



THE TORONTO AND REGION CONSERVATION AUTHORITY

Watershed Management Advisory Board Meeting #1/07

Chair: Richard Whitehead
Vice Chair: Anthony Perruzza
Members: Maria Augimeri
Gay Cowbourne
Grant Gibson
Pamela Gough
Bonnie Littley
John Parker
Andrew Schulz
Gerri Lynn O'Connor - Chair, Authority

April 20, 2007
10:00 A.M.

SOUTH THEATRE, BLACK CREEK PIONEER VILLAGE

AGENDA

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(Minutes Summary enclosed herewith on <u>BLUE</u>) | |
| 2. BUSINESS ARISING FROM THE MINUTES | |
| 3. DISCLOSURE OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF | |
| 4. DELEGATIONS | |
| 5. PRESENTATIONS | |
| 6. CORRESPONDENCE | |
| 7. SECTION I - ITEMS FOR AUTHORITY ACTION | |
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WITHIN THE CITY OF TORONTO PUBLIC PARKS AND VALLEY LANDS | |

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9. NEW BUSINESS

NEXT MEETING OF THE WATERSHED MANAGEMENT ADVISORY COMMITTEE #2/07
JUNE 8, 2007 AT 10:00 A.M. IN THE SOUTH THEATRE,
BLACK CREEK PIONEER VILLAGE

Brian Denney
Chief Administrative Officer

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TO: Chair and Members of the Watershed Management Advisory Board
Meeting #1/07, April 20, 2007

FROM: Nick Saccone, Director, Restoration Services

**RE: RESTORATION OF DAMAGE CAUSED BY HIGH STORM FLOW EVENTS
WITHIN THE CITY OF TORONTO PUBLIC PARKS AND VALLEY LANDS**

KEY ISSUE

Recommending approval to implement projects, other than Edwards Gardens, for the restoration to City of Toronto public parks and valley lands, which were affected by high storm flow events.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT staff be authorized to take such action as is necessary to assist the City of Toronto with the management of projects to restore damage caused by the 2005 storm flow events, including the implementation of priority projects identified.

BACKGROUND

As a result of high storm flow events of July and August 2005, extensive damage occurred to trails, pathways, parking lots, pedestrian bridges and stream banks and embankments, within the parks and valley lands managed by the City of Toronto Parks, Forestry and Recreation Department. Over 500 sites have been identified for remedial works. The damage was attributed to streambank erosion, fallen trees, debris jams and extensive flooding.

Subsequent to the storm events, City of Toronto staff retained the services of Engineered Management Systems Inc. (EMSI) to conduct emergency inspections of the trails, pathways, pedestrian bridges and parking lots to assess the damage. Visual inspections were conducted during October, November and December of 2005.

The consultants prepared a report, which included a summary of the deficiencies and estimated costs for repairs. This report was submitted to the City of Toronto staff in February 2006.

Due to the urgency of conditions, corrective action was taken immediately where there was a high risk to the public safe usage of the trails and pathway network.

The City of Toronto, Parks Forestry and Recreation Department has requested Toronto and Region Conservation Authority (TRCA) to assist them with the management and implementation of projects for the remediation of the remainder of the storm related damage identified by EMSI.

RATIONALE

TRCA and the City of Toronto have a long history of working together on a number of projects. Many of these projects are on TRCA-owned lands of which the city is responsible for management.

TRCA is recognized by the City of Toronto as being able to provide cost-effective management of watershed related projects due to highly specialized expertise, the ability to expedite required approvals and permits, facilitate community involvement and meet tight timelines.

FINANCIAL DETAILS

Toronto City Council has authorized the General Manager of Parks Forestry and Recreation to enter into a sole source purchase order with TRCA in order to expedite these projects within the 2007 capital budget year for an estimated cost of approximately \$2,605,000.

Report prepared by: Jim Berry, 416-392-9721

For Information contact: Jim Berry, 416-392-9721

Date: April 02, 2007

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #1/07, April 20, 2007

FROM: Nick Saccone, Director, Restoration Services

RE: **STREAM RESTORATION OF WILKET CREEK, AT EDWARDS GARDENS
PARK, CITY OF TORONTO**

KEY ISSUE

Recommending approval of a project for the restoration of the storm damage of Wilket Creek at Edwards Garden Park, City of Toronto.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT staff be directed to proceed with the repairs and restoration relating to storm damage of Wilket Creek, at Edwards Gardens Park, City of Toronto.

BACKGROUND

Wilket Creek flows from the approximate area of Bathurst Street and Finch Avenue, south to Leslie Street and Eglinton Avenue, where it joins up with the west Don River. From its headwaters down to York Mills Road, the creek is buried, surfacing at a large outfall located just south of York Mills Road.

The creek is subjected to tremendous wet weather flows causing degraded water quality, extensive erosion problems and frequent flooding events.

As a result of high storm flow events of July and August 2005, two wooden pedestrian bridges were washed out, stream banks were eroded and pathways were damaged.

The City of Toronto retained the services of Chisholm, Fleming and Associates to conduct a feasibility study for the rehabilitation and replacement of pedestrian bridges, pathways and related channel erosion control works in Edwards Gardens Park. The study area included a 400 metre section of Wilket Creek immediately south of Lawrence Avenue. A final report was prepared with a number of recommendations for stream channel and bridge rehabilitation, as well as other related works.

DETAILS OF WORK TO BE DONE

The project involves the following:

- project planning design and approvals;
- removal of sediment deposits;
- replace and or repair pathways;
- replace rail fencing;
- stabilization of stream bank using natural channel design treatments;
- install flow deflector at Lawrence Avenue box culvert;
- install stream bed grade controls;
- protect and stabilize pedestrian bridge abutments and footings;
- removal of damaged gabion baskets;

- possible mitigation of stream barriers (concrete weir and dam); and
- repair to scour pool at culvert pipe outlet.

Subject to the receipt of all required approvals, Toronto and Region Conservation Authority (TRCA) intends to begin construction in June of 2007, for a period lasting approximately 4 months.

RATIONALE

TRCA and the City of Toronto have a long history of working together on a number of projects. Many of these projects are on TRCA lands of which the city is responsible for management.

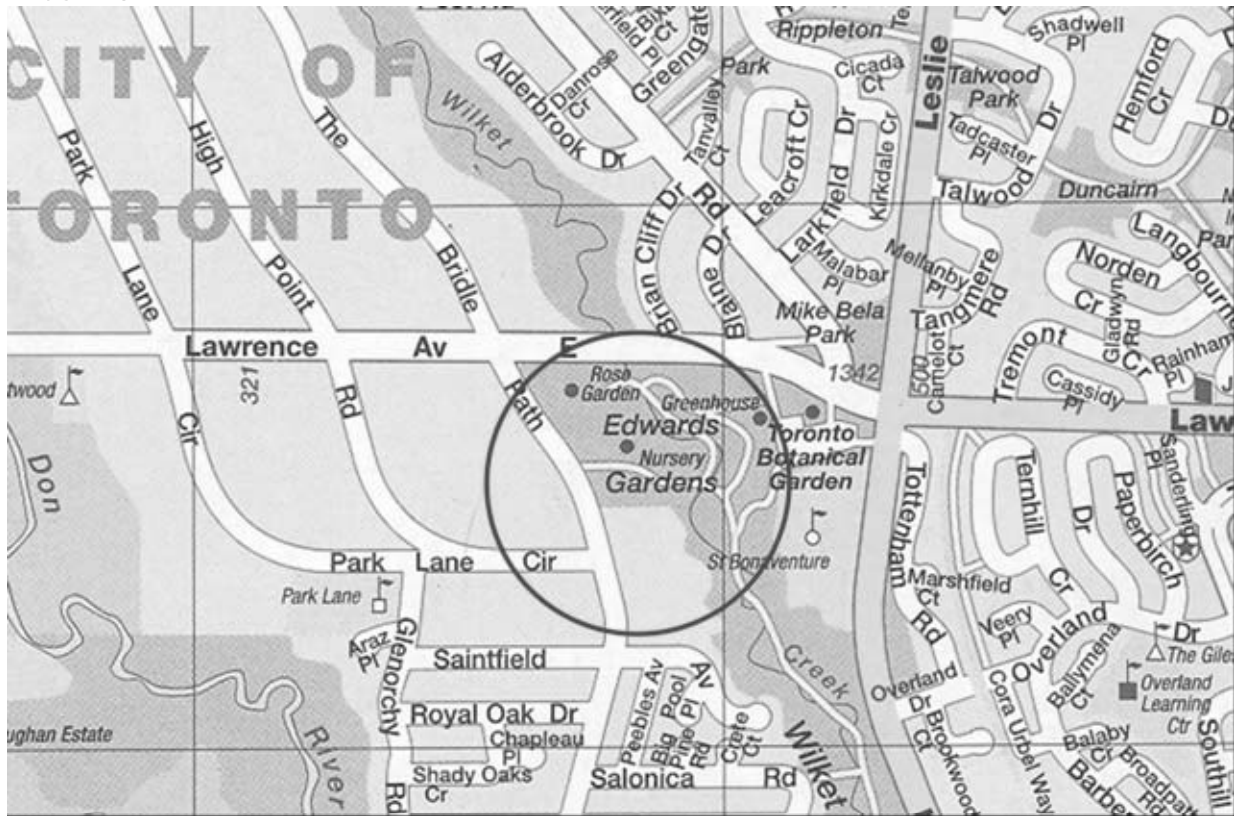
TRCA is recognized by the City of Toronto as being able to provide cost-effective management of watershed related projects due to highly specialized expertise, the ability to expedite required approvals, facilitate community involvement and meet tight time lines.

FINANCIAL DETAILS

Toronto City Council has authorized the General Manager of Parks, Forestry and Recreation to enter into a sole source purchase order with TRCA in order to expedite and complete this project within the 2007 capital budget year for an estimated cost of approximately \$1,400,000.

Report prepared by: Jim Berry, 416-392-9721
For Information contact: Jim Berry, 416-392-9721
Date: March 30, 2007
Attachments: 1

Attachment 1



TO: Chair and Members of the Watershed Management Advisory Board
Meeting #1/07, April 20, 2007

FROM: Nick Saccone, Director, Restoration Services

RE: **CN RAIL EMBANKMENT IN CHARLES SAURIOL CONSERVATION RESERVE
EROSION CONTROL PROJECT**

KEY ISSUE

Initiation of the Class Environmental Assessment process for the CN Rail Embankment at Charles Sauriol Conservation Reserve Erosion Control Project, City of Toronto, under the “City of Toronto Valley and Shoreline Regeneration Project”.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT staff be directed to commence a Class Environmental Assessment (Class EA) for the CN Rail Embankment in Charles Sauriol Conservation Reserve, City of Toronto, under the “City of Toronto Valley and Shoreline Regeneration Project”;

AND FURTHER THAT staff be directed to proceed with the implementation of remedial works, pending approval of the Class EA and the receipt of all necessary approvals, if required.

BACKGROUND

The East Don River runs relatively parallel to the Don Valley Parkway through the reach of Lawrence Avenue in the north to the CP Rail overpass in the south. Within this area, the upper channel is mainly hardened in order to protect the parkway, causing increased flow velocity through the lower segment of the reach.

There are a number of water control structures located within this reach, including a 150 metre section of concrete slab channelization, an armourstone revetment, and a concrete weir. There is also a sanitary sewer crossing in the area. Each of these structures are in varying degrees of disrepair and will be addressed individually.

The primary area of concern, referred to as Mile 9.1 by CN Rail, is located on the west bank of the East Don River directly downstream of the hardened section of the channel and within this area there are two large erosion sites that have been documented and monitored extensively since 2005.

Monthly monitoring of the two erosion sites was carried out by TRCA staff from December of 2005 to December of 2006. Further to this, in order to determine the level of urgency for erosion control works required at these sites, TRCA retained the services of Jacques Whitford Environment Limited in July of 2006, to assess the current level of risk to the stability of the existing CN tracks and embankment from riverbank erosion and to provide rationale for the timing of remedial works based on the level of risk identified.

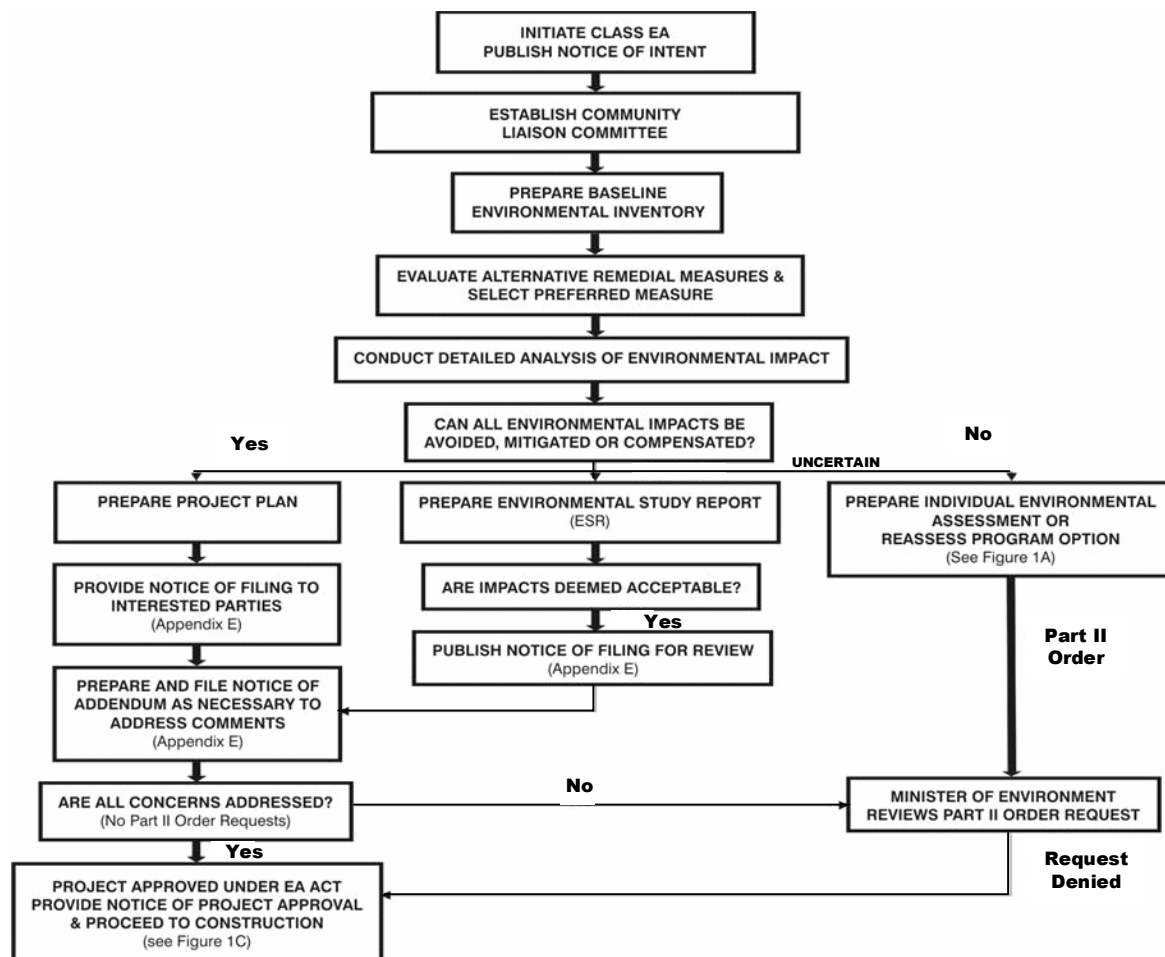
Based on the results of the investigation, Jacques Whitford recommended that consideration be given to conducting remedial works at Erosion Site 1 within the next two to three years, while works should be considered at Erosion Site 2 within the next year or two.

