21, 2005
Regional Municipality of York	November 30, 2005
Regional Municipality of Durham	December 6, 2005

TRCA staff met with the Durham Chapter of the Urban Development Institute on October 25, 2005 regarding the outcome of our implementation assessment. Given the development industry's role in the two watersheds, continued consultation with UDI on implementation approaches will be beneficial to all parties.

Many of the activities have contributed to fulfilling the goals and objectives of the watershed plan. The full implementation report documents progress on all of these activities. Examples of some of the activities that are currently underway in the two watersheds include:

- private land stewardship (with funding from the Oak Ridges Moraine Foundation);
- TRCA Regional Watershed Monitoring Program;
- York-Peel-Durham-Toronto Groundwater Management Study;
- implementation of the Fisheries Management Plan for Duffins Creek and Carruthers Creek;
- restoration efforts at Duffins Creek Marsh ;
- public use trail planning;
- Seaton lands planning;
- consultation with the Greater Toronto Airports Authority regarding studies for the proposed Pickering Airport;
- development of generic watershed policies for municipalities on the Oak Ridges Moraine by the Conservation Authorities Moraine Coalition;
- Stouffville Greenway Project; and,
- establishment of the Uxbridge Township Watershed Advisory Committee.

There have been a number of provincial and federal initiatives that have recently come into place that help support many elements of the watershed plan, including:

- Oak Ridges Moraine Conservation Act and Oak Ridges Moraine Conservation Plan;
- Greenbelt Protection Act and Greenbelt Plan;
- Places to Grow Act and the Greater Golden Horseshoe Growth Plan;
- Oak Ridges Moraine Foundation funding for Glen Major;
- updated Provincial Policy Statement;
- Drinking Water Source Protection Act; and,
- Transport Canada Greenspace Draft Master Plan.

The documented success in the implementation of the Duffins and Carruthers watershed plan is a reflection of the commitment of the various partners to the watershed plan. Through continued efforts, it is envisioned that the Carruthers Creek watershed health will improve, and the Duffins Creek watershed will maintain its status as one of the healthiest in TRCA's jurisdiction.

#### **FINANCIAL DETAILS**

Funding for implementation of the watershed plan has been provided through municipal capital budgets. Provisions to continue this work have been made in TRCA preliminary budgets and work plans for 2006. TRCA staff will continue to pursue funds from other external sources and explore opportunities to build on existing partnerships.

**Report prepared by: Brent Bullough, extension 5392**  
**For Information contact: Gary Bowen, extension 5385**  
**Date: January 12, 2006**  
**Attachments: 1**

**A Watershed Plan for Duffins Creek and Carruthers Creek  
Progress on Implementation**

	<b>GOAL</b>	<b>SCORE*</b>	<b>GRADE</b>
<b>1</b>	To Maintain the Existing Hydrological Function of the Watershed	28/34	<i>B</i>
<b>2</b>	To Protect Groundwater Quality and Quantity	22/22	<i>A</i>
<b>3</b>	To Protect and Improve Surface Water Quality	30/34	<i>B</i>
<b>4</b>	To Protect Aquatic Habitats and Species	14/17	<i>B</i>
<b>5</b>	To Protect and Enhance Terrestrial Habitat and Species	25/25	<i>A</i>
<b>6</b>	To Provide Appropriate Sustainable Public Use that Promotes Environmental Awareness and Enhancement	31/33	<i>A</i>
<b>7</b>	To Preserve and Interpret Our Evolving Human Heritage Resources	15/20	<i>B</i>
<b>8</b>	To Achieve a Behavioural Shift in Lifestyles, Community Design, and Resource Use in Keeping with the Environmental Objectives for the Watersheds	15/17	<i>B</i>
<b>TOTAL SCORE 180/202</b>		<b>OVERALL GRADE B</b>	

\*The score is calculated based on the number of management actions underway for each goal.

**RES.#D89/05 - URBAN FORESTRY UPDATE**

Status report on current pests that threaten southern Ontario forest resources.

Moved by: Gay Cowbourne

Seconded by: Frank Dale

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT staff continue to work cooperatively with all levels of government to monitor trends and conditions of current forest insect and invasive pest populations and to formulate and implement appropriate strategies and methodologies directed at the control and eradication of these pests;**

**AND FURTHER THAT staff report back annually on any significant changes in the status of forest pests in Ontario.**

**CARRIED**

**BACKGROUND**

Staff had previously reported on the status of urban forest pests to Watershed Management Advisory Board Meeting #7/04, held on December 10, 2004. This report is provided as an update on the status of forest pests and their impacts for the 2005 period.

The Canadian Forest Service (CFS) and the Ontario Ministry of Natural Resources (OMNR) maintain a program for the monitoring and reporting of these infestations in Ontario's forests. Together, these agencies monitor for some 30 to 40 invasive forest pests that have been catalogued within the Great Lakes Basin. The possible impacts of these pests include the loss of native species, a decline in biodiversity, the loss of culturally important species, financial impacts to the timber industry all the way down to individual property owners when dealing with the costs associated with dead and dying trees.

At the 29th Annual Forest Health Review, held on October 27, 2005, CFS/OMNR staff presented an overview of the current threats in Ontario and status reports on trends, infestations and ongoing research. Of particular note were:

- Asian Long-horned Beetle (ALHB)
- Emerald Ash Borer (EAB)
- Hickory Bark Beetle (HBB)
- Sirex Wood Wasp (SWW)
- Gypsy Moth (GM)
- Butternut Canker

**Asian Long-horned Beetle**

The ALHB was discovered on September 4, 2003 in an industrial area straddling the border of the City of Toronto and the City of Vaughan. Subsequent surveys in 2003 and 2004 mapped the spread of the ALHB into other localized areas of Toronto and Vaughan. The Canadian Food Inspection Agency (CFIA)-led multi-agency team has implemented the control and eradication plan on an ongoing basis, resulting in the removal of some 15,000 host trees by the end of 2004.

Since the December 10, 2004, staff report, the ALHB has been found in ever decreasing numbers in areas within close proximity to previous finds. The CFIA, with input from the ALHB Science Subcommittee, with representation from the CFS, OMNR and other partner agencies, has revised the ALHB eradication protocol such that any host species tree within 400 metres of a tree exhibiting any lifestage of the ALHB (includes adult exit hole, larvae and egg stages) will be removed. This change is reflective of the possibility that the ALHB is exhibiting both one and two-year lifecycles in the Greater Toronto Area (GTA) region and is intended to capture the latter group which may not be outwardly evident during survey.

The 2005 finds resulted in a further 10,000 trees being removed, bringing the removal total to approximately 25,000 host trees since the program started in 2003. The latest round of infested tree removal was conducted in the fall period, ending in mid-December 2005. All 2005 finds were within the ALHB Regulated Area, a quarantine zone comprising approximately 125 km<sup>2</sup>.

CFIA continues to lead intensive ground and aerial surveys with the support of partner agencies (Toronto, Vaughan, OMNR, York Region, TRCA, CFS, etc.) in an effort to eradicate the ALHB from the GTA region.

### **Emerald Ash Borer**

The Emerald Ash Borer is another invasive exotic pest that has had devastating impacts on the forests of southwestern Ontario. It was first discovered in Michigan in 2002 and has quickly ravaged ash trees throughout Windsor and Essex county. The epicenter of infestation and greatest impact continues to be in Michigan. The infestation in Ontario is believed to be about two years behind the Michigan experience.

The EAB feed exclusively on ash trees. They attack all ash trees regardless of age, size, health or vigor, and kill all of the trees they attack by repeated attacks from successive generations of EAB. Mortality is 100%. Estimates put the ash component of southwestern Ontario forests between 25% and 50%. The effects of the loss of all these trees will be enormous. It is also feared that these sudden openings in our forest stands caused by the dead trees, will create an ideal opportunity for invasive plants to become established creating further problems for the remaining forests.