As the result of these findings staff is preparing to initiate a Class EA in order to develop and implement erosion control works at this location, and proposes to carry out the planning and design phases of the project under the *Class Environmental Assessment for Remedial Flood and Erosion Control Projects (2002)*.

RATIONALE

The Class EA approach is required for these projects by the Province of Ontario to ensure a suitable means for the planning of remedial flood and erosion control projects.

The planning and design process of a Class EA project is illustrated below:



FINANCIAL DETAILS

Funding has been identified within the 2007 City of Toronto Valley and Shoreline Regeneration Project budget.

TRCA will be requesting funding assistance or in kind contributions from CN Rail prior to implimenting works.

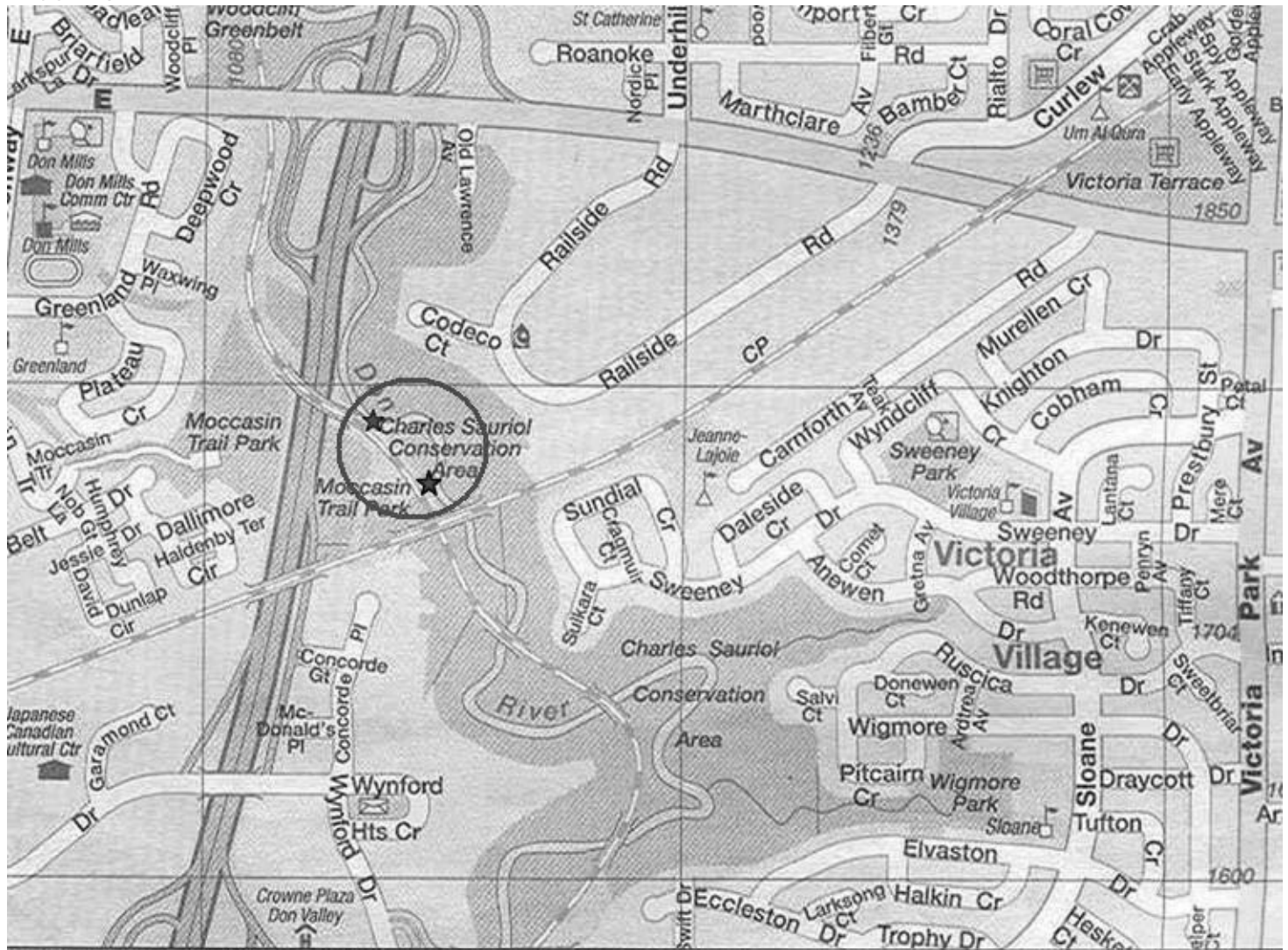
Report prepared by: Patricia Newland, 416-392-9690

For Information contact: Patricia Newland, 416-392-9690

Date: March 30, 2007

Attachments: 1

Attachment 1



TO: Chair and Members of the Watershed Management Advisory Board
Meeting #1/07, April 20, 2007

FROM: Nick Saccone, Director, Restoration Services

RE: **HIGHWAY 10 AND STEELES AVENUE EROSION CONTROL MAINTENANCE PROJECT**

KEY ISSUE

To perform major maintenance on an erosion control structure referred to as the Highway 10 and Steeles Avenue Erosion Control Structure, City of Brampton, under the Regional Municipality of Peel Climate Change Enhancement Projects - 2007.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT subject to the receipt of all required approvals staff be directed to commence major maintenance on the Highway 10 and Steeles Avenue Erosion Control Structure, City of Brampton.

BACKGROUND

Toronto and Region Conservation Authority (TRCA) staff has been annually monitoring the erosion control structures located within the Regional Municipality of Peel since 2005. The structure, called the Highway 10 and Steeles Avenue Erosion Control Structure, has been documented as "at risk of failure" since the initial inspections occurred in 2005. The structure was built on TRCA land by TRCA in 1972.

The structure is an 85 m long, 4 m high, gabion basket retaining wall located within Kiwanis Memorial Park in the City of Brampton. The structure is protecting residential property at the top of the slope from lower bank scour and slumping. There is a large drainage outfall located at the upstream end of the structure, which appears to be contributing to the failure of the retaining wall.

The structure features degradation of the wire and discharge of contents into the water course, indicating that further slumping and possible complete collapse of the retaining wall is inevitable. When the structures fails, it will take out a significant portion of the property at the top of the slope, create risk to the parkland and people visiting the park, as well as causing a very large obstruction in the watercourse through this section of Etobicoke Creek, which could potentially cause problems with the normal conveyance of flow through the area.

DETAILS OF WORK TO BE DONE

Due to the tendency of gabion baskets to degrade at the water/land interface, staff is recommending that the entire structure be removed and replaced with a new structure of armourstone or other more suitable materials.

The following steps will be followed to expedite the implementation of this major maintenance project.

1. survey (Topographic and Archaeological);
2. design planning;

3. submission for, and receipt of, necessary approvals (Fisheries and Oceans Canada, Navigable Waters Protection Act, Ministry of Natural Resources);
4. construction of replacement structure:
 - construct crossing and other site preparation;
 - remove existing structure as per design instructions;
 - replace with armourstone wall or other suitable materials as per design;
 - site cleanup and restoration;
5. perform post construction monitoring to ensure effectiveness of design/installation.

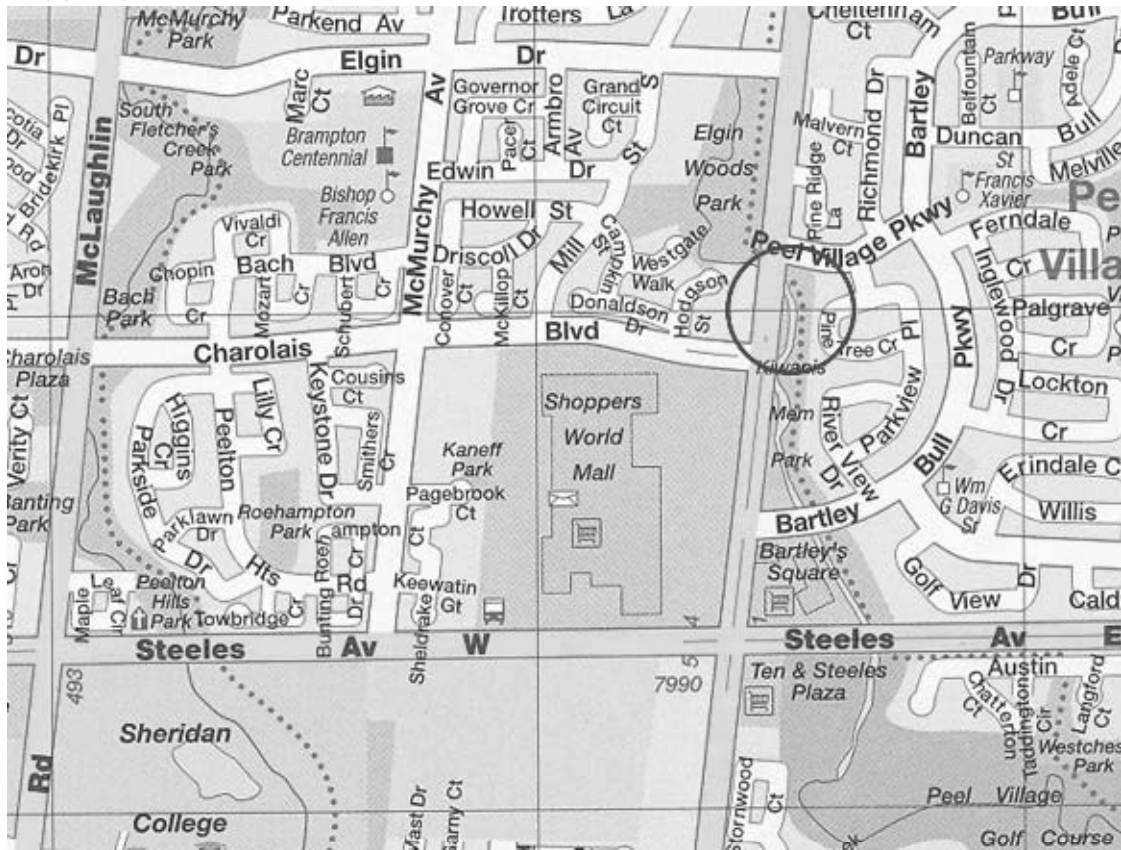
This undertaking will enhance the stability of the slope and ensure ongoing protection to life and property.

FINANCIAL DETAILS

Funding of \$100,000 has been identified for this project in the 2007 Regional Municipality of Peel Climate Change Enhancement Projects budget.

Report prepared by: Patricia Newland, 416-392-9690
For Information contact: Patricia Newland, 416-392-9690
Date: April 02, 2007
Attachments: 1

Attachment 1



TO: Chair and Members of the Watershed Management Advisory Board
Meeting #1/07, April 20, 2007

FROM: Nick Saccone, Director, Restoration Services

RE: **CONSTRUCTION OF EMERGENCY EROSION CONTROL WORKS**
Highland Creek at Morningside Avenue

KEY ISSUE

Approval of the implementation of the final design for proposed channel alterations, including associated pedestrian trail reconstruction.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT staff proceed with the implementation of proposed emergency erosion control works on Highland Creek at Morningside Avenue for the total estimated cost of \$550,000.

BACKGROUND

In January 2005, the City of Toronto Parks, Forestry and Recreation Department identified an eroding pathway in Morningside Park immediately east of the Morningside Avenue Bridge to Toronto and Region Conservation Authority (TRCA) staff. Following a site inspection a detailed survey was carried out by TRCA staff on February 7, 2005, at which time an exposed watermain was discovered in the creek bed below the eroded section of the pathway. TRCA staff notified the City of Toronto Works Department (now Toronto Water) of the problem and informed them that the bank stabilization works to protect the pathway would not be carried out until the exposed watermain was addressed. In addition, staff notified Hydro One of an existing hydro pole at risk, located near the top of bank on the north side of Highland Creek east of Morningside Avenue. Hydro One subsequently relocated the pole. In the interim, TRCA continued ongoing site monitoring, completed the final detailed design and obtained approvals to proceed with the implementation of the bank stabilization work, including reinstatement of the pedestrian trail. Implementation was delayed pending completion of required protection of the exposed watermain by the City of Toronto. The severe flood event of August 19, 2005, and subsequent events resulted in a significant amount of additional damage at the site.

In addition to advancing the erosion of the pathway and further exposing the watermain, extensive erosion occurred around a Morningside Avenue bridge pier and a concrete-encased Bell Canada conduit upstream of the bridge became exposed in the creek. In the months following the flood event, multiple inspections of the site were carried out by various departments within the City of Toronto (Transportation, Toronto Water and Parks), who collectively determined that restoration works should be carried out as a single undertaking.

In April 2006, Toronto Water requested that TRCA serve as project manager for the restoration works at the site. Due to the extensive damage to the infrastructure at this site, City of Toronto staff also declared the restoration works under the City of Toronto's Emergency Protocol.

Although the City of Toronto remains the proponent for the works, TRCA is responsible for managing the services of the consultant, Parish Geomorphic, for the development of the final design, securing all approvals, permits and implementing the restorative works.

Protection of the exposed Bell Canada conduit and temporary channel realignment was recently completed by R&M Construction on behalf of Bell Canada. In addition, the City of Toronto is presently tendering for the protection of the exposed south bridge pier, which is tentatively scheduled to be completed by the end of April, 2007. Following completion of the bridge works, TRCA will commence implementation of the final design for the remainder of the channel protection, pending receipt of all approvals.

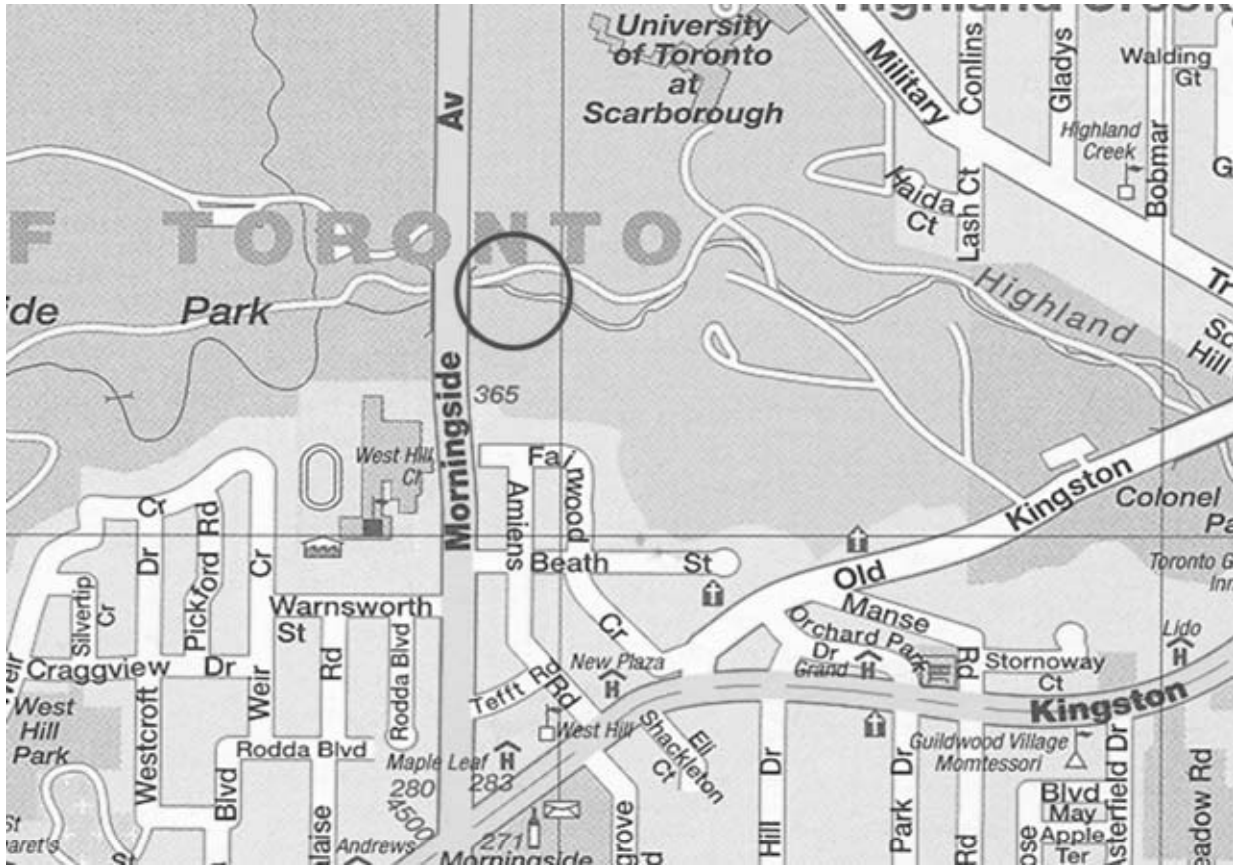
RATIONALE

The purpose of this work is to restore approximately a 200 metre section of the Highland Creek from the existing weir located 90 metres upstream of the Morningside Avenue bridge to a location of approximately 100 metres downstream of the bridge crossing. In addition, work will include reconstruction of a section of damaged asphalt pedestrian trail located on the north bank of the Highland Creek east of the Morningside Avenue bridge. The final detailed design, completed by Parish Geomorphic in consultation with the City of Toronto and TRCA staff will be implemented and managed by the TRCA Restoration Services staff on behalf of the City of Toronto. Work is expected to be completed by the end of August, 2007 assuming commencement of construction activities at the end of April.

FINANCIAL DETAILS

TRCA previously committed \$100,000 from our capital erosion budget towards the bank stabilization component within account code 155-01. This amount will be applied to the total cost of the restoration works. The remaining portion of the cost will be 100% recoverable from the City of Toronto.

Report prepared by: Mark Preston, 416-392-9722
For Information contact: Mark Preston, 416-392-9722
Date: April 02, 2007
Attachments: 1



TO: Chair and Members of the Watershed Management Advisory Board
Meeting #1/07, April 20, 2007

FROM: James W. Dillane, Director, Finance and Business Services

RE: **JEFFERSON'S FOREST MANAGEMENT TRACT**
Advisory Committee

KEY ISSUE

Initiation of the Jefferson's Forest Management Tract Advisory Committee

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT staff be directed to establish an advisory committee, which would include members of the Humber Watershed Alliance, Rouge Park Alliance, interested community groups, business representatives, community residents, agency staff, municipal staff and area councillors, to assist with the development of the Jefferson's Forest Management Plan and to facilitate the opportunity for public input;

AND FURTHER THAT the management plan be brought to the Authority for approval once completed.

BACKGROUND

The Jefferson's Forest Management Tract (JFMT) is approximately 180 hectares of land that straddles the boundary between the Humber River and Rouge River watersheds. It is located between Bethesda Sideroad and Stouffville Road to the north and south, and between Bayview Avenue and Leslie Street to the east and west. The Lake St. George Field Centre is immediately north of the JFMT, and the Oak Ridges Moraine Corridor Park is to the west. The JFMT is located in the Town of Richmond Hill, in the Region of York. JFMT consists of forest and successional forest areas, wetlands and meadows. It provides quality habitat in both the Humber River and Rouge River watersheds, as evidenced by the variety of flora and fauna species of regional concern.

The property is subject to several provincial plans and policies, including the Oak Ridges Moraine Conservation Plan and the Greenbelt Plan. Environmentally Significant Areas (ESAs) and Areas of Natural and Scientific Interest (ANSIs) also exist on the site.

The JFMT provides the opportunity for passive, year-round public use. The property is heavily used by the public currently, with both authorized and unauthorized uses. There is evidence that hikers, mountain bikers, dirt bikers, all terrain vehicles (ATV's), snowmobiles and 4-wheel drive vehicles are using the property.

In connection with the funding for the purchase of the Bayview Oakridges Estates Inc property, Toronto and Region Conservation Authority (TRCA) received funding from the Town of Richmond Hill, the Region of York, the Oak Ridges Moraine Foundation, the City of Toronto and The Conservation Foundation of Greater Toronto in the amount of \$40,000 to develop a management plan for the Jefferson's Forest complex.

To develop the management plan, staff will use the TRCA model process that has been successfully used at other TRCA properties. The four phases of work will include:

Phase 1 - estimated completion fall 2007:

- establishment of a technical committee;
- site protection and securement plan.

Phase 2 - estimated completion winter 2007/2008:

- natural and cultural heritage inventories of the property;
- establishment of an advisory committee;
- develop plan vision, goals and objectives;
- complete management plan background report for the property;
- public consultation.

Phase 3 - estimated completion summer 2008:

- develop draft management zones for the property;
- draft management recommendations;
- public consultation.

Phase 4 - estimated completion December 2008:

- finalize management zones;
- finalize management recommendations;
- public information session.

RATIONALE

It is an appropriate time to complete a management plan for the property, as TRCA has received funding to develop a plan and there is no current plan in place. The forest is encountering many stresses with recent and proposed urban development. In addition, with the projected population growth in the Town of Richmond Hill and the Region of York, the Jefferson's Forest Management Tract will likely become an even more popular environmental and outdoor recreation area, requiring a plan that can address future public use demands and enhanced environmental protection. The plan will integrate the Oak Ridges Corridor Park Management Plan that was recently completed and will integrate with implementation initiatives. Furthermore, it is necessary to prepare a comprehensive and integrated management plan for the property that can respond to the changes in the availability of public funds and evolving concepts in conservation and sustainability, and move TRCA towards its goal for The Living City - a vision for healthy communities based on a healthy ecosystem.

The management plan will complement a number of TRCA initiatives, including:

- The Living City vision;
- Terrestrial Natural Heritage System Strategy;
- Legacy: A Strategy for a Healthy Humber;
- Rouge Park North Management Plan.

The goal of the Jefferson's Forest Management Tract Management Plan process will be to protect, conserve and manage the property within an ecosystem framework, and in consultation with the community ensuring watershed health, public enjoyment and environmental sustainability.

Staff has recommended the establishment of an advisory committee to provide an integrated approach to the development of the management plan. The committee will assist with determining the management zones and management recommendations, and provide direction and comment on the public use development and restoration plans.

TRCA will select and invite agency and community representatives to be members of the advisory committee for the duration of the project. Suggested advisory committee representatives could include:

- TRCA – Authority Member and staff;
- Town of Richmond Hill – Councillor and staff;
- Region of York – Councillor and staff;
- Rouge Park Alliance – Member and staff;
- Ministry of Natural Resources;
- Richmond Hill Naturalists;
- Citizens Environment Watch;
- Humber Watershed Alliance;
- Ontario Realty Corporation;
- Humber Valley Heritage Trail Association;
- Oak Ridges Moraine Trail Association;
- Oak Ridges Moraine Foundation;
- Oak Ridges Moraine Land Trust;
- Save the Oak Ridges Moraine;
- Oak Ridges Friends of the Environment;
- Diamond Back Golf Course;
- User groups, including mountain bikers;
- Local ratepayers groups;
- Representatives from local schools and school boards;
- Major area landowners, including developers;
- Community residents; and,
- Local business representatives.

DETAILS OF WORK TO BE DONE IN 2007

Phase 1;

- establishment of a technical committee;
- site protection and securement plan;

Phase 2;

- develop a project Terms of Reference, which will include the scope of work responsibilities and projected timelines;
- complete background report, including natural and cultural heritage inventories;
- establishment of an advisory committee;
- public consultation.

It is anticipated that the management plan will be completed by December 2008 and brought back to the Authority for approval.

FINANCIAL DETAILS

Provision for the development of a management plan for the Jefferson's Forest Management Tract has been included in TRCA's 2007 Capital Budget under account 408-38.

Report prepared by: April Mathes, extension 5320

For Information contact: Mike Bender, extension 5287 or April Mathes, extension 5320

Date: March 26, 2007

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #1/07, April 20, 2007

FROM: James W. Dillane, Director, Finance and Business Services

**RE: GLEN MAJOR FOREST AND WALKER WOODS STEWARDSHIP
COMMITTEE**
Terms of Reference

KEY ISSUE

Approval of Terms of Reference for the Glen Major forest and Walker Woods Stewardship Committee.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT the Terms of Reference for the Glen Major Forest and Walker Woods Stewardship Committee be approved;

AND FURTHER THAT all members of the Glen Major Forest and Walker Woods Stewardship Committee and the Duffins and Carruthers Watershed Resource Group be so advised.

BACKGROUND

At Authority Meeting #6/03, held on July 25, 2003, Resolution #A158/03 was approved, in part, as follows:

THAT the Duffins Creek Headwaters Management Plan for TRCA Properties, dated June 2003, as attached, be approved;...

One of the key recommendations of the Duffins Creek Headwaters Management Plan was the development of a stewardship committee to assist with the implementation of the management plan. The role of the committee should include:

- reviewing all proposed public uses and related activities for the property;
- working with TRCA in raising funds to implement site development, maintenance, environmental protection and restoration activities.

Upon completion of the plan, TRCA staff worked with interested community members and established a stewardship committee for the Glen Major Forest and Walker Woods properties, including the Brock tract, Dagmar lands and Wilder Forest and Wildlife Area. Altogether these lands total more than 1,500 hectares of TRCA-owned land on the Oak Ridges Moraine.

The stewardship committee consists of approximately 20-30 members, and includes trail captains, area landowners, representatives from user groups (including hiking, biking and equestrian), and representatives from a variety of groups and agencies, including municipalities, the Oak Ridges Trail Association and the Durham Conservation Association among others. These members have been working actively for the last two years, but the committee has not yet been formalized. The adoption of the Terms of Reference will assist in formalizing the committee's mandate and organization.

RATIONALE

Implementation of the *Duffins Creek Headwaters Management Plan for TRCA Properties* (2003), *A Watershed Plan for Duffins and Carruthers Creek* 2003 and the *Fisheries Management Plan for Duffins Creek and Carruthers Creek* (2004) will continue to be assisted by the Glen Major Forest and Walker Woods (GMWW) Stewardship Committee. They will also continue to provide a forum for public input and help TRCA determine priority implementation actions as set forth in the aforementioned plans.

Area landowners, user group representatives, community groups and organizations compose the GMWW Stewardship Committee. User group representatives are essential in communicating with their respective communities to educate and engage them in positive land use practices for their activities, as well as presenting the concerns and needs of those communities back to the stewardship committee. This approach is instrumental in creating an inclusive atmosphere at the stewardship committee, has resulted in improved user relations on the property and has successfully raised plan implementation funds. Successful collaboration can benefit a significant natural area and the GMWW Stewardship Committee is an excellent example of such success.

DETAILS OF WORK TO BE DONE

The GMWW Stewardship Committee will:

- Make recommendations regarding the prioritization and implementation of the *Duffins Creek Headwaters Management Plan for TRCA Properties*, *A Watershed Plan for Duffins Creek and Carruthers Creek* and the *Fisheries Management Plan for Duffins Creek and Carruthers Creek* (2004). The recommendations must be consistent with the objectives of TRCA and must assist TRCA in reaching prescribed targets as set forth in the watershed plan.
- Make recommendations to TRCA on modifications or updates to the *Duffins Creek Headwaters Management Plan for TRCA Properties*.
- Identify and enhance relationships with the Glen Major and surrounding area communities through the development of public awareness and stewardship programs.
- Develop and establish communications links with the community and the municipality.
- Participate in activities such as:
 - natural area enhancements including tree plantings and wetland buffers;
 - trail construction and maintenance;
 - identification and management of non-native, invasive species;
 - public use and natural heritage monitoring; and
 - property cleanup events.
- Undertake other activities which support the management plan and TRCA

Specific projects that the GMWW Stewardship Committee will be involved with in 2008 include:

- trail development and restoration;
- habitat creation through site rehabilitation;
- invasive species management.

FINANCIAL DETAILS

TRCA will provide a staff contact to act as a liaison between TRCA and the Glen Major Forest and Walker Woods Stewardship Committee. The TRCA liaison will also facilitate any technical reviews or formal approvals that are required before commencement of a project.

Project support has been budgeted as part of management plan implementation under account 408-96.

Report prepared by: April Mathes, extension 5320

For information contact: Mike Bender, extension 5287 or April Mathes, extension 5320

Date: March 30, 2007

Attachment s: 1

Glen Major Forest and Walker Woods Stewardship Committee
TERMS OF REFERENCE

1 INTRODUCTION

In 1999, Toronto and Region Conservation (TRCA) initiated the preparation of a management plan for a complex of properties in the Duffins Creek watershed, including Glen Major Resource Management Tract, Walker Woods Tract, Goodwood Resource Management Tract, Secord Forest and Wildlife Area, Clubine Agreement Forest, the Former Timber Brother Gravel Pit and the Claremont Field Centre. TRCA worked in partnership with Durham Region, the Township of Uxbridge, the City of Pickering, the Ontario Heritage Trust, the Duffins Creek Headwaters Management Plan Advisory Committee and the community to prepare the Duffins Creek Headwaters Management Plan for TRCA Properties.

At Authority Meeting #6/03, held on July 25, 2003, Resolution #A158/03 was approved, in part, as follows:

THAT the Duffins Creek Headwaters Management Plan for TRCA Properties, dated June 2003, as attached, be approved;

One of the key recommendations of the Duffins Creek Headwaters Management Plan was the development of two stewardship committees, one for the East Duffins Creek and one for the West Duffins Creek, to assist with the implementation of the management plan. The committees should “assist with the review of all proposed public uses and related activities for the property.... Assist with all specific aspects such as trail, education and communications... assist TRCA in raising funds to implement site development, maintenance, environmental protection and restoration activities.”

2 GLEN MAJOR FOREST AND WALKER WOODS

The Glen Major Forest and Walker Woods property complex is more than 1,500 hectares composed of the Glen Major Resource Management Tract at 1,081 hectares, the Walker Woods Tract at 429 hectares and the former Timber Brothers gravel pit at 38 hectares.

These lands are located in the headwaters of the Duffins Creek watershed within the Township of Uxbridge. TRCA owns all of the lands with the exception of 72 hectares in the Glen Major Resource Management Tract, which is owned by Ontario Heritage Trust and managed by TRCA. The properties are situated within the southern portion of the Great Lakes-St Lawrence floristic region, which is composed of mixed coniferous-deciduous forest. In addition, the properties stretch across the Oak Ridges Moraine physiographic region, which is made up of sand and gravel soils and is characterized by rolling hills, kames and kettles. The lands also contain groundwater discharge areas in the form of springs, seeps and marshy areas that support high quality cold water fish habitat.