The "Fire Break" or ash free zone implemented in 2003 has not been as effective as hoped, with outbreaks reported 10 km past the eastern edge of the zone. The outbreaks appear to follow traffic corridors, with the movement of wood being the most likely cause. Recent outbreaks include Lambton, Chatham-Kent and Elgin counties. New quarantine areas are being implemented for these infestations. The goal of the CFIA with respect to EAB, is to control the spread of the pest, until more effective countermeasures can be found.

### **Hickory Bark Beetle**

The Hickory Bark Beetle is a native pest that continues to be enjoying a resurgence in southwestern Ontario. The reasons are twofold. HBB is a secondary pest, meaning that it attacks already weakened trees, or trees under stress. The past several years have been very dry and this seems to increase the risk of an attack. There is often nearly 100% mortality in host trees. Many of the infected stands have large components of ash which is further contributing to the demise of these forests. It also appears that the poor management practice of "high grading" - cutting the best and leaving the rest - of the stands in the past has removed almost entirely the maple component from these forests. This leaves an abnormally high percentage of hickory in these stands, thus increasing the potential for a devastating attack by just one species of forest pest.

### **Butternut Canker**

In July 2005, Butternut was added to the official list of endangered species. Currently we do not know where the Butternut Canker comes from, but it has probably been in Ontario since the 1980's. This disease affects trees of all ages and sizes. It appears that vigorous trees on good sites with good growing conditions are more resistant to the canker. It will be important to manage our forests to the benefit of Butternut wherever possible, and to continue to educate private landowners of this threat.

### **Sirex Wood Wasp**

This wasp was first detected in New York state in 2005 near the Port of Oswego. It is being monitored closely in the Fulton County region of New York by the USDA Forest Service and by CFS/MNR along the Canadian side of Lake Ontario to see if it has spread into Canada.

The wasp is believed to move about 30 to 35 kilometers per year by natural spread (ie. flight) and typically has one generation per year, although a two-year lifecycle may also exist in our colder climate. The wasp primarily infects 2 and 3 needled pines - including Scot's, Jack, Austrian and Pitch pines. It isn't yet known if it can live in other pines, including the 5 needled White Pine. It is a fungus that is introduced by the wasp that eventually kills the tree.

There may be native predators for this wasp, but due to the very new status of this threat, many questions have yet to be answered. It appears that it was introduced from Eurasia, possibly in wood from shipping crates, and the possibility that it could enter Canada this way is also a concern.

### **Gypsy Moth**

Gypsy Moth was first introduced to North America accidentally by a resident of Medford, Massachusetts, looking to breed a silk moth that could survive our cold climate. Several moths escaped and thrived due to the complete lack of natural predators. Most hardwood trees can survive one or two defoliations by the moth, however, oak and most susceptible conifers (ie. White Pine) can be killed by a single attack depending on severity. The pest is often spread by vehicles, firewood, boats or any other item that the moths can lay their eggs on. There are several biological control methods available and we continue to monitor for outbreaks.

At present there are six infestation areas of concern in the Credit Valley Conservation Authority (CVCA) jurisdiction of the City of Mississauga with the potential for more next year. There are no known infestations in close proximity to TRCA-owned lands.

At its meeting of January 18, 2006, the City of Mississauga considered its options regarding the GM outbreak. Four options were put forward as follows:

1. implement an integrated pest control program excluding biological and/or chemical spraying (ie. use of sticky traps, tree bands, etc.) to slow the spread;
2. ground based application of biological and/or chemical controls for street and park trees, where access permits;
3. aerial treatment by helicopter including street trees, wooded parklands and residential hot spots using biological (Bti) control; and,
4. do nothing.

Staff will have the outcome of this discussion available at the time of the Watershed Management Advisory Board meeting. Regardless of the final Council decision, the City of Mississauga is continuing to monitor the situation closely.

### **Implications**

The implications of these forest pests have not changed substantially from the position stated in the previous WMAB #7/04 report dated Decemebr 10, 2004. As a result, the discussion is reprinted below for reference:

*"In response to the ALHB infestation, the TRCA has participated in all aspects of the eradication program led by the CFIA. Staff are cognizant of the ALHB regulated area and have implemented the applicable protocols to comply with the federal regulation in all aspects of the TRCA's business, including commenting on plans and proposals and issuance of permits with conditions in respect of landscaping, forest management and environmental regeneration activities.*

*TRCA does not plant ALHB host species within the core areas of infestation, however it may continue to plant these species (ie. maple, willow, poplar, etc.) within the regulated area in an effort to maintain diversity within the urban forest canopy of these neighborhoods. This practice is in keeping with the directions of our municipal partners. It is anticipated that upon achieving eradication of the ALHB, the core area would be re-populated with host species to enhance diversity and the represented species mix.*

*The problems associated with EAB are not as clear cut. Ash is a fairly large component of both the planted and natural forests within the TRCA jurisdiction. It is a species suited to many varied site conditions, and is well suited to growing in open conditions, while being stronger and longer lived than many alternatives. It is a valuable nurse crop for other species which would become part of a climax forest ecosystem.*

*The TRCA supports the City of Toronto's directive to eliminate ash species from all restoration plans within the city. TRCA staff continue to approve ash use as part of a diverse and sustainable urban forest in all other areas. The composition of each new planting is such that Ash are limited to a smaller proportion than may have been the case before the introduction of EAB.*

*Discussions with other government and industry professionals supports the continued use of ash as part of a biologically diverse and balanced ecosystem. There has been no indication by the OMNR or Conservation Ontario to limit or discourage the planting of ash species.*

*Staff at the TRCA's nursery continue to propagate ash seedlings in an effort to maintain the maximum diversity of species available in TRCA's attempts to enhance and improve terrestrial natural heritage and biodiversity values and opportunities across our watersheds. In order to ensure a balanced approach, TRCA staff will regulate ash species use to not more than ten percent of hardwood tree species planted on a particular site. In reforestation plantings, ash will comprise less than two percent of the total planting effort of the TRCA."*

Additionally, while the GM population in Mississauga is being closely watched, it is believed that the population may collapse on itself as a result of the cyclical nature of outbreaks in conjunction with the dry conditions experienced during the 2005 growing season.

We are continuing to monitor the presence and potential threats posed by the remainder of forest pests.

Report prepared by: Dave Rogalsky, extension 5378  
For Information contact: Tom Hildebrand, extension 5379  
Date: January 19, 2006

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**RES.#D90/05 - 2005 RURAL CLEAN WATER PROGRAM**  
Update. An update regarding the Rural Clean Water Program.

Moved by: Nancy Stewart  
Seconded by: David Gurin

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT the 2005 Rural Clean Water Program update be received;**

**THAT staff be directed to continue discussions to advance the Rural Clean Water Program in Durham Region;**

**AND FURTHER THAT the Rural Clean Water Program be reviewed in terms of opportunities to deliver a portion of the Source Water Protection plan implementation following the legislation.**

**CARRIED**

## **BACKGROUND**

Since 2000, the goal of the Rural Clean Water Program (RCWP) has been to reduce the bacteria, nutrient and phosphorous loadings to water courses and ultimately Lake Ontario. The program strives to achieve this goal by recognizing the proactive efforts taken by private rural landowners and providing technical and financial assistance to landowners within the Toronto Area of Concern (AOC). Livestock access restriction from watercourses, milkhouse washwater disposal, manure management, field and stream bank erosion control, well protection and septic system repairs are examples of activities that qualify for financial and technical assistance under the RCWP. Increasing public awareness of rural pollution sources and environmentally sound land management practices to protect surface and subsurface water are also key parts of the program. These activities are in keeping with the sustainable communities component of the Living City vision.

RCWP achievements in the TRCA jurisdiction since 2000 include:

- Participation at over 125 agricultural group meetings, events, tours, workshops and fairs
- Creation of a new display and presentation for the RCWP
- Creation of the Peel Rural Water Quality Program and related literature
- Presentations on the Rural Clean Water Program, stewardship and Beneficial Management Practices (BMPs) to various audiences
- Contact with over 12,000 rural landowners about the RCWP in the TRCA jurisdiction through flyers and direct contact. In 2005, direct contact was made with 250 landowners, with another 956 people reached through flyers.
- Implementation of:
  - 17 septic system replacements and/or repairs
  - 10 manure management projects
  - 16 livestock access restriction projects
  - 8 field and bank erosion control projects
  - 4 milkhouse washwater disposal projects
  - 20 rural backyard stewardship projects
  - 2 nutrient management plan projects
- The above projects have led to:
  - Protection of over 9 hectares of woodlot
  - Protection of 7.0 kilometres of streams
  - Creation of 4.4 kilometres of windbreaks
  - Planting of 1720 trees and 2030 shrubs in either riparian zones or as windbreaks

## **2005 Deliverables**

It has been 5 years since the tragedy in Walkerton. Over these 5 years, the RCWP continued to deliver technical and financial assistance to help rural landowners reach the recommendations and directions set out in Justice O'Connor's report on the Walkerton Inquiry. The 2005 year has focused on strategic development of the RCWP to ensure that the delivery of the program continues to meet the needs of the rural landowners and to address rural non-point pollution sources on their properties. The RCWP has also focused on ensuring that the program meets and supports provincial and federal regulations, such as the Nutrient Management Act, as well as new directions with Source Water Protection and the 3rd edition of the Canada-Ontario Environmental Farm Plan. RCWP participated in workshops, meetings and conferences in order for the program to prepare for and be at the forefront of upcoming initiatives such as near urban agriculture, the GTA Agricultural Action Plan and the upcoming release of Agriculture & Agri-Food Canada's Agriculture Policy Framework II.

The 2005 program deliverables included the following:

### **Peel Rural Water Quality Program**

In 2004/05, the Peel Rural Water Quality Program (PRWQP) was created in a partnership with Toronto & Region Conservation (TRCA), Credit Valley Conservation (CVC), Peel Federation of Agriculture, Peel Soil & Crop Improvement Association, Peel Stewardship Council and the Region of Peel.

Prior to this collaboration, a significant portion of Peel Region outside of the TRCA jurisdiction, was without a rural water quality program, creating inconsistencies in water quality preservation efforts. To formalize the program delivery, a Memorandum of Understanding was prepared between the TRCA and the CVC, creating a partnership to enable the delivery of a seamless rural water quality program throughout the Region of Peel in its entirety.

Projects eligible for funding by the Peel Rural Water Quality Program include existing Rural Clean Water Program projects, nutrient management planning, well protection, and provides a link to the Region of Peel's well decommissioning program.

A brochure outlining the PRWQP, eligible projects and project grant funding rates has been distributed to Peel residents through the Peel Federation of Agriculture, Peel Soil & Crop Improvement Association as well as Conservation and Region of Peel staff. A display promoting the program has been developed for reaching the farming community at fairs, workshops and agriculture meetings.

In 2005, the Peel Rural Water Quality Approvals Sub-Committee was established. This Committee is comprised of representatives from agricultural and rural based groups and citizens from the Region of Peel. The purpose of the Committee is to peer review all Water Quality Improvement Plan applications made to the PRWQP and recommend approval or denial of applications to the Peel Agricultural Advisory Working Group. The TRCA and CVC provide assistance to landowners, bring forth applications and provide technical support to the Committee. To date, eight applications to the PRWQP were received by the Committee in the TRCA's jurisdiction.

### **Durham Rural Clean Water Program**

The Durham Region Agricultural Advisory Working Group has expressed interest in developing and implementing a seamless Rural Clean Water Program between Conservation Authorities in Durham Region, similar to the model developed in Peel Region. TRCA staff have been meeting with representatives from Durham Region, Durham Stewardship Council and the four partnering Conservation Authorities, exploring the development and funding sources for this program. Currently, the TRCA only provides technical assistance to rural private landowners in Durham Region.

### **Rouge River Stewardship**

In 2004, landowner contact was conducted in the Rouge River watershed to inform residents of TRCA's private land stewardship programs. Staff were able to make contact with over eighty landowners through on-site visits and/or follow-up information packages. This method of landowner contact led to eleven Beneficial Management Practices (BMPs) and riparian enhancement projects identified for implementation in this watershed in 2005/06. In addition, a private land stewardship brochure and information package was created and utilized as a resource to inform the public on programs and funding available in the Rouge River watershed.

The Rouge Park Alliance continued to support the resources required to work in this watershed in 2005 by providing funding to the RCWP through the Rouge Park Natural and Cultural Heritage Program. Landowner contact continued in 2005 with over 30 landowners contacted and an interactive workshop hosted at Bruce's Mill on November 19th. A rural homeowner resource kit was developed for distribution to 75 landowners in the Rouge watershed.

### **Communication & Public Awareness**

The RCWP has developed effective partnerships with similar community groups, organizations and not-for-profits within the jurisdiction to promote public awareness of the program and acknowledge good stewardship practices. Keeping an open dialogue with these groups and providing opportunities for partnerships and collaboration for events, projects, communications and information sharing has assisted in enhancing the transfer of technology and information on beneficial management practices (BMPs) that have been the goal and objectives of the RCWP since 2000. Communication & public awareness has been and will continue to be achieved in 2006 through:

- Presentations on the Rural Clean Water Program, stewardship and BMPs to various audiences and attendance at agricultural group meetings, youth organizations, workshops and fairs
- Contact made with private rural landowners about RCWP programs in the TRCA jurisdiction through flyers and direct landowner contact
- Mailbox and on-site project signage program
- Partnership with the Ontario Soil & Crop Improvement Association and local Environmental Farm Plan representatives for the delivery of the federal cost-share programs, i.e., Greencover Canada, Canada-Ontario Water Supply Expansion Program and the Canada-Ontario Farm Stewardship Program
- Update web page for the Rural Clean Water Program on the TRCA Web Site promoting current RCWP practices and highlights of the program from 2000 to 2005

- Collaboration with Conservation Ontario's Watershed Stewardship Working Group to develop the seamless delivery of rural clean water programming throughout all Conservation Authorities.
- Partnership with the Region of Peel Ontario 4-H program and the Centreville Creek Environmental Stewardship Program to deliver the 'Peel Pikes 4-H Fishing Club' and the 'Explore Peel 4-H Club'.

### **Project Profiling**

For every Water Quality Improvement Plan (WQIP) submitted to the Rural Clean Water Program, a project profile sheet is completed. This sheet highlights the WQIP, measures that need to be taken to meet the goals of the WQIP and how the RCWP could enhance the plan by providing the financial and technical support required to implement the recommendations.

Building on the concept of the WQIPs, the RCWP is in the process of developing a series of landowner profile fact sheets that, with the landowners permission, showcases outstanding private land stewardship projects completed through the RCWP. This series of fact sheets exemplifies how the landowner has been able to accomplish the goals set out in their WQIP. The development of these landowner profile fact sheets will continue to be undertaken in 2006 for other projects completed throughout the program as part of a greater landowner recognition program.

### **RCWP Strategic Development**

A survey is being developed for past participants of the RCWP, to examine the delivery of the current program and look at adapting the program to continue to meet the needs of landowners in the Toronto and Region AOC. This survey asks participants to provide information on their experience with the program delivery, to evaluate their project, the current technical and financial assistance available through the RCWP and to indicate any new technical and financial areas they see as beneficial to a rural landowner. This survey will help provide strategic direction to the RCWP and highlight new financial and technical areas of assistance for rural landowners. To thank participants for their contribution to the survey, participants will receive a CD produced by the Ontario Ministry of Agriculture, Food & Rural Affairs (OMAFRA) which contains all Beneficial Management Practices fact sheets produced by OMAFRA.