The Duffins headwater properties are some of the most naturally diverse in the TRCA jurisdiction, supporting over 120 different vegetation communities, 573 vascular plant species and 107 different fauna species. With respect to conservation status, over 50 vegetation communities, 150 flora species and 51 fauna species are considered to be of concern within the TRCA jurisdiction. The natural habitats range from mature, organic coniferous swamps, to near-old growth upland deciduous and mixed forests, conifer plantations, and dry, open, prairie-like communities with complexes of sand barrens. The properties are also significant for their representative contiguous natural cover and extensive interior forest conditions within the TRCA jurisdiction.

The Glen Major Forest and Walker Woods properties contain an Environmentally Sensitive Area (#111, the Uxbridge Forest Kames), Areas of Natural and Scientific Interest (Earth Sciences – Uxbridge Forest Kames, Candidate Life Sciences – Uxbridge – Glen Major Forests) and Provincially Significant Wetlands (Glen Major Wetland Complex).

3 MANAGEMENT PLAN

In 1999, TRCA initiated the preparation of a management plan for the Glen Major Forest and Walker Woods properties (GMWW). As a part of the process for developing the plan, TRCA prepared the *Phase 1 Reference Document In Preparation of a Management Plan for Goodwood, Secord, Clubine, Walker Woods, Glen Major, Timber Brothers, and Claremont*, dated February 2000, that details the current knowledge about the properties. This report was reviewed by TRCA staff and the Duffins Creek Headwaters Management Plan Advisory Committee.

The *Duffins Creek Headwaters Management Plan for TRCA Properties* contains the following:

- a brief description of the property and the management planning process;
- vision, goals, objectives and principles;
- management zone delineation;
- management recommendations;
- concept plans;
- trail plans; and
- implementation guidelines.

The following vision statement was developed for TRCA properties in the Duffins Creek Headwaters, and should guide all current and future actions.

The Toronto and Region Conservation Authority properties in the Duffins Creek Headwaters, which contain diverse ecosystems, abundant wildlife and spectacular vistas, will become a model for private and public land stewardship. The various TRCA properties will be integrated and expanded through donations, land purchases, conservation easements and planning incentives to protect, conserve and improve ecological integrity. The properties will be carefully managed and monitored to ensure sustainability and adherence to conservation principles. Appropriate public use and environmental awareness will be promoted and managed with a balanced approach.

The *Duffins Creek Headwaters Management Plan for TRCA Properties* will guide GMWW for the next 25 years, with regular reviews and updates conducted every five to seven years. Through diligent implementation of this plan, GMWW will be further enhanced as a valuable environmental, recreational and educational resource for residents of the Greater Toronto Area.

4 COMMUNITY STEWARDSHIP COMMITTEE

The Glen Major Forest and Walker Woods Stewardship Committee will work with TRCA to implement the *Duffins Creek Headwaters Management Plan for TRCA Properties* and the relevant objectives that are set out in the watershed plan for the Duffins and Carruthers Creek watersheds. The following details the composition of the committee, basic operating procedures and responsibilities.

4.1 MANDATE

The Glen Major Forest and Walker Woods Stewardship Committee will assist TRCA: in implementing the *Duffins Creek Headwaters Management Plan for TRCA Properties, A Watershed Plan for Duffins Creek and Carruthers Creek* and the *Fisheries Management Plan for Duffins Creek and Carruthers Creek*, provide a forum for public input; and help TRCA determine priority implementation actions as set forth in the plan. In addition, the Glen Major Forest and Walker Woods Stewardship Committee will participate in partnership projects led by Durham Region, the Township of Uxbridge and the City of Pickering.

The GMWW Stewardship Committee will:

- Make recommendations regarding the prioritization and implementation of the *Duffins Creek Headwaters Management Plan for TRCA Properties, A Watershed Plan for Duffins Creek and Carruthers Creek* and the *Fisheries Management Plan for Duffins Creek and Carruthers Creek*. The recommendations must be consistent with the objectives of TRCA and must assist TRCA in reaching prescribed targets as set forth in the watershed plan.

- Make recommendations to TRCA on modifications or updates to the *Duffins Creek Headwaters Management Plan for TRCA Properties*.
- Identify and enhance relationships with the Glen Major and surrounding area communities through the development of public awareness and stewardship programs.
- Develop and establish communications links with the community and the municipality.
- Participate in activities such as:
 - natural area enhancements such as tree plantings and wetland buffers;
 - trail construction and maintenance;
 - identification and management of non-native, invasive species;
 - public use and natural heritage monitoring; and
 - property cleanup events.
- Undertake other activities which support the management plan and TRCA.

4.2 MEMBERSHIP

Membership will be open to any interested party or individual committed to the protection of the natural environment. Membership will be based on individual or agency interest and with a commitment to the mandate of the Glen Major Forest and Walker Woods Stewardship Committee. Interviews of potential members at large may be undertaken if there is interest beyond the maximum membership numbers. Participation will be voluntary and without compensation.

All stewardship committee meetings are open to the public.

4.2.1 GROUP AND AGENCY REPRESENTATIVES

The membership of the GMWW Stewardship Committee will be as follows:

- Trail captains for all of the zones in GMWW (8).
- Members at large, including representatives for each of the major user groups (8):
 - bicycling;
 - equestrian;
 - hiking.
- Group or agency representation (see list below).

Each of the above will be a voting member. It is anticipated that decisions will be made by consensus of the members present. Representatives of agencies and user groups are expected to represent the interests of their organizations or communities to the best of their abilities. Invitations to members of the public to join will be made to fill the members-at-large positions.

TRCA shall have the authority to designate or remove members of the stewardship committee.

The GMWW Stewardship Committee members may designate an alternate to ensure attendance and representation at meetings. Members who do not wish to attend meetings cannot vote by proxy.

The following groups and agencies have been, or will be, invited by TRCA to join, or are currently members of the Glen Major Forest and Walker Woods Stewardship Committee and may constitute voting members (see structure):

- TRCA Chair (Ex-officio);
- Durham Region staff;
- Township of Uxbridge staff;
- City of Pickering staff
- Elected officials representing Durham Region, the Township of Uxbridge and the City of Pickering;
- Local members of provincial and federal parliament;
- Ontario Heritage Trust;
- Durham Conservation Association;
- Oak Ridges Trail Association;
- Mountain bicycling community, currently represented by the Durham Mountain Bicycling Association and Chico Racing;
- Equestrian community, currently represented by the Uxbridge Horsemen's Association;
- Uxbridge Watershed Committee;
- Uxbridge Naturally
- Duffins Creek Watershed Specialist

4.2.3 TRCA STAFF

The TRCA staff liaison will attend all Glen Major Forest and Walker Woods Stewardship Committee meetings. In addition, TRCA technical staff will be invited to attend the meetings, as the agenda requires.

4.3 *GROUP ORGANIZATION*

The purpose of full stewardship committee meetings shall be to inform committee members on recent developments, hear and comment on actions taken by the Executive Committee and sub-committees, seek input on issues, take suggestions on new initiatives, and host presentations and speakers on relevant issues.

The Chair will be elected by the voting members of the Glen Major Forest and Walker Woods Stewardship Committee. The Chair should have at least one year experience as a member of the Glen Major Forest and Walker Woods Stewardship Committee. It is preferred that the Chair be a member of the public and not a representative from an agency.

The stewardship committee will also elect a Vice Chair and a Secretary. All other representatives on the Executive Committee (see below) will be designated by their respective user groups or the stewardship committee as a whole. TRCA staff will not stand for the positions of Chair or Vice Chair.

Elections for the Chair, Vice Chair and Secretary positions will take place on alternate years. The Vice Chair will not be considered an automatic successor for the Chair. Responsibilities of the Chair include chairing the stewardship committee meetings and setting the agenda. The Vice Chair will be responsible for the Chair's tasks in absence of the Chair. The Secretary is responsible for recording minutes of the Glen Major Forest and Walker Woods Stewardship Committee meetings.

Due to the large size of the stewardship committee, an Executive Committee shall be formed. The Executive Committee will be composed of up to eight members and shall include, at a minimum, the Chair, Vice Chair, Secretary and one representative from each of the major user groups.

The executive committee will meet regularly and will be authorized to carry out the mandate of the stewardship committee. Their duties will include researching, developing solutions and taking actions on issues that are before the stewardship committee. The Executive Committee may invite experts in as needed. The Executive Committee may also be assembled as needed to address issues that are time-sensitive or that do not require input from the entire stewardship committee. All decisions that are made by the Executive Committee will be communicated to the stewardship committee.

4.4 TERM LENGTH

Membership includes a two year commitment to the Glen Major Forest and Walker Woods Stewardship Committee. An individual's term can be renewed for up to five consecutive terms, resulting in a maximum service of ten consecutive years. This will be consistent with review and update of the *Duffins Creek Headwaters Management Plan for TRCA Properties* as prescribed in the management plan.

The appointment of the Chair shall be for two years. The Chair shall be eligible for re-appointment.

4.5 RULES OF CONDUCT

The Glen Major Forest and Walker Woods Stewardship Committee will follow TRCA's Rules of Conduct as adopted by Resolution #34 at Authority Meeting #2/86, held on March 21, 1986, and as amended periodically.

The Glen Major Forest and Walker Woods Stewardship Committee is not a formal commenting body of TRCA. The group will develop and make recommendations to TRCA that assist with the development and implementation of the *Duffins Creek Headwaters Management Plan for TRCA Properties* and *A Watershed Plan for Duffins Creek and Carruthers Creek*. TRCA staff will advise the Glen Major Forest and Walker Woods Stewardship Committee of TRCA projects planned or undertaken within the area of GMWW, and of major planning initiatives or projects of other agencies where TRCA may be a commenting or permitting body.

4.5.1 ISSUE RESOLUTION PROCEDURES

All issues will be resolved through agreement by consensus of the Glen Major Forest and Walker Woods Stewardship Committee. However, if an issue cannot be resolved, there will be a majority vote taken.

TRCA is responsible for ultimate decision-making and, where disagreement occurs, stewardship committee members are welcome to make delegations to TRCA's boards.

4.5.2 MEETING FREQUENCY

The Glen Major Forest and Walker Woods Stewardship Committee will meet a minimum of four times per year. Meetings shall only be scheduled when there is sufficient business to justify the meeting. A meeting may be cancelled on the authority of the Chair for cause (e.g. a major snowstorm). The date of the next meeting should be set at each meeting, or at the call of the Chair.

The Executive Committee will meet a minimum of four times per year, with more regular meetings being held as needed. The Executive Committee may meet or make decisions via phone or electronic mail as needed, with all decisions being communicated back to the stewardship committee.

4.6 ADMINISTRATIVE AND TECHNICAL SUPPORT

TRCA will provide administrative support in the operation of the Glen Major Forest and Walker Woods Stewardship Committee to the Chair, Vice Chair and Secretary.

TRCA will provide a staff contact to act as a liaison between TRCA and the Glen Major Forest and Walker Woods Stewardship Committee. The TRCA liaison will also facilitate any technical reviews or formal approvals that are required before commencement of a project. Project support will be dependent on the limits of TRCA resources.

4.7 *COMPENSATION*

Committee members shall receive no financial compensation. If appropriate, members reasonable 'out of pocket' expenses may be reimbursed solely at the discretion of TRCA.

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #1/07, April 20, 2007

FROM: Deborah Martin-Downs, Director, Ecology

RE: **FULFILMENT OF OAK RIDGES MORAINÉ CONSERVATION PLAN
WATERSHED PLANNING REQUIREMENTS**

KEY ISSUE

Approval of the Oak Ridges Moraine Conservation Plan conformity assessments and approval to use the watershed planning documents referenced in the conformity assessments (Attachments 1, 2 and 3) in the review of major development proposals on the Oak Ridges Moraine.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT the conformity assessment for the Duffins Creek Watershed Plan in Attachment 1 and the watershed planning documents referenced in the conformity assessment be deemed to fulfil the watershed planning requirements of the Oak Ridges Moraine Conservation Plan (ORMCP; 2002) and be approved for use in the review of major development proposals on the Oak Ridges Moraine in the Duffins Creek watershed;

THAT the conformity assessment for the Rouge River Watershed Plan in Attachment 2 and the watershed planning documents referenced in the conformity assessment be deemed to fulfil the watershed planning requirements of the Oak Ridges Moraine Conservation Plan (ORMCP; 2002) and be approved for use on an interim basis in the review of major development proposals on the Oak Ridges Moraine in the Rouge River watershed until such time as a final watershed plan is brought back to the Authority for approval;

THAT the conformity assessment for the Don River Watershed Plan in Attachment 3 and the watershed planning documents referenced in the conformity assessment be deemed to fulfil the watershed planning requirements of the Oak Ridges Moraine Conservation Plan (ORMCP; 2002) and be approved for use on an interim basis in the review of major development proposals on the Oak Ridges Moraine in the Don River watershed until such time as a final watershed plan is brought back to the Authority for approval;

THAT staff report back to the Authority in June 2007 on the conformity assessment for the Humber River Watershed Plan;

THAT staff be directed to continue to work toward the timely completion of watershed planning documents for the Rouge, Don and Humber River watersheds including adequate opportunities for public and stakeholder consultation;

THAT staff work with watershed municipalities to coordinate ongoing planning initiatives, including growth planning and source water protection planning, with the finalization of watershed plans;

THAT staff report back at the earliest possible opportunity on the completion of each of the remaining watershed plans and with a progress report in September 2007;

AND FURTHER THAT the regional and local watershed municipalities and the Conservation Authorities Moraine Coalition be so advised.

BACKGROUND

ORMCP Watershed Planning Requirements

The watershed planning requirements of the *Oak Ridges Moraine Act* and sections 24 and 25 of the *Oak Ridges Moraine Conservation Plan* (ORMCP) require municipalities to:

- Initiate the preparation of watershed plans by April 22, 2003 for each watershed, whose streams originate on the Oak Ridges Moraine (ORM);
- Incorporate the watershed plan's requirements into the municipal official plan; and
- Ensure all major development commenced on, or after, April 23, 2007 conforms with the completed watershed plan, otherwise the major development (i.e. 4 lots or greater; 500 m² (5000 ft²) or greater; or major recreational use) cannot be approved.

Late in 2006, regional municipal staff sought clarification from the province regarding the approval process for 'completed' watershed plans, with respect to the April 23, 2007 deadline. Correspondence from staff at the Ministry of the Environment indicated that the province has no intent of reviewing final watershed plans and that the municipalities are responsible for determining when a watershed plan is completed. Through discussions among regional and conservation authority staff, regional staff has asked that conservation authority boards review and endorse the completed watershed plans and confirm fulfilment of the ORMCP, as one step in the process of confirming that overall requirements of the ORMCP have been satisfied. Regional staff will have the option of taking full reports on the final watershed plans to their committees and councils in fall 2007, once they can report on the plans' implications in relation to growth planning and other major initiatives.

The regional municipalities of Peel and York have requested the province grant a one year extension of the ORMCP's implied deadline for the completion of watersheds plans, on the basis that the province's technical guidelines supporting the ORMCP have not yet been finalized and the municipalities need additional time to understand the watershed plan's implications in relation to provincial growth planning and other major initiatives that have emerged since the ORMCP was introduced. Similarly, the Regional Municipality of Durham has requested a two year extension.

At the time of writing, the province had not yet responded to the regions, and therefore staff is taking a conservative approach by preparing this report on the assumption that the province will not grant an extension. A common 'conformity assessment' form was developed by Toronto and Region Conservation Authority (TRCA) staff, in cooperation with regional staff and staff from neighbouring conservation authorities for use in summarizing how each watershed plan addresses the ORMCP requirements. This form is used as the basis for this report.

Watershed Planning Work program

Shortly after the release of the ORMCP, the regional municipalities of Peel, York and Durham expressed interest in working with TRCA on the fulfilment of the ORMCP's watershed planning requirements, in recognition of long-established partnership in watershed management.

There are four watersheds draining the Oak Ridges Moraine in TRCA's jurisdiction: Humber River, Don River, Rouge River and Duffins Creek. A state of the art watershed plan for the Duffins Creek watershed was just completed as the ORMCP was released and, following review by TRCA and Regional Municipality of Durham staff, was considered to provide adequate direction to meet the intent of the ORMCP. Watershed management strategies had previously been prepared for the Rouge River (MTRCA, 1990), Don River (TRCA, 1994), and Humber River (TRCA, 1997), and therefore watershed planning activities were deemed to have been initiated and ongoing for these watersheds, as per the ORMCP requirement. However, updates were needed to reflect new information and fill gaps.

The Regional Municipality of York, Regional Municipality of Peel and City of Toronto entered into five year capital work programs with TRCA in 2003 to develop updated plans for the Humber, Don and Rouge River watersheds, particularly with an aim to fulfil the watershed planning requirements of the ORMCP. At Authority Meeting #7/03, held on September 26, 2003, Resolution #A196/03, regarding an overall workplan and schedule for this work, was approved as follows:

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

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

This 'generic' workplan was developed jointly with the regions and neighbouring conservation authorities, such that all ORM watershed plans would follow a consistent process. The workplan outlined a common three-phased approach to watershed planning, including:

- 1) initial workplan scoping and characterization of current conditions;
- 2) analysis of current and potential future stresses on the watershed and evaluation of various management strategies; and
- 3) preparation of the watershed management plan and implementation framework.

Opportunities for public and stakeholder consultation throughout the process were recognized as an essential component of the work program. The scope of technical study components addressed the core ORMCP requirements (e.g. water, natural heritage) and acknowledged that 'other' study components such as cultural heritage and nature-based recreation may be included to address local watershed interests and issues.

Based on the generic workplan outline, TRCA staff prepared tailored work plans and schedules for each watershed with input from watershed municipalities and stakeholders. TRCA has been committed to be a leader in advancing the science of integrated watershed planning in order to produce state-of-the-art watershed planning products that will provide a sound basis for effective management decisions. Some of the innovative aspects of this work include:

- modelling and analysis of the watershed's response to future land use and management scenarios, including various extents and forms of urban growth, stormwater retrofits, expanded natural cover and climate change;
- an integrated, interdisciplinary analysis that has improved understanding of the watershed system and its sensitivities (e.g. interaction of surface and groundwater; effects of terrestrial natural heritage on hydrology, etc.);
- development and application of linked modelling tools to support the above-noted analysis;
- development of a science-based methodology for prioritization of regeneration actions;
- social marketing studies in support of more strategic implementation recommendations for lot level practices in business and residential sectors;
- development of an implementation guide to accompany the watershed plan, including a policy component that will assist municipal planners in applying the plan's science and strategic recommendations; and
- ongoing commitment to community engagement in the planning process.

In 2005, the province released a series of draft technical guidelines addressing various aspects of the ORMCP, including one on watershed planning. TRCA and regional staff reviewed and submitted comments on the guidelines. The watershed planning guidelines, while quite general, do seem to advocate for the same planning process that TRCA and its partners had previously outlined and were following. The provincial guidelines have yet to be finalized.

Fulfilment of ORMCP

The ORMCP's watershed planning requirements mainly involve the characterization of the watershed's water budget, surface and ground water flow systems and natural heritage and determination of appropriate land and water use management strategies and criteria to protect these resources.

A watershed study for the Duffins Creek watershed had been initiated prior to the release of the ORMCP and, when that plan was completed in 2003, it was considered to provide state-of-the-art management direction in keeping with the principles and needs of the ORMCP. Work on the Rouge, Don and Humber watershed plans has been generally progressing according to the work plans, such that the technical information and direction necessary to fulfil the ORMCP requirements has been completed. However, there have been delays (explained below), which have meant that there has not been adequate time to complete meaningful public consultation and the final documentation for these all watershed plans.

Staff has prepared 'conformity assessments' for the Duffins, Rouge and Don watersheds summarizing how each watershed planning study has addressed the ORMCP requirements and identifying the appropriate *draft* or *final* document references of where the information can be found (see Tables 1-3).

A conformity assessment for the Humber watershed will be reported back at the Authority's June meeting, to allow municipal staff the opportunity to review the first full draft watershed plan. Unlike the Rouge watershed, where an initial round of consultation has taken place, the Humber planning study schedule has followed the Rouge and subsequently has only very recently completed the first draft plan. Peel and York municipal staff has expressed preference for this timing.

Staff feel confident that the information and management direction contained in the draft watershed planning documents has an adequate scientific basis to allow municipal and TRCA staff to begin to use this information in the review of major development applications, if any such applications are submitted after April 23, 2007 and before final watershed planning documents can be brought back for approval by the Authority.

The watershed plans provide updated technical information about existing conditions and systems in the watershed that is unlikely to change substantively as the plans are finalized. Many of the management recommendations are not new, but rather endorse the continuation of accepted practice using the updated technical information. New approaches are being recommended in the following areas:

- the need to protect and expand natural cover in the watersheds, as an integral component of the water management strategy and also to achieve objectives for biodiversity;
- the need to manage water balance, particularly as part of community planning and stormwater management designs. Community designs that minimize impervious surfaces and incorporate innovative stormwater management techniques will be needed to mitigate impacts on pre-development rates of infiltration, evapotranspiration and surface runoff; and
- the need to design and build more sustainably in greenfield developments, redevelopments and retrofits, by addressing a range of objectives including those noted above.

It should also be recognized that the watershed plans are providing guidance at watershed and subwatershed scales of detail. This information represents a valuable contribution and context, which will assist development proponents. However there will still be further study requirements and planning refinements to be carried out by proponents at the site scale.

Interim approval to use the draft watershed planning documents will allow TRCA and municipal staff to work cooperatively with development proponents on the early stages of implementation. Lessons learned from these experiences can be considered and incorporated into the final watershed planning and implementation documents.

There are various reasons for the delays in the studies, specific to each watershed plan, but generally include: modelling study complexities; time required to carefully ensure sound science; study modifications and adjustments in response to major provincial planning initiatives (i.e. Greenbelt Plan, Places to Grow Plan, Clean Water Act); capital budget deferrals, and loss of certain staff resources due to job changes. Much of the work involved in these watershed plans is leading edge science and in some cases being tested for the first time. The additional time taken will help ensure a defensible product.

Delay in the completion of watershed plans is beneficial in some respects, in that it will allow municipal and TRCA staff an opportunity to incorporate growth planning considerations into the watershed plans. This will make the watershed plans all the more valuable and relevant for the municipalities, who are actively embarking on growth plan initiatives in response to the provincial *Places to Grow* plan.

Watershed Planning Status

The following sections report on the progress and status of each of the specific watershed plans.

Duffins Creek Watershed (Attachment 1)

- Watershed plan and supporting technical documents completed in 2003.

Rouge River Watershed (Attachment 2)

- Final draft watershed plan delivered by Rouge Watershed Task Force November 30, 2006.
- Authority approval on January 5, 2007 to proceed to finalize all background technical reports, undertake public consultation and report back in April 2007 with final watershed plan.
- Background technical report finalization has taken longer than expected, due in part to staff loss and a concurrent staff focus on completion of the draft Humber watershed plan.
- All background reports and final draft watershed plan expected to be released for consultation in May 2007.
- Draft implementation guide also to be the subject of consultation and further development expected to start in May 2007.
- Aim to report back to Authority with final Rouge River Watershed Plan in fall 2007, pending comments received and the extent of work to relate the plans to growth planning initiatives.

Don River Watershed (Attachment 3)

- TRCA deferred the City of Toronto portion of the 2006 budget to 2007, which was accommodated in the work schedule by extending the completion of the full watershed plan until end of 2007.
- An interim ORM report for the Don watershed, *Conformity with sections 24 and 25 of the ORMCP*, was drafted in early 2006, which characterized the ORM subwatersheds in the Don and concluded there were no further opportunities for major development due to the advanced stage of development and/or development planning processes in this watershed.
- The interim ORM report and selected other reference documents contain adequate information to fulfil the ORMCP requirements, should there emerge a new opportunity for major development or redevelopment in this watershed.
- Active work is underway on the development of an updated Don watershed plan by end of 2007, with an emphasis on setting regeneration project priorities and re-engaging watershed stakeholders.

Humber River Watershed (conformity assessment to be reported at June 2007 meeting)

- First full draft watershed plan to be released for consultation period in May 2007.
- Preliminary consultation with watershed municipalities was held on March 30, 2007 on draft plan recommendations.
- Background technical reports and draft implementation guide expected to be available for review concurrent with and following the release of the watershed plan.

- Aim to report back to Authority with final Humber River watershed plan in fall 2007, pending comments received and the extent of work to relate the plans to growth planning initiatives.

DETAILS OF WORK TO BE DONE

As noted above, consultation with Humber municipalities on the first draft watershed plan and conformity assessment is to be carried out and a report brought back for interim approval in June 2007.

Further broad consultation must be conducted on the Rouge and Humber watershed plans and in the development of the full Don watershed plan. All watershed planning technical documentation must be finalized. As watershed plans are finalized, separate, full reports will be brought to the Authority outlining new findings and management directions for each watershed. The reports will verify the ORMCP conformity assessment.

An important aspect of consultation on the final draft watershed plans will involve working closely with the municipalities to ensure a full understanding of the implications and relationships between the watershed plans and growth plans, as well as other planning initiatives.

FINANCIAL DETAILS

Funding for the watershed planning studies was provided by the Regional Municipality of Peel, Regional Municipality of York and City of Toronto as part of the municipal capital budgets. There are adequate funds remaining to support completion of the planned schedule of consultation and finalization of the documents. Additional funds would be necessary if the work involved in addressing public comments and integrating growth planning implications into the plans proves to be extensive and prolonged. Staff will report back to seek direction, should such circumstances arise.

Report prepared by: Sonya Meek, extension 5253
For Information contact: Sonya Meek, extension 5253
Date: March 30, 2007
Attachments: 3

Attachment 1

Table 1: Oak Ridges Moraine Conservation Plan Watershed Plan Requirements Conformity Assessment Report - DUFFINS CREEK WATERSHED (March 28, 2007)

This report documents how requirements of sections 24 and 25 of the Oak Ridges Moraine Conservation Plan (MMAH, 2002) have been satisfied for the portions of the Duffins Creek watershed located in the Oak Ridges Moraine Area, based on direction provided by the Province's draft technical guidance documents (Ministry of the Environment, 2005).

Subsection	Requirement	Conformity Assessment	Document Reference
24.(1)	Every upper-tier municipality and single-tier municipality shall, on or before April 22, 2003, begin preparing a watershed plan, in accordance with subsection 24.(3), for every watershed whose streams originate within the municipality's area of jurisdiction.	A watershed study was initiated by the TRCA, in partnership with the Region of Durham, Region of York and area municipalities for the Duffins Creek and Carruthers Creek watersheds in 2000, prior to the release of the ORMCP. The final Watershed Plan for the Duffins Creek and Carruthers Creek (herein called "Duffins Creek Watershed Plan") was completed in August 2003.	Duffins Creek Watershed Plan was adopted for use in the plan input and review process at the June 27, 2003 meeting of the TRCA (Authority Res. #A126/03).
24.(3)	A watershed plan shall include, as a minimum, (a) a water budget and conservation plan as set out in section 25;	See conformity assessments for sections 25.(1) and 25.(2).	See document references for sections 25.(1) and 25.(2).
24.(3) cont'd	(b) land and water use and management strategies;	The final "Duffins Creek Watershed Plan" describes recommended management strategies regarding existing and future land and water use that will help to protect the ecological and hydrological features and functions of the watershed, including the portions in the Oak Ridges Moraine Area. A key strategy is the need to protect and expand natural cover as a means of achieving multiple watershed benefits.	See Section 6.0 (Management Strategies) in the Duffins Creek Watershed Plan.
24.(3) cont'd	(c) a framework for implementation, which may include more detailed implementation plans for smaller geographic areas, such as subwatershed plans, or for specific subject matter, such as environmental management plans;	Implementation direction and initial considerations for priority actions and areas accompany the management strategies in the Duffins Creek Watershed Plan and are illustrated on subwatershed-specific maps. There is also an implementation section that summarizes key directions according to various implementation tools.	See Sections 6.0 (Strategies), 7.0 (Subwatersheds) and 8.0 (Implementation) of the Duffins Creek Watershed Plan.

Subsection	Requirement	Conformity Assessment	Document Reference
24.(3) cont'd	(d) an environmental monitoring plan;	The Duffins Creek Watershed Plan includes recommendations regarding changes or enhancements to existing environmental monitoring programs and other area, site-or issue-specific monitoring requirements.	See section 8.7 (Monitoring and Reporting) of the Duffins Creek Watershed Plan.
24.(3) cont'd	(e) provisions requiring the use of environmental management practices and programs, such as programs to prevent pollution, reduce the use of pesticides and manage the use of road salt; and,	The Duffins Creek Watershed Plan includes recommendations regarding the use of environmental practices and programs.	See Sections 6.0 (Strategies), 7.0 (Subwatersheds) and 8.0 (Implementation) of the Duffins Creek Watershed Plan.
24.(3) cont'd	(f) criteria for evaluating the protection of water quality and quantity, hydrological features and hydrological functions.	The Duffins Creek Watershed Plan includes a framework of watershed goals, objectives, indicators and targets to be used to track or evaluate long term watershed health. The Plan also includes a policy framework and criteria for the review of land use proposals to evaluate the protection of groundwater and surface water quality and quantity, hydrological features and functions, as well as terrestrial features and functions, and aquatic communities and habitat.	See Table E-1 (Summary of Management Goals, Objectives and Ratings) and Section 6.0 (Strategies) for watershed goals, objectives, indicators and targets used to track or evaluate watershed health. See Section 8.3 of the Duffins Creek Watershed Plan for key policy issues and criteria.

Subsection	Requirement	Conformity Assessment	Document Reference
24.(4)	Major development is prohibited unless, (a) the watershed plan for the relevant watershed, prepared in accordance with subsection 24.(3), has been completed;	The Duffins Creek Watershed Plan was completed in 2003. During the peer review phase of that plan, stakeholders agreed that the plan represented state-of-the-art in the areas of water and natural heritage management, core aspects of the Oak Ridges Moraine Conservation Plan.	Duffins Creek Watershed Plan was adopted for use in the plan input and review process at the June 27, 2003 meeting of the TRCA (Authority Res. #A126/03)
24.(4) cont'd	(b) the major development conforms with the watershed plan; and	See conformity assessment for section 24.(3)	Report of the Peer Review Workshop, April 29, 2003.
24.(4) cont'd	(c) a water budget and conservation plan, prepared in accordance with section 25 and demonstrating that the water supply required for the major development is sustainable, has been completed.	See conformity assessments for sections 25.(1) and 25.(2).	See document references for sections 25.(1) and 25.(2)
24.(8)	An application for major development to which this subsection applies shall not be approved unless, (a) the relevant municipality has complied with clause (c) of subsection 24.(4); or (b) the applicant, (i) identifies any hydrologically sensitive features and related hydrological functions on the site and how they will be protected, (ii) demonstrates that an adequate water supply is available for the development without compromising the ecological integrity of the Plan Area, and (iii) provides, with respect to the site and such other land as the approval authority considers necessary, a water budget and water conservation plan that, (A) characterizes groundwater and surface water flow systems by means of modeling, (B) identifies the availability, quantity and quality of water sources, and (C) identifies water conservation measures.	See conformity assessment for section 24.(4)	See document references for section 24.(4)
24.(8) cont'd		For any applications received prior to completion of watershed plans, in accordance with the ORMCP, conformity will have been reviewed and confirmed through applicant submitted studies.	