### **Nutrient Management Act**

The RCWP continues to support the Nutrient Management Act (NMA) through the implementation of BMPs to support nutrient management planning for proper nutrient management practices on agricultural land. The NMA was passed in 2002 and has set standards for lands producing or receiving organic or synthetic nutrients to protect the environment. In November 2005, there were amendments made to the NMA regulations to increase the number of farms practicing nutrient management in the province.

### **Canada-Ontario Environmental Farm Plan**

On April 16, 2005, the third edition of the Canada-Ontario Environmental Farm Plan (EFP) was released. This voluntary program continues to be administered by the Ontario Soil & Crop Improvement Association (OSCIA) to support farmers in taking action to reduce the risk to the environment from agricultural operations. This program will provide up to \$30,000 in cost-share programs to implement beneficial management practices through the Canada-Ontario Farm Stewardship Program and Greencover Canada. As well, a further \$15,000 is available through the Canada-Ontario Water Supply Expansion Program. In combination with the EFP, the Nutrient Management Financial Assistance Program (NMFAP) provides large farm operations with up to \$90,000 of potential grant funds.

On September 21, 2005, Conservation Ontario and OSCIA entered into a partnership enabling Conservation Authorities to deliver all on-farm technical assistance of the Greencover Canada program. This partnership enables Conservation Authorities to receive \$500 in compensation from OSCIA for each completed project, to help cover the cost of the Conservation Authorities technical services. There is a total of \$1 million available for Conservation Authorities, covering 2000 Greencover Canada projects.

In addition to this Greencover Canada partnership, TRCA staff continues to provide technical and financial assistance through the RCWP to compliment and partner with EFP projects, without financial compensation from OSCIA.

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

The RCWP, through its education, outreach and financial assistance programming, will continue to advocate and implement projects that assist rural landowners in protecting water quality. Landowner contact as well as financial and technical delivery of the RCWP, will continue to be a primary focus.

On-going partnership with the Ontario Soil & Crop Improvement Association for the delivery of the third edition of the Canada-Ontario Environmental Farm Plan also remains at the forefront of the RCWP. The EFP provides numerous financial opportunities to the agricultural community, and the RCWP is reviewing the cost-share integration options with committee reviewers and the Conservation Ontario Watershed Stewardship Working Group.

The RCWP will also continue to explore, develop and implement pilot projects such as a well water testing program, a landowner recognition program and sponsorship of continued learning programs for farmers.

### **FINANCIAL DETAILS**

In 2005, \$123,000, of financial support was received for the RCWP program from York Region Natural Heritage, Peel Region Sustainable Communities, Rouge Park Natural & Cultural Heritage, City of Toronto RAP, RAP MOU, Credit Valley Conservation and Great Lakes Sustainability Fund.

We also continue to receive in-kind support from partnerships established with the York and Peel Stewardship Council's, King Township, Town of Caledon, Town of Richmond Hill, Town of Vaughan, Town of Whitchurch-Stouffville, Town of Markham, OMAFRA, the Ontario Soil & Crop Improvement Association, the Peel Rural Water Quality Program Approvals Sub-Committee and landowners.

**Report prepared by: Melanie Williams, extension 5349**  
**For Information contact: Melanie Williams , extension 5349**  
**Date: January 20, 2006**

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**RES.#D91/05 - UPDATE ON WEST NILE VIRUS SURVEILLANCE PROGRAMME FOR 2004-2005**

Participation in the West Nile Virus advisory committee and larval mosquito monitoring in Toronto and Region Conservation Authority-owned wetlands.

Moved by: Nancy Stewart  
Seconded by: Gay Cowbourne

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT staff be directed to continue to participate in the West Nile Virus advisory committees for the regions of Peel, Durham, York and the City of Toronto;**

**AND FURTHER THAT the summary report on West Nile Virus in Natural Wetlands and Storm Water Management Ponds in 2004-2005 be circulated to the regions of Peel, Durham, York and the City of Toronto public health units, and the Ministry of Health and Long Term Care.**

**CARRIED**

**BACKGROUND**

West Nile Virus (WNV) is a flavivirus transmitted by adult mosquitoes that feed on infected birds. Humans can become accidentally infected with WNV through the bite of an infected mosquito however the chance of becoming infected is relatively low. For those who do become infected, the majority will show no symptoms or only mild flu like symptoms. Severe cases of WNV are rarer but can be fatal when they do occur. Since the virus was first discovered in North America in New York in 1999, it has since spread rapidly throughout the United States and Canada. In Ontario, the virus was first detected in birds in 2001 and in the following year human cases were being reported, including the death of 14 people.

## RATIONALE

To minimize the risk of WNV infection in humans, public health units of Ontario have set out to identify and eliminate preferred breeding sites of the two key enzootic vectors. In February 2003, Toronto and Region Conservation Authority (TRCA) was asked by the regional health departments of Peel, Durham, York and Toronto to assist in the monitoring of larval mosquito populations in natural areas. At Authority Meeting #3/03, held on April 25, 2003, Resolution #A64/03 was approved as follows:

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

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

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

That summer TRCA conducted a TRCA-wide monitoring program to characterize the mosquito species of marshes, ponds and woodland pools and to identify breeding sites for the two key WNV vectors (*Culex pipiens* and *Culex restuans*). The results from this study showed that healthy, functioning wetlands pose little risk to the public in terms of breeding high densities of WNV vectors. On a few occasions, WNV vectors could be found in exceedingly high numbers in isolated pockets of stagnant water.

By sampling mosquito larvae in 2004 and 2005 staff have continued with our investigation on the level of risk that wetlands and, more recently, stormwater management ponds (SWMP) pose to the public in terms of providing breeding habitat for WNV vectors. The results from both years indicate that SWMP and natural wetlands do not typically support the breeding of a high number of WNV vector mosquitoes. In both years of our study, about 10% of SWMP had WNV vector larvae in numbers that would warrant control measures. This finding was typical of other SWMP studies conducted by other participating agencies including the Ministry of Transportation, and the public health units of Peel, York and Toronto. In natural wetlands vector larvae were found in high numbers at only two sites in 2004 and three in 2005. The detection of high numbers in a few of these sites highlights the importance of regular monitoring. When identified, WNV vector breeding sites can be managed in part through wetland restoration projects that aim at grading small depressions, thinning dense stands of emergent vegetation and removing garbage. Where wetland restoration is not possible, the application of Bti will be warranted. The TRCA is committed to identifying these high risk sites on our property and managing them appropriately.

The results of the 2004 and 2005 WNV sampling season are summarized in a technical report. Copies of this report will be available at Watershed Management Advisory Board Meeting #6/05, to be held on February 10, 2006.

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

Staff will continue to liaise with regional health units and participate in upcoming WNV advisory committees. Staff will continue to respond to public inquiries on WNV and to reports of standing water on TRCA property in addition to providing information for both the public and TRCA staff. Staff will continue to identify sites of concern for WNV on TRCA property in the upcoming 2006 field season through larval monitoring and by performing housekeeping duties to reduce the number of potential breeding sites for the major WNV vectors.

## **FINANCIAL DETAILS**

Funding for TRCA's 2005 WNV surveillance program was made available from TRCA's municipal funding partners as part of the Regional Watershed Monitoring Program. This funding, in the amount of \$50,000 was sufficient to support the 2005 surveillance field work and staff support to liaise with the regional health units and to respond to complaints. The funding does not cover costs associated with any control measures if deemed necessary. Staff are continuing to discuss funding options with the regional and provincial health departments in the event that control measures are required. For 2006, funding in the same amount has been sought in order to continue TRCA's monitoring and surveillance work.

Report prepared by: Nicole Lauro, extension 5665  
For Information contact: Nicole Lauro , extension 5665  
Date: December 9, 2005

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### **RES.#D92/05 -**

### **CHANGES TO MEMBERSHIP**

Don Watershed Regeneration Council. Changes to the membership of the Don Watershed Regeneration Council.