Subsection	Requirement	Conformity Assessment	Document Reference
25.(1)	<p>Every upper-tier municipality and single-tier municipality shall, on or before April 22, 2003, begin preparing a water budget and conservation plan, in accordance with subsection 25.(2), for every watershed whose streams originate within the municipality's area of jurisdiction.</p>	<p>A water budget study was completed in 2002 by the Toronto and Region Conservation Authority, in partnership with the Region of Durham, Region of York, and area municipalities for the Duffins Creek Watershed.</p> <p>The Region of Durham's first water efficiency strategy was completed in 1994. Between 1996 and 2005, 12,000 in-efficient toilets were replaced, saving an average 25% of indoor water use per household. A summer peak reduction program was initiated in 1997 and thus far over 15,000 households have participated. Average summer peak reductions per household are in excess of 30%. Other highlights include distribution of over 100,000 rain gauges, 70,000 Household Guides to Water Efficiency and the construction of a 1.5 acre Water Efficient Demonstration Garden.</p> <p>Durham's Water Efficiency Plan has been updated to cover the next ten year period. The plan is designed to be 'a source of water' by creating infrastructure capacity out of current inefficiency. For example, Durham expected to grow by 52% by 2021 and the cost of expending the infrastructure to keep pace is approximately \$125 million. A cost effective water efficiency plan can 'create' that capacity for about \$17 million.</p> <p>Durham's Plan has set the following targets for the next ten years: Average Annual Day Demand reduction of 10%, Peak Day Demand reduction of 10% and to reduce Wastewater Flows by 7%.</p>	<p>See <i>Water Budget in Urbanizing Watersheds – Duffins Creek Watershed</i> (Clarifica, 2002).</p> <p><i>Water Use Efficiency Strategy of Durham Region</i> (1994).</p> <p>Durham Region's <i>Water Efficiency Plan</i> (2007) -pending Council Approval.</p>

Subsection	Requirement	Conformity Assessment	Document Reference
25.(1) cont'd		<p>The Region of York began preparing a water conservation plan for the entire Region in 1997. The program included a 6 year capital program along with a 2 year maintenance program. This 8 year program came to completion in summer 2006, with a sustained savings of 20.33 million litres per average day.</p> <p>In February 2006 the Region of York began its Water Efficiency Master Plan Update, it will be completed in spring of 2007. Once completed an implementation plan will be developed to update the Water for Tomorrow program to include some or all of the measures recommended in the report. During this time the Water for Tomorrow program is maintaining its public and youth education programs along with a shower head and toilet flapper retrofit maintenance program.</p>	
25.(2)	<p>A water budget and conservation plan shall, as a minimum,</p> <p>(a) quantify the components of the water balance equation, including precipitation, evapotranspiration, groundwater inflow and outflow, surface water outflow, change in storage, water withdrawals and water returns;</p>	<p>The Duffins Creek Watershed Plan includes a quantitative description of the major components of the water balance equation on an average annual basis over the watershed surface area. The water budget was developed based on land use characteristics, interception abstractions, vegetation, surficial soil characteristics and spatial variations in long term average precipitation, temperature and evaporation (average daily inputs) across the watershed, using Water Balance Analysis System (WABAS) software. WABAS generated recharge estimates for input to the MODFLOW groundwater model, which was used to estimate the groundwater component of the water budget.</p>	<p>See <i>Water Budget in Urbanizing Watersheds – Duffins Creek Watershed</i> (Clarifica, 2002)</p> <p>Section 3.3 of the <i>Technical Analysis and Integration Process Summary Report – Duffins and Carruthers Creek Watersheds</i> provides a more detailed description of the existing water budget, including maps and tabular summaries, and the effects of future land use and management scenarios on the water budget.</p>

Subsection	Requirement	Conformity Assessment	Document Reference
25.(2) cont'd	(b) characterize groundwater and surface water flow systems by means of modelling;	<p>The groundwater flow system of the Duffins Creek watershed has been characterized by development and calibration of a groundwater flow model that utilizes MODFLOW software.</p> <p>The surface water flow system of the Duffins Creek watershed has been characterized by development and calibration of a hydrologic model based on Visual OTTHYMO software.</p>	<p>See <i>Duffins Creek Hydrogeology and Assessment of Land Use Change on the Groundwater System</i> (Gerber Geosciences, 2003)</p> <p>See <i>Duffins Creek Hydrology Update</i> (Aquafor Beech, 2002)</p> <p>See <i>Technical Analysis and Integration Process Summary Report – Duffins and Carruthers Creek Watersheds</i> for a description of the effects of future land use and management scenarios on the surface and groundwater flow systems.</p>
25.(2) cont'd	(c) identify, (i) targets to meet the water needs of the affected ecosystems, (ii) the availability, quantity and quality of water sources, and (iii) goals for public education and for water conservation;	<p>The Duffins Creek Watershed Plan includes criteria in the form of maps and targets (both quantitative and qualitative) for the protection of groundwater and surface water quality and quantity, hydrological features and functions, as well as terrestrial features and functions and aquatic communities and habitat.</p> <p>Durham Region's <i>Water Efficient Durham</i> has a multi-pronged approach to public education which includes TV Ads, publications, partnerships with a variety of stakeholders including retailers, garden centres, horticultural groups, lower tier municipalities, home builders, manufacturers etc. The goals for the public education component are to identify the barriers to the desired behaviour and develop strategies to overcome those barriers. These strategies are designed to promote specific actions (eg. buy a subsidized 6L. toilet).</p>	<p>See 24(3)(f) above for targets.</p> <p>See Section 2.4.3 (Groundwater use) <i>Duffins Creek Hydrogeology and Assessment of Land Use Change on the Groundwater System</i> (Gerber Geosciences, 2003) for a summary of the availability and quality of water sources.</p>

Subsection	Requirement	Conformity Assessment	Document Reference
25.(2) cont'd		<p>York Region's Water for Tomorrow program outlined specific goals for both education and water conservation measures as outlined in the initial scope of work. The Water Efficiency Master Plan Update recommends new and/or updated programs for public education and water conservation measures. New goals for education and water conservation measures will be set once the program implementation plan is completed and approved by council.</p>	
25.(2) cont'd	(d) develop a water-use profile and forecast;	<p>All upper-tier and single-tier municipalities in the Rouge River watershed have developed water use profiles and forecasts as part of preparing water use assessment reports and/or water efficiency plans and programs.</p> <p>Durham Region has developed water and sewer use projections through the year 2021.</p> <p>York Region has developed water-use profiles and forecasts as part of the Water Master Plan Update, 2004. The forecasts consider the effect of planned water conservation measures on future demand. These profiles and forecasts are updated with the master plans.</p>	<p>See the <i>Development Control Program Report</i>, May 2006.</p> <p>See section 4.0 of York Region's <i>Long Term Water Project Master Plan Update</i>, April 2004</p>
25.(2) cont'd	(e) evaluate plans for water facilities such as pumping stations and reservoirs;	<p>A watershed-scale evaluation of the predicted effects of forecasted water and land use on groundwater levels was completed in support of the Duffins Creek Watershed Plan. Based on this evaluation, appropriate land and water use management strategies have been provided in the final draft plan.</p>	<p><i>Duffins Creek Hydrogeology and Assessment of Land Use Change on the Groundwater System</i> (Gerber Geosciences, 2003)</p>

Subsection	Requirement	Conformity Assessment	Document Reference
25.(2) cont'd	<p>(f) identify and evaluate,</p> <p>(i) water conservation measures such as public education, improved management practices, the use of flow restricting devices and other hardware, water reuse and recycling, and practices and technologies associated with water reuse and recycling,</p> <p>(ii) water conservation incentives such as full cost pricing, and</p> <p>(iii) ways of promoting water conservation measures and water conservation incentives;</p>	<p>All upper-tier and single-tier municipalities in the Duffins Creek watershed have developed water efficiency plans and programs that identify and evaluate water conservation measures, incentives and ways of promoting water conservation measures and incentives. The Duffins Creek Watershed Plan supports the recommendations of the municipal water efficiency plans and programs and describes management strategies that would further contribute to achieving the objectives and targets of these plans/programs.</p> <p>Durham Region's water rates are derived through full cost pricing.</p> <p>York Region's water rates are currently based on full cost pricing.</p>	<p>See Section 6.0 of Durham's Water Efficiency Plan. Section 6.1 discusses the criteria use to choose the efficiency measures. Section 6.2 identifies the screening process used (technical feasibility, applicability, social acceptability and cost effectiveness. Section 6.3 identifies the acceptable measures.</p> <p>See Section 6.6 Duffins Creek Watershed Plan.</p> <p>See Sections 5.0 and 6.0 of York Region's <i>Water Efficiency Master Plan Update (2007)</i> for the identification, evaluation and recommendation of water conservation measures and education</p>
25.(2) cont'd	<p>(g) analyse the costs and benefits of the matters described in clause (f);</p>	<p>All upper-tier and single-tier municipalities in the Rouge River watershed have developed water efficiency plans and programs that analyse the costs and benefits of their recommended water conservation measures, incentives and promotion strategies.</p>	<p>See Section 8.3 of Durham's Water Efficiency Plan which defines the benefit/cost ratios for all chosen water efficiency measures</p> <p>See Section 5.2.3 of York Region's <i>Water Efficiency Master Plan Update (2007)</i> for the cost analysis of water conservation measures</p>

Subsection	Requirement	Conformity Assessment	Document Reference
25.(2) cont'd	(h) require the use of specified water conservation measures and incentives;	<p>Region of Durham's Water Efficiency Plan identified the water efficiency measures through the aforementioned criteria, it sets target water reductions for each, identifies the type of water use to be reduced (eg. average annual day, peak day etc.) identifies subsidy amounts where applicable, and compares the cost of the measure compared to the cost creating that water capacity through conventional means (eg. expanding the water plant).</p> <p>York Region's Water for Tomorrow program used specific water conservation measures and incentives as part of the original capital plan. The Water Efficiency Master Plan Update also recommends the use of specific water conservation measures and incentives.</p>	<p>See Sections 6.0 to 8.0 of Durham's Water Efficiency Plan.</p> <p>See Section 6.0 of York Region's <i>Water Efficiency Master Plan Update (2007)</i> for the recommended program strategy</p>
25.(2) cont'd	(i) contain an implementation plan for those specified measures and incentives that reconciles the demand for water with the water supply;	<p>Durham Region's Water Efficiency Plan is a ten year plan. It features a detailed implementation schedule which specifies both the pilot project duration and full-scale project length of each water efficiency measure.</p> <p>York Region developed an implementation plan for the program as part of the scope of work in 1998. The Water Efficiency Master Plan Update has recommended an updated program strategy, the development of an implementation plan for the updated program will begin once the Master Plan Update has been finalized.</p>	<p>See Section 9.0 of Durham's Water Efficiency Plan]</p> <p>See Section 6.0 of York Region's <i>Water Efficiency Master Plan Update (2007)</i> for the recommended program strategy</p>

Subsection	Requirement	Conformity Assessment	Document Reference
25.(2) cont'd	(i) provide for monitoring of the water budget and water conservation plan for effectiveness.	Region of Durham's Water Efficiency Plan identifies six methods of monitoring and analyzing the real-world water savings resulting from the water efficiency measures identified in its Water Efficiency Plan. York Region's Water Use Efficiency Master Plan Update recommends a monitoring and Evaluation program. The Duffins Creek Watershed Plan includes recommendations regarding changes or enhancements to existing environmental monitoring programs and other area, site-or issue-specific monitoring requirements that provide for, or improve capacity for monitoring of the water budget [e.g., additional climate stations, stream gauges, groundwater monitoring wells etc.].	See Section 9.6 of Durham's Water Efficiency Plan.. See Section 9.0 of York Region's <i>Water Efficiency Master Plan Update (2007)</i> See Section 8.7 of the Duffins Creek Watershed Plan.
27.(1) 27.(1) cont'd	Except with respect to land in Settlement Areas, all development and site alteration with respect to land in a subwatershed are prohibited if they would cause the total percentage of the area of the subwatershed that has impervious surfaces to exceed, (a) 10 per cent; or (b) any lower percentage specified in the applicable watershed plan.	Current and projected future per cent impervious cover has been assessed for each subwatershed, revealing that current and project future impervious coverage is well below the 10% threshold. No lower percentage is specified.	See <i>Duffins Creek Watershed Impervious Cover Assessment Technical Briefing Note</i> (TRCA, 2007) N/A

¹ Endnotes

- Ministry of the Environment (2005) Oak Ridges Moraine Conservation Plan – Watershed Plans, Technical Paper #9, June 2005.
- Ministry of the Environment (2005) Oak Ridges Moraine Conservation Plan – Water Budgets, Technical Paper #10, June 2005.
- Ministry of the Environment (2005) Oak Ridges Moraine Conservation Plan – Water Conservation Plans, Technical Paper #11, June 2005.
- Ministry of the Environment (2005) Oak Ridges Moraine Conservation Plan – Subwatersheds (Impervious Surfaces), Technical Paper #13, June 2005.

Attachment 2

Table 2: *Oak Ridges Moraine Conservation Plan Watershed Plan Requirements Conformity Assessment Report - ROUGE RIVER WATERSHED, (March 28, 2007)*

This report documents how requirements of sections 24 and 25 of the Oak Ridges Moraine Conservation Plan (MMAH, 2002) have been satisfied for the portions of the Rouge River watershed located in the Oak Ridges Moraine Area, based on direction provided by the following draft technical guidance documents (Ministry of the Environment, 2005)

Subsection	Requirement	Conformity Assessment	Document Reference
24.(1)	Every upper-tier municipality and single-tier municipality shall, on or before April 22, 2003, begin preparing a watershed plan, in accordance with subsection 24.(3), for every watershed whose streams originate within the municipality's area of jurisdiction.	<p>Watershed planning and ongoing watershed management have been activities the Toronto and Region Conservation Authority (TRCA) has carried out in partnership with its municipalities for a number of years. Therefore a watershed plan was deemed to have been initiated prior to April 22, 2003, although study components required updating to varying degrees.</p> <p>A watershed study was initiated by the TRCA, in partnership with the Region of York, Region of Durham and City of Toronto and area municipalities for the Rouge River watershed on June 27, 2003.</p> <p>A final draft of the <i>Rouge River Watershed Plan</i> was completed on November 30, 2006, subject to specified revisions approved by the Rouge Watershed Task Force. Finalization of this plan is pending further public consultation.</p>	<p>Approval to initiate the Rouge River Watershed Planning Study according to an initial work program was granted at the June 27, 2003 meeting of the TRCA (Authority Res. #A129/03).</p> <p>A Workplan to fulfil the watershed planning requirements of the ORMCP was approved by the Authority on Sept. 26, 2003 (Authority Res. #A196/03)</p> <p>Approval to undertake public consultation on the final draft <i>Rouge River Watershed Plan</i> and its supporting technical documents was granted at the January 5, 2007 meeting of the TRCA (Authority Res. #A295/06)</p>

Subsection	Requirement	Conformity Assessment	Document Reference
24.(3)	A watershed plan shall include, as a minimum, (a) a water budget and conservation plan as set out in section 25;	See conformity assessments for sections 25.(1) and 25.(2).	See document references for sections 25.(1) and 25.(2).
24.(3) cont'd	(b) land and water use and management strategies;	The final draft <i>Rouge River Watershed Plan</i> describes recommended management strategies regarding existing and future land and water use that will help to protect the ecological and hydrological features and functions of the watershed, including the portions in the Oak Ridges Moraine Area. Key strategies include the need to expand natural cover and build sustainable communities, particularly with an aim to maintain or restore water balance.	See Section 5.0 (Strategies) in the <i>Rouge River Watershed Plan</i> .
24.(3) cont'd	(c) a framework for implementation, which may include more detailed implementation plans for smaller geographic areas, such as subwatershed plans, or for specific subject matter, such as environmental management plans;	Implementation direction and initial considerations for priority actions and areas accompany the management strategies in the final draft <i>Rouge River Watershed Plan</i> . The draft <i>Rouge River Watershed Plan Implementation Guide</i> provides more detailed implementation direction for policy, regeneration projects etc., including supportive maps, criteria etc. Specific policies within the framework for implementation may be subject to revision based on detailed consultation with municipal partners and stakeholders and Conservation Authority Board review. Any such revisions will not affect satisfaction of this Oak Ridges Moraine Conservation Plan requirement.	See Section 5.0 of the <i>Rouge River Watershed Plan</i> . See <i>Rouge River Watershed Plan Implementation Guide</i> .

Subsection	Requirement	Conformity Assessment	Document Reference
24.(3) cont'd	(d) an environmental monitoring plan;	The final draft <i>Rouge River Watershed Plan</i> includes recommendations regarding changes or enhancements to existing environmental monitoring programs and other area, site- or issue-specific monitoring requirements.	See Section 5.6 of the <i>Rouge River Watershed Plan</i> for recommended enhancements to existing monitoring programs.
24.(3) cont'd	(e) provisions requiring the use of environmental management practices and programs, such as programs to prevent pollution, reduce the use of pesticides and manage the use of road salt; and,	The final draft <i>Rouge River Watershed Plan</i> includes recommendations regarding the use of environmental practices and programs. The Implementation Guide further identifies practices required in the land use planning and development process.	See Section 5.0 of the <i>Rouge River Watershed Plan</i> .
24.(3) cont'd	(f) criteria for evaluating the protection of water quality and quantity, hydrological features and hydrological functions.	The final draft <i>Rouge River Watershed Plan</i> includes a framework of watershed goals, objectives, indicators and targets to be used to track or evaluate long term watershed health. The accompanying <i>Implementation Guide</i> sets out criteria for the review of land use proposals to evaluate the protection of groundwater and surface water quality and quantity, hydrological features and functions, as well as terrestrial features and functions, and aquatic communities and habitat.	See Appendix D of the <i>Rouge River Watershed Plan</i> for a summary of watershed goals, objectives, indicators and targets used to track or evaluate watershed health. See the draft <i>Rouge River Watershed Plan Implementation Guide</i> for a compilation of all criteria and maps showing where criteria apply.

Subsection	Requirement	Conformity Assessment	Document Reference
24.(4)	Major development is prohibited unless, (a) the watershed plan for the relevant watershed, prepared in accordance with subsection 24.(3), has been completed;	A final draft of the <i>Rouge River Watershed Plan</i> was completed on November 30, 2006, subject to specified revisions approved by the Rouge Watershed Task Force. While the final draft plan may be subject to revisions based on detailed consultation with municipal partners and stakeholders and Conservation Authority Board review, any such revisions will not affect satisfaction of Oak Ridges Moraine Conservation Plan requirements.	Approval to undertake public consultation on the final draft <i>Rouge River Watershed Plan</i> and its supporting technical documents was granted at the January 5, 2007 meeting of the TRCA (Authority Res. #A295/06)
24.(4) cont'd	(b) the major development conforms with the watershed plan; and	See conformity assessment for section 24.(3)	See document references for section 24.(3)
24.(4) cont'd	(c) a water budget and conservation plan, prepared in accordance with section 25 and demonstrating that the water supply required for the major development is sustainable, has been completed.	See conformity assessments for sections 25.(1) and 25.(2).	See document references for sections 25.(1) and 25.(2)
24.(8)	An application for major development to which this subsection applies shall not be approved unless, (a) the relevant municipality has complied with clause (c) of subsection 24.(4); or	See conformity assessment for section 24.(4)	See document references for section 24.(4)
24.(8) cont'd	(b) the applicant, (i) identifies any hydrologically sensitive features and related hydrological functions on the site and how they will be protected, (ii) demonstrates that an adequate water supply is available for the development without compromising the ecological integrity of the Plan Area, and (iii) provides, with respect to the site and such other land as the approval authority considers necessary, a water budget and water conservation plan that, (A) characterizes groundwater and surface water flow systems by means of modelling, (B) identifies the availability, quantity and quality of water sources, and (C) identifies water conservation measures.	For any applications received prior to completion of watershed plans, in accordance with the ORMCP, conformity will have been reviewed and confirmed through applicant submitted studies.	

Subsection	Requirement	Conformity Assessment	Document Reference
25.(1)	Every upper-tier municipality and single-tier municipality shall, on or before April 22, 2003, begin preparing a water budget and conservation plan, in accordance with subsection 25.(2), for every watershed whose streams originate within the municipality's area of jurisdiction.	<p>A water budget study was initiated in January 2003 by the Toronto and Region Conservation Authority, in partnership with the Region of York, Region of Durham and City of Toronto and area municipalities for the Rouge River Watershed, in advance of the overall Rouge River Watershed Planning study.</p> <p>The Region of York began preparing a water conservation plan for the entire Region in 1997. The program included a 6 year capital program along with a 2 year maintenance program. This 8 year program came to completion in summer 2006, with a sustained savings of 20.33 million litres per average day.</p> <p>In February 2006 the Region began its Water Efficiency Master Plan Update, it will be completed in spring of 2007. Once completed an implementation plan will be developed to update the Water for Tomorrow program to include some or all of the measures recommended in the report. During this time the Water for Tomorrow program is maintaining its public and youth education programs along with a shower head and toilet flapper retrofit maintenance program.</p>	<p>See TRCA 2003 Capital Budget Workplan and Authority approval to hire consultants to undertake a study terms of reference.</p> <p>Approval to initiate the Rouge River Watershed Planning Study according to an initial work program, including water budget study, was granted at the June 27, 2003 meeting of the TRCA (Authority Res. #A129/03).</p> <p>Approval to undertake public consultation on the final draft <i>Rouge River watershed plan</i> and its supporting technical documents was granted at the January 5, 2007 meeting of the TRCA (Authority Res. #A295/06)</p>

Subsection	Requirement	Conformity Assessment	Document Reference
25.(2)	<p>A water budget and conservation plan shall, as a minimum,</p> <p>(a) quantify the components of the water balance equation, including precipitation, evapotranspiration, groundwater inflow and outflow, surface water outflow, change in storage, water withdrawals and water returns;</p>	<p>The <i>Rouge River Watershed Plan</i> includes a quantitative description of the major components of the water balance equation on an average annual over the watershed surface area. The water budget was developed based on land use characteristics, interception abstractions, vegetation, surficial soil characteristics and spatial variations in long term average precipitation, temperature and evaporation across the watershed, using Water Balance Analysis System (WABAS) software. WABAS generated recharge estimates for input to the MODFLOW groundwater model, which was used to estimate the groundwater component of the water budget.</p>	<p>Section 3.2 (Current Conditions) of the <i>Rouge River Watershed Plan</i> and Chapter 4 (Groundwater Quantity and Quality) of the <i>Rouge River State of the Watershed Report</i> present the overall water budget for the watershed.</p> <p>Section 4.5 of the <i>Rouge Watershed Modelling and Analysis Report</i> provides a more detailed description of the existing water budget, including maps and tabular summaries, and the effects of future land use and management scenarios on the water budget.</p>
25.(2) cont'd	<p>(b) characterize groundwater and surface water flow systems by means of modelling;</p>	<p>The groundwater flow system of the Rouge River watershed has been characterized by development and calibration of a groundwater flow model that utilizes MODFLOW software.</p> <p>The surface water flow system of the Rouge River watershed has been characterized by development and calibration of a hydrologic model based on HSP-F software.</p>	<p>See Section 3.2 (Current Conditions) of the <i>Rouge River Watershed Plan</i> and the <i>Rouge River State of the Watershed Report</i> Chapter 4 (Groundwater Quantity and Quality) and Chapter 5 (Surface Water Quantity) for descriptions of the current groundwater and surface water flow systems and issues.</p>

Subsection	Requirement	Conformity Assessment	Document Reference
25.(2) cont'd			Sections 4.1 and 4.5 of the <i>Rouge Watershed Modelling and Analysis Report</i> provide a more detailed description of the existing surface and groundwater flow systems, including maps and tabular summaries, and the effects of future land use and management scenarios on these systems.
25.(2) cont'd	<p>(c) identify,</p> <ul style="list-style-type: none"> (i) targets to meet the water needs of the affected ecosystems, (ii) the availability, quantity and quality of water sources, and (iii) goals for public education and for water conservation; 	<p>The final draft <i>Rouge River Watershed Plan</i> includes criteria in the form of maps and targets (both quantitative and qualitative) for the protection of groundwater and surface water quality and quantity, hydrological features and functions, as well as terrestrial features and functions and aquatic communities and habitat.</p> <p>The Region of York's Water for Tomorrow program outlined specific goals for both education and water conservation measures as outlined in the initial scope of work. The Water Efficiency Master Plan Update recommends new and/or updated programs for public education and water conservation measures. New goals for education and water conservation measures will be set once the program implementation plan is completed and approved by council.</p>	<p>See 24(3)(f) above for targets.</p> <p>See Chapters 4.0 (Groundwater Quantity and Quality) and 5.0 (Surface Water Quantity) of the <i>Rouge River State of the Watershed Report</i> for a summary of the availability and quality of water sources.</p> <p>Section 5.5.3 (Resource Use) of the <i>Rouge River Watershed Plan</i> addresses water conservation and supports continuation of the Regional water efficiency and public awareness programs.</p>

Subsection	Requirement	Conformity Assessment	Document Reference
25.(2) cont'd	(d) develop a water-use profile and forecast;	<p>All upper-tier and single-tier municipalities in the Rouge River watershed have developed water use profiles and forecasts as part of preparing water use assessment reports and/or water efficiency plans and programs.</p> <p>York Region has developed water-use profiles and forecasts as part of the Water Master Plan Update, 2004. The forecasts consider the effect of planned water conservation measures on future demand. These profiles and forecasts are updated with the master plans.</p> <p>Drawing on this information, a watershed-based water use profile and forecast was developed as part of preparing the Rouge River Watershed Plan.</p>	<p>See Chapters 4.0 and 5.0 of <i>Rouge River State of the Watershed Report</i>. See Appendix A (Scenario Descriptions) of <i>Rouge Watershed Modelling and Analysis Report</i> for water use forecast assumptions (based on municipal forecasts).</p> <p>See section 4.0 of York Region's <i>Long Term Water Project Master Plan Update, April 2004</i></p>
25.(2) cont'd	(e) evaluate plans for water facilities such as pumping stations and reservoirs;	<p>A watershed-scale evaluation of the predicted effects of forecasted water and land use on groundwater levels was completed in support of the <i>Rouge River Watershed Plan</i>. Based on this evaluation, appropriate land and water use management strategies have been provided in the final draft plan.</p> <p>Further plans for any such facilities are being evaluated by York Region as part of its updated water supply strategy and will be reviewed in the context of the updated watershed information.</p>	<p>See Section 4.3 of <i>Rouge Watershed Modelling and Analysis Report</i> for effects of forecasted water and land use on groundwater levels.</p> <p>See Chapter 5.0 of the <i>Rouge River Watershed Plan</i> for management strategies.</p> <p>York Region's <i>Long Term Water Project Master Plan Update, April 2004</i></p>

Subsection	Requirement	Conformity Assessment	Document Reference
25.(2) cont'd	<p>(f) identify and evaluate,</p> <p>(i) water conservation measures such as public education, improved management practices, the use of flow restricting devices and other hardware, water reuse and recycling, and practices and technologies associated with water reuse and recycling,</p> <p>(ii) water conservation incentives such as full cost pricing, and</p> <p>(iii) ways of promoting water conservation measures and water conservation incentives;</p>	<p>All upper-tier and single-tier municipalities in the Rouge River watershed have developed water efficiency plans and programs that identify and evaluate water conservation measures, incentives and ways of promoting water conservation measures and incentives. The final draft <i>Rouge River Watershed Plan</i> supports the recommendations of the municipal water efficiency plans and programs and describes management strategies that would further contribute to achieving the objectives and targets of these plans/programs.</p> <p>York Region's water rates are currently based on full cost pricing.</p>	<p>See Section 5.5.3 <i>Rouge River Watershed Plan</i>.</p> <p>See Sections 5.0 and 6.0 of York Region's <i>Water Efficiency Master Plan Update (2007)</i> for the identification, evaluation and recommendation of water conservation measures and education</p>
25.(2) cont'd	<p>(g) analyse the costs and benefits of the matters described in clause (f);</p>	<p>All upper-tier and single-tier municipalities in the Rouge River watershed have developed water efficiency plans and programs that analyse the costs and benefits of their recommended water conservation measures, incentives and promotion strategies.</p>	<p>See Section 5.2.3 of York Region's <i>Water Efficiency Master Plan Update(2007)</i> for the cost analysis of water conservation measures</p>
25.(2) cont'd	<p>(h) require the use of specified water conservation measures and incentives;</p>	<p>York Region's Water for Tomorrow program used specific water conservation measures and incentives as part of the original capital plan. The Water Efficiency Master Plan Update also recommends the use of specific water conservation measures and incentives.</p>	<p>See Section 6.0 of York Region's <i>Water Efficiency Master Plan Update (2007)</i> for the recommended program strategy</p>
25.(2) cont'd	<p>(i) contain an implementation plan for those specified measures and incentives that reconciles the demand for water with the water supply;</p>	<p>York Region developed an implementation plan for the program as part of the scope of work in 1998. The Water Efficiency Master Plan Update has recommended an updated program strategy, the development of an implementation plan for the updated program will begin once the Master Plan Update has been finalized.</p>	<p>See Section 6.0 of York Region's <i>Water Efficiency Master Plan Update (2007)</i> for the recommended program strategy</p>

Subsection	Requirement	Conformity Assessment	Document Reference
25.(2) cont'd	(i) provide for monitoring of the water budget and water conservation plan for effectiveness.	<p>York Region's Water Use Efficiency Master Plan Update recommends a monitoring and Evaluation program.</p> <p>The final draft <i>Rouge River Watershed Plan</i> includes recommendations regarding changes or enhancements to existing environmental monitoring programs and other area, site-or issue-specific monitoring requirements that provide for, or improve capacity for monitoring of the water budget [e.g., additional climate stations, stream gauges, groundwater monitoring wells etc.].</p>	<p>See Section 9.0 of York Region's <i>Water Efficiency Master Plan Update(2007)</i></p> <p>See Section 5.6 of the <i>Rouge River Watershed Plan</i> for recommended enhancements to existing monitoring programs.</p>
27.(1)	<p>Except with respect to land in Settlement Areas, all development and site alteration with respect to land in a subwatershed are prohibited if they would cause the total percentage of the area of the subwatershed that has impervious surfaces to exceed,</p> <p>(a) 10 per cent; or</p>	<p>The Rouge River Watershed Planning study assessed the current and projected future per cent impervious cover for each Oak Ridges Moraine subwatershed (based on methods suggested in draft Technical Paper #13 which excludes Settlement Areas, utilizing subwatershed boundaries defined in draft Technical Paper #9). These estimates indicate that no Oak Ridges Moraine subwatersheds in the Rouge River Watershed exceed the 10% impervious cover criteria for current conditions (based on 2002 land use), nor will they exceed 10% upon build-out of municipal official plans approved as of 2002.</p>	<p>See <i>Rouge Watershed Modelling and Analysis Report</i> Appendix B – Impervious Cover Assessment Technical Briefing Note.</p>
27.(1) cont'd	(b) any lower percentage specified in the applicable watershed plan.	No lower percentage is specified.	N/A

¹ Endnotes

- Ministry of the Environment (2005) Oak Ridges Moraine Conservation Plan – Watershed Plans, Technical Paper #9, June 2005.
- Ministry of the Environment (2005) Oak Ridges Moraine Conservation Plan – Water Budgets, Technical Paper #10, June 2005.
- Ministry of the Environment (2005) Oak Ridges Moraine Conservation Plan – Water Conservation Plans, Technical Paper #11, June 2005.
- Ministry of the Environment (2005) Oak Ridges Moraine Conservation Plan – Subwatersheds (Impervious Surfaces), Technical Paper #13, June 2005.