Moved by: Nancy Stewart  
Seconded by: Gay Cowbourne

**THE BOARD RECOMMENDS TO THE AUTHORITY THAT the resignation of Deborah Martin-Downs, resident of the Town of Markham, be received;**

**THAT the resignation of Cassandra Bach, resident of the City of Toronto, be received;**

**THAT the resignation of Nancy Penny, resident of the City of Toronto, be received;**

**THAT the resignation of Mel Plewes, resident of the City of Toronto, be received;**

**THAT Martin German, representing Friends of the Don East, be appointed to replace Andrew McCammon;**

**AND FURTHER THAT the retiring members be thanked for their work on the Don Watershed Regeneration Council.**

**CARRIED**

## **RATIONALE**

On an annual basis, the membership of the Don Watershed Regeneration Council, in accordance with the Terms of Reference - Section 3.0, is reviewed by Toronto and Region Conservation Authority (TRCA) staff to ensure it is up-to-date.

The Don Watershed Regeneration Council currently consists of 45 members and alternates, including residents, interest groups, business associations, academic institutions and elected representatives.

Council members and their alternates are appointed for a three-year term. Over this period, some members find they are unable to continue with their commitment and hence, need to resign. In the case of both Deborah Martin-Downs and Cassandra Bach, each accepted a position at the TRCA as Director, Ecology and Administrative Clerk, respectively, and consequently resigned their positions as members of the Don Council. To ensure the vitality of the council, members may be added as necessary at a later date.

The above recommendations reflect the current status of the Don Watershed Regeneration Council membership.

Report prepared by: Amy Thurston, extension 5283  
For Information contact: Adele Freeman, extension 5238  
Date: November 17, 2005

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**RES.#D93/05 -      **GENERIC REGULATION: "Development, Interference with Wetlands and Alterations to Shorelines and Watercourses"****  
Toronto and Region Conservation Authority Conformity Exercise as Required Under the Conservation Authorities Act. The Toronto and Region Conservation Authority is required to update its current Fill, Construction and Alteration to Waterways Regulation, Ontario Regulation 158, to conform to the provincially approved Generic Regulation under the Conservation Authorities Act by May 1, 2006.

Moved by:                 Dick O'Brien  
Seconded by:             Nancy Stewart

**WHEREAS a local regulation to manage development, interference with wetlands and alterations to shorelines and watercourses has been prepared in conformity with the provisions outlined in Section 28 of the Conservation Authorities Act;**

**THEREFORE LET IT BE RESOLVED THAT THE BOARD RECOMMENDS TO THE AUTHORITY THAT the Toronto and Region Conservation Authority (TRCA) adopt the Generic Regulation: "Development, Interference with Wetlands and Alterations to Shorelines and Watercourses";**

THAT the said regulation and related documentation be submitted to the Conservation Ontario Peer Review Committee and subsequently to the Ministry of Natural Resources (MNR) for approval by the Minister;

THAT staff continue to work cooperatively with all TRCA's municipal partners and stakeholders regarding the transition and implementation of the Generic Regulation to ensure that resources are managed in a sustainable way to protect public health and safety;

TRCA continue to consult with concerned landowners in the Region of Peel to review the application of the Generic Regulation criteria in the current mapping, identify any possible inaccuracies and discuss site specific implications of the Generic Regulation mapping for those properties identified by concerned landowners;

AND FURTHER THAT this report be considered at Authority Meeting #2/06, scheduled to be held on March 24, 2006, rather than at Annual Authority Meeting #1/06.

**AMENDMENT**  
**RES.#D94/05**

Moved by: Dick O'Brien  
Seconded by: Nancy Stewart

THAT the following be inserted before the main motion:

WHEREAS each of Ontario's 36 conservation authorities is required to bring their individual "Fill, Construction and Alteration to Waterways Regulation" into conformity with Ontario Regulation 97/04, referred to as the Generic Regulation by May 1, 2006;

WHEREAS the Conservation Ontario Peer Review Committee has been established to ensure consistency across the province;

THE AMENDMENT WAS CARRIED

THE MAIN MOTION, AS AMENDED, WAS CARRIED

**BACKGROUND**

At Authority Meeting #5/05, held on June 24, 2005, Resolution #A138/05 was approved as follows:

*THAT staff proceed with the Generic Regulation conformity exercise in consultation with member municipalities and the public as per the Comprehensive Generic Regulation Work Plan;*

*AND FURTHER THAT following the municipal and public consultation process, staff report back to the Authority for final endorsement of the Toronto and Region Conservation Authority (TRCA) Generic Regulation.*

On May 1, 2004, the province approved Ontario Regulation 97/04 entitled “The Content of Conservation Authority Regulations under Subsection 28(1) of the Act: Development, Interference with Wetlands and Alterations to Shorelines and Watercourses”, which is referred to as the “Generic Regulation”. Each of Ontario’s 36 conservation authorities (CA) is required to bring their existing individual “Fill, Construction and Alteration to Waterways Regulation” into conformity with the Generic Regulation by May 1, 2006. The development of the Generic Regulation and the development of local regulations to implement the Generic Regulation are direct requirements of the amendments to Section 28(1) of the Conservation Authorities Act in 1997. The purpose of the Generic Regulation is to provide consistency in key terminology and policy intent between the Provincial Policy Statement governing natural hazards, development and site alteration under the Planning Act and Section 28 (1) of the CA Act; it ensures consistency between policy direction and legislative implementation tools. The Generic Regulation is consistent with the policy direction of the 2005 Provincial Policy Statement to manage resources in a sustainable way and protect public health and safety. This is an update to the conservation authority Regulation that has been in effect for more than 40 years.

Further to the previous staff report and presentation to the Water Management Advisory Board on June 10, 2005, the following is an update on the mapping exercise and a summary of the municipal and public consultation process associated with TRCA’s conformity exercise.

### **Mapping Exercise**

A Terms of Reference was prepared and reviewed by the MNR/Conservation Ontario Technical Committee to ensure that the methodology used by TRCA to map and delineate the various Generic Regulation criteria was in conformity with standards established in the “Guidelines for Developing Schedules of Regulated Areas”. The map limit of the following criteria was generated in-house by TRCA staff and technical resources: meander belt, riverine erosion hazards, wetlands and associated area of interference and Lake Ontario shoreline flooding and erosion hazards.

A key change in the Generic Regulation was the inclusion of wetlands as regulated areas. Within the TRCA jurisdiction, wetlands with an area of 0.5 ha or greater are included as part of the regulation mapping. Ministry of Natural Resources wetland mapping and TRCA’s Ecological Land Classification (ELC) Vegetation Type mapping were used as information sources for mapping this criteria. Although not specifically referenced in the Generic Regulation, Section 28 (5(e)) of the CA Act allows the Minister to permit the regulation of ‘other areas’. The ‘other areas’ criteria has been applied as an allowance to the land adjacent to wetlands where development may have a hydrological impact on the function of the wetland. This allowance is known as an ‘area of interference’. The TRCA is proposing to use a 120 metre allowance around all Provincially Significant Wetlands and all wetlands on the Oak Ridges Moraine to delineate the regulated area. This approach is consistent with current planning legislation and the direction provided by the Ministry of Natural Resources and Conservation Ontario. A 30 metre allowance is being applied to all other wetlands.

TRCA initiated a jurisdiction-wide flood plain mapping update program in 2000 and this new information has been used for the engineered flood hazard limit. This program included an update to the base topographic mapping, the hydrologic models used to predict the 100 year return period and Hurricane Hazel flow rates, the hydraulic models used to convert the flow rates to flood levels and the plotting of the resulting updated flood levels. This updated mapping covers the majority of the larger watercourses within TRCA's jurisdiction.

For those currently unmapped headwater valley and stream corridors, TRCA retained Dillon Consulting Limited to provide Digital Flood Plain Estimation Mapping. The mapping was applied to significant watercourses up to a minimum drainage area of 50 ha which resulted in approximately 1,000 km of stream length being mapped. The updated engineered and estimated flood plain mapping represents a significant volume of technical data that will assist member municipalities and TRCA staff in evaluating development applications.

As a result of the mapping exercise, TRCA's existing registered fill and flood plain schedules on the major valley systems and the unregistered fill line extension mapping in the 905 headwater areas will be replaced. The new mapping for the Generic Regulation will be displayed on 2002 ortho photo base mapping and will be available in digital format for use both internally and externally. It is important to note that regulation mapping can be updated to reflect current technical information and data, on an ongoing basis.

### **Regulation Limit**

The delineation of the 'Regulation Limit', (area of interest), involved the compilation of a variety of technical data sources. The mapping represents a screening tool that guides TRCA staff, landowners and municipal staff on areas of interest where permit approval may be required.

**The Regulation Limit does not represent a development limit or a land use restriction.**

Through the review of site specific development applications, the delineation of the requisite hazard (e.g. flood plain, erosion hazard, etc.) is evaluated and if necessary, refined by additional technical assessment. It is a permissive limit, unlike a municipal zoning schedule that restricts land use, in that regulated activities (construction, site alteration, etc.) can proceed provided the control of flooding, dynamic beaches or pollution or the conservation of land is not affected by development.

### **Text Regulation and Mapping**

As part of the conformity exercise, a Text Regulation has been prepared describing the regulated areas and activities, the permit approval process and it refers to the mapping. **It is important to note that the text prevails in the case of a conflict between the regulated area described in the Text Regulation and the mapping.** For example, if a conservation authority has not physically mapped the feature or the mapping is wrong, the text prevails and the mapping can be changed. This is a significant change from the current Regulation where the fill line schedules are registered together with the Text Regulation and any changes to the mapping would require an amendment to the Regulation. Staff see this as a positive change in that it allows the mapping to be updated with current technical standards and information, which is a reflection of the dynamic nature of the natural hazards that are being regulated. A copy of the Draft TRCA Generic Regulation is attached to this report and will be subject to review by the Peer Review Committee, prior to advancing to the Minister of Natural Resources. The format and content of the Text Regulation has been established by the MNR to ensure consistency across the province.

## **Municipal and Public Consultation**

Consultation with our municipal partners and the public is, and will continue to be, an integral part of the conformity exercise and ultimately the implementation of TRCA's Generic Regulation. The minimum standards for consultation were established by MNR and Conservation Ontario and outlined in The Approval Process Document.

### **Municipal Consultation**

A letter was sent out to all member municipalities in August 2005, noting Authority Resolution #A138/05 regarding TRCA's conformity exercise together with an information brochure about the Generic Regulation. The municipalities were also advised of a pending workshop to be held in October.

On October 6th and 7th, 2005, TRCA held Municipal Information Sessions, (half day workshops), at Black Creek Pioneer Village. The sessions consisted of presentations by TRCA staff about the history, content and approval process of the Generic Regulation and TRCA's associated conformity exercise. TRCA engineering staff provided a detailed overview of the jurisdiction-wide engineered flood plain mapping update program as well as the digital flood plain estimation study undertaken for the 905 headwater area. The TRCA's solicitor gave a presentation about the legal implications of implementing TRCA's current Regulation and the Generic Regulation, as well as an update on the 2005 changes to the Building Code Act. Over 90 staff from planning, building, engineering, by-law, public works departments of our member regional and local municipalities attended these information sessions.

As a follow-up to the Municipal Information Sessions, TRCA staff conducted further individual meetings with the majority of our regional and local municipal staff to have a more detailed discussion about the draft mapping and the implementation of the Generic Regulation. It is recognized that there will ongoing dialogue with our municipal partners and staff will continue to meet with municipal staff to assist with the transition and implementation of the Generic Regulation.

The draft mapping, including the digital layers of the Regulation Limit and all the layers of the various criteria, has been provided to TRCA's municipal partners for their review and comment. Staff are in the process of receiving comments on the draft mapping and meeting with municipal staff in this regard. As a result, minor modifications and adjustments to the mapping are anticipated to reflect where possible current site conditions, particularly in our urbanizing 905 area where development has occurred since the 2002 base aerial photography.

TRCA staff have also made presentations to Councils and will continue to do so upon request from our municipal partners. Municipal staff has, or will be preparing reports to inform their Councils about the Generic Regulation. In general, TRCA staff has received positive feedback from municipal staff about the Generic Regulation and they are anxious to use the updated technical data.

## **Public Consultation**

As part of preparing the local regulation, authorities were required to conduct a "public information program" to advise its constituency that local regulations are being updated as a result of the legislated amendments approved by the provincial government. The public consultation process generally followed the format of the Planning Act consultation requirements. Seven public information sessions were held throughout our jurisdiction. Notices about the information sessions were mailed to a variety of stakeholders including: the development community, Urban Development Institute, consultants, solicitors, agricultural groups, landowner groups, environmental associations, hydro and gas utilities, members of federal and provincial parliament and federal and provincial ministries. The information sessions were advertised in local newspapers and noted on the TRCA's website. Our website has been continually updated throughout the entire conformity exercise as another means to inform the public.

The public information sessions were structured as a public open house/drop-in format. There were display panels and a PowerPoint presentation available to outline all the aspects of the Generic Regulation update and approval process. For each municipality, the TRCA displayed a map illustrating the existing Fill Regulated and Fill Extension areas compared to the proposed regulated areas for the Generic Regulation. Draft 'Regulation Limit' mapping at a 1:10,000 scale plotted on 2002 aerial photo base was available for the public to review. If a landowner wanted a more detailed review of the mapping and an understanding of the criteria that generated the Regulation Limit, staff were able to use a laptop at the public meeting to digitally display this information. Approximately 250 people attended the public information sessions, with a good representation from all the various stakeholders.

As part of the consultation process, members of public were encouraged to submit comment cards if they had any additional questions, wanted a copy of the draft mapping or wanted further discussions or a site meeting to review the mapping as it relates to their property. The comments received and the responses provided by TRCA staff are being documented. We also continue to receive and respond to telephone inquiries and walk-in inquiries at the office. The majority of the comments received to date have been requests for copies of the draft mapping.

### **General Municipal and Public Response:**

Based upon the consultation noted above, the response received from municipal staff was generally positive. There was an acknowledgement of technical efforts of TRCA to provide up-to-date information which forms the basic elements of natural hazards planning. This information provides a valuable resource management tool to assist municipal planning, building and engineering staff in evaluating development applications.

Through the public information process, staff generally received similar feedback from the consulting and development industry in terms of having more up-to-date mapping and information. The input received from most members of the public resulted in requests for copies of the draft mapping and some requests for site visits to review and discuss the implications of the mapping on their property. However, there was one area of TRCA's jurisdiction where specific concerns were raised, which the following summarizes.

### **Town of Caledon - Region of Peel**

The municipal and public consultation in the Town of Caledon followed the process outlined above and was coordinated together with Credit Valley Conservation (CVC). In addition, TRCA and CVC staff introduced the Generic Regulation to Caledon Council with a presentation at a council workshop in October 2004. CVC and TRCA met with Caledon staff in a special meeting in November 2005 to discuss the details of the Generic Regulation conformity exercise, prior to the Public Information Session in December. Following the public meeting in December, landowners in the Town of Caledon expressed their concerns to Caledon Council that there has been insufficient opportunity to review the mapping associated with CVC and TRCA's Generic Regulations to ensure the accuracy of the Regulation Limit as it relates to their properties. To support the concerned landowners, Town of Caledon Council passed a resolution on January 24, 2006 requesting the Minister of Natural Resources to extend the deadline for CVC and TRCA to submit their Generic Regulations in order that concerns expressed in the town staff report could be addressed and that the CAs be requested to hold a public meeting to allow public to review the mapping of their individual properties.

In addition, Regional Council received a Notice of Motion on January 26, 2006 requesting that the Minister of Natural Resources extend the deadline for CVC and TRCA to submit the mapping associated with their generic regulations in order to provide further opportunity for public review of the mapping and that the Ministry provide appropriate financial support to carry out the necessary mapping exercise. This Notice of Motion will be considered by Regional Council at their meeting on February 16, 2006.

TRCA and CVC staff met with approximately 100 rural landowners at a Peel Federation of Agriculture meeting on February 1, 2006 to explain the history and requirements of the Generic Regulation, the methodology used for creating their mapping associated with their regulations, answered the questions of concerned landowners and met one-on-one with individual landowners to review the draft mapping. TRCA and CVC also held a supplementary Public Information Session on February 7, 2006 for the Town of Caledon, which was well attended with approximately 60 residents being within the TRCA watershed.

TRCA staff respect the concerns that have been expressed by the residents of Caledon and are committed to working with the residents and town staff to address these concerns. Town of Caledon's member on the Authority has participated in all of the municipal and public meetings related to this exercise and has assisted staff in facilitating and communicating the intent, purpose and importance of this update to our Regulation. TRCA and CVC have, and will continue to, meet with town staff and provide residents with the opportunity to review the associated Generic Regulation mapping. It is important to emphasize that in the case of a conflict between the mapping and the written description of the regulated areas in the Text of the Regulation, it is the Text that prevails. The opportunity to review and update the regulation mapping can continue after the Text Regulation is approved by the Minister of Natural Resources.

Based upon discussions between staff of the Region of Peel, CVC, TRCA and Town of Caledon, regional planning staff have prepared a report for consideration by Regional Council on February 16, 2006 in response to the Notice of Motion introduced on January 26, 2006. As an extension to the May 1, 2006 deadline would require an amendment to the Conservation Authorities Act and the mapping can be refined after the Text Regulation is approved, regional staff are not supporting the motion to request the Minister to extend the deadline for TRCA and CVC. Regional staff are recommending the motion be amended such that the Region of Peel Council request CVC and TRCA to continue to consult with concerned landowners to allow time to review the accuracy of the current mapping associated with the Generic Regulation of the CAs for those properties identified by concerned landowners. CVC and TRCA staff will be in attendance as a delegation at the February 16, 2006 Regional Council meeting to respond to the Notice of Motion.

### **Next Steps**

As outlined in the June 10, 2005 report and presentation, following the municipal and public consultation process, the next step in this exercise is to seek approval from the Authority in order to submit the Regulation to the Conservation Ontario Peer Review Committee for review and approval. The role of the Peer Review Committee is to confirm that the updated TRCA Regulation is consistent with the Generic Regulation and that the approval process has been followed prior to advancing to the Minister of Natural Resources for approval. TRCA is scheduled to appear before the final Peer Review Committee meeting on February 28, 2006.

This report is brought forward for consideration by the Water Management Advisory Board and will proceed to the Authority for endorsement at their meeting on to be held on March 24, 2006 as the next meeting of the Authority is to be held on February 24, 2006 which is the annual meeting. In recognition of meeting schedules and timelines, the Peer Review Committee has made provisions for authorities to proceed to the Peer Review Committee and their review and approval would be subject to endorsement by resolution of the Authority. Given this schedule, TRCA would be submitting our Regulation to the Minister following the March 24, 2006 Authority meeting. This timeline will allow us to continue to receive comments of the regulation mapping and make any necessary modifications such that the mapping referred to in the Text Regulation is as up-to-date as possible. If there are any significant concerns resulting from this process or the Peer Review process, staff will provide an update at the March Authority meeting. TRCA staff will notify each member municipality and provide public notification in area newspapers of the effective date and implementation of the updated Regulation. TRCA will continue to work closely with our municipal partners regarding the transition and implementation of the updated Regulation.

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

In general, we do not anticipate significant changes to our current review process. However, we will be undertaking a review of our existing TRCA policy framework and conducting an update to address any deficiencies with respect to the areas and activities subject to the Generic Regulation. We will also be developing implementation policies to deal with the transition from our current Regulation to the Generic Regulation. The legislation offers opportunities to exempt certain activities, (e.g. minor works) from the Regulation through our implementation policies. TRCA will explore these opportunities with our member municipalities through future discussions. Any policy revisions will be brought forward to the Authority for consideration and endorsement.

**Summary**

Staff advise that a local regulation to manage development, interference with wetlands, alterations to shorelines and watercourses has been prepared in conformity with the provisions outlined in Section 28 of the Conservation Authorities Act and that the provincial standards for mapping and public consultation. Staff recommend that the Authority adopt the subject regulation and the regulation and related documentation be submitted to the Conservation Ontario Peer Review Committee and subsequently to MNR for approval by the Minister. Furthermore, staff will continue to work with all member municipalities and all stakeholders regarding the transition and implementation of the Generic Regulation to ensure that resources are managed in a sustainable way to protect public health and safety.

**Report prepared by: Laurie Nelson, extension 5281**

**For Information contact: Laurie Nelson, extension 5281**

**Date: February 8, 2006**

**Attachments: 1**

**ONTARIO REGULATION**

made under the

**CONSERVATION AUTHORITIES ACT**

**TORONTO AND REGION CONSERVATION AUTHORITY: REGULATION OF  
DEVELOPMENT, INTERFERENCE WITH WETLANDS AND ALTERATIONS TO  
SHORELINES AND WATERCOURSES**

**Definition**

1. In this Regulation,

“Authority” means the Toronto and Region Conservation Authority.

**Development prohibited**

2. (1) Subject to section 3, no person shall undertake development, or permit another person to undertake development in or on the areas within the jurisdiction of the Authority that are,

- (a) adjacent or close to the shoreline of the Great Lakes-St. Lawrence River System or to inland lakes that may be affected by flooding, erosion or dynamic beaches, including the area from the furthest offshore extent of the Authority’s boundary to the furthest landward extent of the aggregate of the following distances:
  - (i) the 100 Year flood level, plus an allowance for wave uprush and other water related hazards;
  - (ii) the predicted long term stable slope projected from the existing stable toe of the slope or from the predicted location of the toe of the slope as that location may have shifted as a result of shoreline erosion over a 100-year period;
  - (iii) where a dynamic beach is associated with the waterfront lands, a 30 metre allowance inland to accommodate dynamic beach movement; and
  - (iv) an allowance of 15 metres inland.

- (b) river or stream valleys that have depressional features associated with a river or stream, whether or not they contain a watercourse, the limits of which are determined in accordance with the following rules:
  - (i) where the river or stream valley is apparent and has stable slopes, the valley extends from the stable top of bank, plus 15 metres, to a similar point on the opposite side,
  - (ii) where the river or stream valley is apparent and has unstable slopes, the valley extends from the predicted long term stable slope projected from the existing stable slope or, if the toe of the slope is unstable, from the predicted location of the toe of the slope as a result of stream erosion over a projected 100-year period, plus 15 metres, to a similar point on the opposite side,
  - (iii) where the river or stream valley is not apparent, the valley extends the greater of,
    - (A.) the distance from a point outside the edge of the maximum extent of the engineered flood plain under the applicable flood event standard, plus 15 metres, to a similar point on the opposite side, and
    - (B.) the distance from a point outside the edge of the maximum extent of the estimated flood plain under the applicable flood event standard, plus 15 metres, to a similar point on the opposite side, and
    - (C.) the distance from the predicted meander belt of a watercourse, expanded as required to convey the flood flows under the applicable flood event standard, plus 15 metres, to a similar point on the opposite side;
- (c) hazardous lands;
- (d) wetlands; or
- (e) other areas where development could interfere with the hydrologic function of a wetland, including areas within 120 metres of all provincially significant wetlands and wetlands on the Oak Ridges Moraine greater than 0.5 hectares, and within 30 metres of all other wetlands greater than 0.5 hectares in size, but not including those areas where development has been approved pursuant to an application made under the *Planning Act* or other public planning or regulatory process.

(2) The areas described in subsection (1) are the areas referred to in section 12 except that, in case of a conflict, the description of the areas provided in subsection (1) prevails over the descriptions referred to in that section.

### **Permission to develop**

3. (1) The Authority may grant permission for development in or on the areas described in subsection 2 (1) if, in its opinion, the control of flooding, erosion, dynamic beaches, pollution or the conservation of land will not be affected by the development.

(2) The permission of the Authority shall be given in writing, with or without conditions.

### **Application for permission**

4. A signed application for permission to undertake development shall be filed with the Authority and shall contain the following information:

1. Four copies of a plan of the area showing the type and location of the development.
2. The proposed use of the buildings and structures following completion of the development.
3. The start and completion dates of the development.
4. The elevations of existing buildings, if any, and grades and the proposed elevations of buildings and grades after development.
5. Drainage details before and after development.
6. A complete description of the type of fill proposed to be placed or dumped.

### **Alterations prohibited**

5. Subject to section 6, no person shall straighten, change, divert or interfere in any way with the existing channel of a river, creek, stream or watercourse or change or interfere in any way with a wetland.

### **Permission to alter**

6. (1) The Authority may grant a person permission to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse or to change or interfere with a wetland.

(2) The permission of the Authority shall be given in writing, with or without conditions.

### **Application for permission**

7. A signed application for permission to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse or change or interfere with a wetland shall be filed with the Authority and shall contain the following information:

1. Four copies of a plan of the area showing plan view and cross-section details of the proposed alteration.
2. A description of the methods to be used in carrying out the alteration.
3. The start and completion dates of the alteration.
4. A statement of the purpose of the alteration.

### **Cancellation of permission**

8. (1) The Authority may cancel a permission if it is of the opinion that the conditions of the permission have not been met.

(2) Before cancelling a permission, the Authority shall give a notice of intent to cancel to the holder of the permission indicating that the permission will be cancelled unless the holder shows cause at a hearing why the permission should not be cancelled.

(3) Following the giving of the notice, the Authority shall give the holder at least five days notice of the date of the hearing.

### **Validity of permissions and extensions**

9. (1) A permission of the Authority is valid for a maximum period of 24 months after it is issued, unless it is specified to expire at an earlier date.

(2) A permission shall not be extended.

### **Appointment of officers**

10. The Authority may appoint officers to enforce this Regulation.

### **Flood event standards**

11. (1) The applicable flood event standards used to determine the maximum susceptibility to flooding of lands or areas within the watersheds in the area of jurisdiction of the Authority are the Hurricane Hazel Flood Event Standard, the 100 Year Flood Event Standard and the Lake Ontario 100 Year flood level plus wave uprush, described in the Schedule.

**Areas included in the Regulation Limit**

12. Hazardous lands, wetlands, shorelines and areas susceptible to flooding, and associated allowances, within the watersheds in the area of jurisdiction of the Authority are delineated by the Regulation Limit shown on maps 1 to 132 dated XXXXXX 2006 and filed at the head office of the Authority at 5 Shoreham Drive, Downsview, Ontario under the map title “Ontario Regulation 97/04: Regulation for Development, Interference with Wetlands and Alterations to Shorelines and Watercourses”.

**SCHEDULE**

1. The Hurricane Hazel Flood Event Standard means a storm that produces over a 48-hour period,

- (a) in a drainage area of 25 square kilometres or less, rainfall that has the distribution set out in Table 1; or
- (b) in a drainage area of more than 25 square kilometres, rainfall such that the number of millimetres of rain referred to in each case in Table 1 shall be modified by the percentage amount shown in Column 2 of Table 2 opposite the size of the drainage area set out opposite thereto in Column 1 of Table 2.

**TABLE 1**

73 millimetres of rain in the first 36 hours
6 millimetres of rain in the 37th hour
4 millimetres of rain in the 38th hour
6 millimetres of rain in the 39th hour
13 millimetres of rain in the 40th hour
17 millimetres of rain in the 41st hour
13 millimetres of rain in the 42nd hour
23 millimetres of rain in the 43rd hour
13 millimetres of rain in the 44th hour
13 millimetres of rain in the 45th hour
53 millimetres of rain in the 46th hour
38 millimetres of rain in the 47th hour
13 millimetres of rain in the 48th hour

**TABLE 2**

Column 1	Column 2
Drainage Area (square kilometres)	Percentage
26 to 45 both inclusive	99.2
46 to 65 both inclusive	98.2
66 to 90 both inclusive	97.1
91 to 115 both inclusive	96.3
116 to 140 both inclusive	95.4
141 to 165 both inclusive	94.8
166 to 195 both inclusive	94.2

196 to 220 both inclusive	93.5
221 to 245 both inclusive	92.7
246 to 270 both inclusive	92.0
271 to 450 both inclusive	89.4
451 to 575 both inclusive	86.7
576 to 700 both inclusive	84.0
701 to 850 both inclusive	82.4
851 to 1000 both inclusive	80.8
1001 to 1200 both inclusive	79.3
1201 to 1500 both inclusive	76.6
1501 to 1700 both inclusive	74.4
1701 to 2000 both inclusive	73.3
2001 to 2200 both inclusive	71.7
2201 to 2500 both inclusive	70.2
2501 to 2700 both inclusive	69.0
2701 to 4500 both inclusive	64.4
4501 to 6000 both inclusive	61.4
6001 to 7000 both inclusive	58.9
7001 to 8000 both inclusive	57.4

2. The 100 Year Flood Event Standard means rainfall or snowmelt, or a combination of rainfall and snowmelt, producing at any location in a river, creek, stream or watercourse, a peak flow that has a probability of occurrence of one per cent during any given year.

3. The Lake Ontario 100 Year flood level means the peak instantaneous still water level plus an allowance for wave uprush and other water-related hazards that has a probability of occurrence of one per cent during any given year.

Made by:

TORONTO AND REGION CONSERVATION AUTHORITY:

.....  
*Signature*

.....  
*Please Print Name and Title*

.....  
*Signature*

.....  
*Please Print Name and Title*

Date made: .....

I certify that I have approved this Regulation.

.....

*Minister of Natural Resources*

Date approved: .....

## SECTION IV - ITEMS FOR THE INFORMATION OF THE BOARD

**RES.#D95/05** - **DON WATERSHED REGENERATION COUNCIL**  
Minutes of Meetings #6/05, #7/05 and #8/05. The minutes of the Don Watershed Regeneration Council meetings #6/05, #7/05 and #8/05, held on June 16, 2005, July 21, 2005, and September 29, 2005 respectively are provided for information.

Moved by: Nancy Stewart  
Seconded by: Gay Cowbourne

**IT IS RECOMMENDED THAT the minutes of the Don Watershed Regeneration Council meetings #6/05, #7/05 and #8/05, held on June 16, 2005, July 21, 2005, and September 29, 2005 respectively, as appended, be received.**

**CARRIED**

### **BACKGROUND**

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

**Report prepared by: Michelle Vanderwel, extension 5280**  
**For Information contact: Michelle Vanderwel, extension 5280**  
**Date: November 8, 2005**

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**RES.#D96/05** - **ETOBICOKE-MIMICO WATERSHEDS COALITION**  
Minutes of Meeting #4/05, September 8, 2005. The minutes of Etobicoke-Mimico Watersheds Coalition Meeting #4/05, held on September 8, 2005, are provided for your information.

Moved by: Nancy Stewart  
Seconded by: Gay Cowbourne

**IT IS RECOMMENDED THAT the minutes of Etobicoke-Mimico Watersheds Coalition meeting #4/05, held on September 8, 2005, be received.**

**CARRIED**

### **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, 2002 by Resolution #A124/02, includes the following provision:

Section 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.

Report prepared by: Joanna Parsons, extension 5575  
For Information contact: Chandra Sharma, extension 5237  
Date: January 24, 2006

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**TERMINATION**

ON MOTION, the meeting terminated at 11:28 a.m., on Friday, February 10, 2005.

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Dave Ryan  
Chair

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Brian Denney  
Secretary-Treasurer

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