Attachment 3

Table 3: *Oak Ridges Moraine Conservation Plan Watershed Plan Requirements Conformity Assessment Report - DON RIVER WATERSHED (March 28, 2007)*

This report documents how requirements of sections 24 and 25 of the Oak Ridges Moraine Conservation Plan (MMAH, 2002) have been satisfied for the portions of the Don River watershed located in the Oak Ridges Moraine Area, based on direction provided by the following draft technical guidance documents (Ministry of the Environment, 2005)

Subsection	Requirement	Conformity Assessment	Document Reference
24.(1)	Every upper-tier municipality and single-tier municipality shall, on or before April 22, 2003, begin preparing a watershed plan, in accordance with subsection 24.(3), for every watershed whose streams originate within the municipality's area of jurisdiction.	<p>Watershed planning and ongoing watershed management have been activities the Toronto and Region Conservation Authority (TRCA) has carried out in partnership with its municipalities for a number of years. Therefore a watershed plan was deemed to have been initiated prior to April 22, 2003, although study components required update to varying degrees.</p> <p>A watershed study was initiated by the TRCA, in partnership with the City of Toronto, Region of York, and area municipalities for the Don River watershed in 2004.</p> <p>An interim report for the Don Watershed ORM subwatersheds, <i>Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i>, was completed in March 2007. While the final watershed plan will be developed with additional detailed consultation with municipal partners and stakeholders and Conservation Authority Board review, any such revisions will not affect satisfaction of the Oak Ridges Moraine Conservation Plan requirements.</p>	<p>A workplan to fulfil the watershed planning requirements of the ORMCP and direction to commence the Don River Watershed Plan in 2004 were approved at Sept 26 2003 meeting of the Authority (Authority Res. #A196/03).</p> <p>A revised work plan and schedule for the Don River watershed plan proposing delivery of the full plan in Feb. 24, 2006 meeting of the Authority (Authority Res. #A8/06).</p> <p><i>Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i> (TRCA, March, 2007).</p>

Subsection	Requirement	Conformity Assessment	Document Reference
24.(3)	A watershed plan shall include, as a minimum, (a) a water budget and conservation plan as set out in section 25;	See conformity assessments for sections 25.(1) and 25.(2).	See document references for sections 25.(1) and 25.(2).
24.(3) cont'd	(b) land and water use and management strategies;	The interim report, <i>Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i> , describes recommended management strategies regarding existing and future land and water use that will help to protect the ecological and hydrological features and functions in the Oak Ridges Moraine Area.	Section 3.0, <i>Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i> (TRCA, March 2007).
24.(3) cont'd	(c) a framework for implementation, which may include more detailed implementation plans for smaller geographic areas, such as subwatershed plans, or for specific subject matter, such as environmental management plans;	Implementation direction accompanies the recommended management strategies noted in section 24(3)(b).above. Priority regeneration actions have been identified in each subwatershed through an application of the <i>Principles-based Methodology for Identifying Priority Watershed Regeneration Actions</i> .	Don Watershed priority subwatershed regeneration actions master spreadsheet, based on: Briefing report, <i>A Principles-based Methodology for Identifying Priority Watershed Regeneration Actions</i> (TRCA, March 7, 2007)
24.(3) cont'd	(d) an environmental monitoring plan;	The interim report, <i>Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i> , includes recommendations regarding environmental monitoring programs and other area, site-or issue-specific monitoring requirements.	See Section 3.0 of <i>Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i> (TRCA, March 2007).

Subsection	Requirement	Conformity Assessment	Document Reference
24.(3) cont'd	(e) provisions requiring the use of environmental management practices and programs, such as programs to prevent pollution, reduce the use of pesticides and manage the use of road salt; and,	The interim report, <i>Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i> , contains recommendation management strategies, including the need for environmental management practices and programs.	See Section 3.0 of <i>Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i> (TRCA, March 2007).
24.(3) cont'd	(f) criteria for evaluating the protection of water quality and quantity, hydrological features and hydrological functions.	<p>A Draft Management Framework identifies watershed goals, objectives, indicators and targets to be used to track or evaluate long term watershed health. This framework is updated, but based on that in <i>Forty Steps to a New Don</i> (the previous watershed management strategy; TRCA, 1994).</p> <p>The interim report, <i>Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i>, contains management strategies that provide guidance for the review of land use proposals in terms of their ability to protect groundwater and surface water quality and quantity, hydrological features and functions, as well as terrestrial features and functions, and aquatic communities and habitat.</p>	<p>Draft <i>Don River Watershed Plan Management Framework</i>, March 2007.</p> <p><i>Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i> (TRCA, March 2007).</p>

Subsection	Requirement	Conformity Assessment	Document Reference
24.(4)	Major development is prohibited unless, (a) the watershed plan for the relevant watershed, prepared in accordance with subsection 24.(3), has been completed;	The interim report, <i>Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i> , was completed in March 2007. While the final watershed plan will be developed with additional detailed consultation with municipal partners and stakeholders and Conservation Authority Board review, any such revisions will not affect satisfaction of the Oak Ridges Moraine Conservation Plan requirements.	<i>Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i> (TRCA, March 2007).
24.(4) cont'd	(b) the major development conforms with the watershed plan; and	See conformity assessment for section 24.(3)	See document references for section 24.(3)
24.(4) cont'd	(c) a water budget and conservation plan, prepared in accordance with section 25 and demonstrating that the water supply required for the major development is sustainable, has been completed.	See conformity assessments for sections 25.(1) and 25.(2).	See document references for sections 25.(1) and 25.(2)
24.(8)	An application for major development to which this subsection applies shall not be approved unless, (a) the relevant municipality has complied with clause (c) of subsection 24.(4); or	See conformity assessment for section 24.(4)	See document references for section 24.(4)

Subsection	Requirement	Conformity Assessment	Document Reference
24.(8) cont'd	<p>(b) the applicant,</p> <p>(i) identifies any hydrologically sensitive features and related hydrological functions on the site and how they will be protected,</p> <p>(ii) demonstrates that an adequate water supply is available for the development without compromising the ecological integrity of the Plan Area, and</p> <p>(iii) provides, with respect to the site and such other land as the approval authority considers necessary, a water budget and water conservation plan that,</p> <p>(A) characterizes groundwater and surface water flow systems by means of modelling,</p> <p>(B) identifies the availability, quantity and quality of water sources, and</p> <p>(C) identifies water conservation measures.</p>	<p>For any applications received prior to completion of watershed plans, in accordance with the ORMCP, conformity will have been reviewed and confirmed through applicant submitted studies.</p>	
25.(1)	<p>Every upper-tier municipality and single-tier municipality shall, on or before April 22, 2003, begin preparing a water budget and conservation plan, in accordance with subsection 25.(2), for every watershed whose streams originate within the municipality's area of jurisdiction.</p>	<p>A water budget study was initiated by the Toronto and Region Conservation Authority, in partnership with the City of Toronto, Region of York, and area municipalities for the Don River Watershed as part of the overall Don River Watershed Plan.</p> <p>The Region of York began preparing a water conservation plan for the entire Region in 1997. The program included a 6 year capital program along with a 2 year maintenance program. This 8 year program came to completion in summer 2006, with a sustained savings of 20.33 million litres per average day.</p>	<p>Approval to initiate the Don River Watershed Planning Study according to an initial work program, including water budget study, was granted at the Sept 26, 2003 meeting of the Authority (Authority Res. #A196/03).</p>

Subsection	Requirement	Conformity Assessment	Document Reference
25.(1) cont'd		<p>In February 2006 the Region began its Water Efficiency Master Plan Update, it will be completed in spring of 2007. Once completed an implementation plan will be developed to update the Water for Tomorrow program to include some or all of the measures recommended in the report. During this time the Water for Tomorrow program is maintaining its public and youth education programs along with a shower head and toilet flapper retrofit maintenance program.</p>	
25.(2)	<p>A water budget and conservation plan shall, as a minimum, (a) quantify the components of the water balance equation, including precipitation, evapotranspiration, groundwater inflow and outflow, surface water outflow, change in storage, water withdrawals and water returns;</p>	<p>The interim report for the Don Watershed ORM subwatersheds, <i>Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i>, includes a quantitative description of the major components of the water balance equation on an average annual basis, over the watershed surface area. An initial water budget was developed based on land use characteristics, interception abstractions, vegetation, surficial soils, and spatial variations in long term average precipitation, temperature and evaporation across the watershed using Hydrologic Simulation Program – Fortran (HSP-F) software. This water budget will be updated in the final watershed plan to conform with the jurisdictional standard prepared for the source water protection program.</p>	<p>See Table 2, <i>Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i> (TRCA, March 2007).</p>

Subsection	Requirement	Conformity Assessment	Document Reference
25.(2) cont'd	(b) characterize groundwater and surface water flow systems by means of modelling;	<p>The groundwater flow system of the Don River watershed has been characterized by development and calibration of a groundwater flow model that utilizes MODFLOW software.</p> <p>The surface water flow system of the Don River watershed has been characterized by development and calibration of a hydrologic model based on Visual OTTHYMO software.</p>	<p><i>Don River Watershed – Current Conditions Report on Geology and Groundwater Resources</i>, draft January 2, 2007.</p> <p><i>Don River Watershed – Current Conditions Report on Surface Water Hydrology, Hydraulics and Stormwater Management</i>, draft October 24, 2006.</p> <p><i>Don River Hydrology Update</i>. MMM Ltd., 2004</p>
25.(2) cont'd	(c) identify, (i) targets to meet the water needs of the affected ecosystems, (ii) the availability, quantity and quality of water sources, and (iii) goals for public education and for water conservation;	<p>See 24(3)(f) above for targets and criteria.</p> <p>The Regional Municipality of York's Water for Tomorrow program outlined specific goals for both education and water conservation measures as outlined in the initial scope of work. The Water Efficiency Master Plan Update recommends new and/or updated programs for public education and water conservation measures. New goals for education and water conservation measures will be set once the program implementation plan is completed and approved by council.</p>	<p>See 24(3)(f) above for targets and criteria.</p>
25.(2) cont'd	(d) develop a water-use profile and forecast;	<p>All upper-tier and single-tier municipalities in the Don River watershed have developed water use profiles and forecasts as part of preparing water use assessment reports and/or water efficiency plans and programs.</p> <p>York Region has developed water-use profiles and forecasts as part of the Water Master Plan Update, 2004. The forecasts consider the effect of planned water conservation measures on future demand. These profiles and forecasts are updated with the master plans.</p>	<p>See section 4.0 of York Region's <i>Long Term Water Project Master Plan Update</i>, April 2004</p>

Subsection	Requirement	Conformity Assessment	Document Reference
25.(2) cont'd		Drawing on this and additional information from the Permit to Take Water database, a watershed-based water use profile and forecast was prepared as part of the interim report for the Don Watershed ORM subwatersheds, <i>Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i> .	York Region's <i>Long Term Water Project Master Plan Update, April 2004</i> .
25.(2) cont'd	(e) evaluate plans for water facilities such as pumping stations and reservoirs;	Plans for any such facilities are being evaluated by York Region as part of its updated water supply strategy and will be reviewed in the context of the updated watershed information.	
25.(2) cont'd	(f) identify and evaluate, (i) water conservation measures such as public education, improved management practices, the use of flow restricting devices and other hardware, water reuse and recycling, and practices and technologies associated with water reuse and recycling, (ii) water conservation incentives such as full cost pricing, and (iii) ways of promoting water conservation measures and water conservation incentives;	All upper-tier and single-tier municipalities in the Don River watershed have developed water efficiency plans and programs that identify and evaluate water conservation measures, incentives and ways of promoting water conservation measures and incentives. The interim report for the Don Watershed ORM subwatersheds, <i>Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i> supports the recommendations of the municipal water efficiency plans and programs and describes management strategies that would further contribute to achieving the objectives and targets of these plans/programs. York Region's water rates are currently based on full cost pricing.	See <i>Section 3.0 in Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i> , March 2007. See Sections 5.0 and 6.0 of York Region's <i>Water Efficiency Master Plan Update</i> for the identification, evaluation and recommendation of water conservation measures and education
25.(2) cont'd	(g) analyse the costs and benefits of the matters described in clause (f);	All upper-tier and single-tier municipalities in the Don River watershed have developed water efficiency plans and programs that analyse the costs and benefits of their recommended water conservation measures, incentives and promotion strategies.	See Section 5.2.3 of York Region's <i>Water Efficiency Master Plan Update</i> for the cost analysis of water conservation measures
25.(2) cont'd	(h) require the use of specified water conservation measures and incentives;	York Region's Water for Tomorrow program used specific water conservation measures and incentives as part of the original capital plan. The Water Efficiency Master Plan Update also recommends the use of specific water conservation measures and incentives.	See Section 6.0 of York Region's <i>Water Efficiency Master Plan Update</i> for the recommended program strategy

Subsection	Requirement	Conformity Assessment	Document Reference
25.(2) cont'd	(i) contain an implementation plan for those specified measures and incentives that reconciles the demand for water with the water supply;	York Region developed an implementation plan for the program as part of the scope of work in 1998. The Water Efficiency Master Plan Update has recommended an updated program strategy, the development of an implementation plan for the updated program will begin once the Master Plan Update has been finalized.	See Section 6.0 of York Region's <i>Water Efficiency Master Plan Update</i> for the recommended program strategy
25.(2) cont'd	(i) provide for monitoring of the water budget and water conservation plan for effectiveness.	York Region's Water Use Efficiency Master Plan Update recommends a monitoring and Evaluation program.	See Section 9.0 of York Region's <i>Water Efficiency Master Plan Update</i>
27.(1)	Except with respect to land in Settlement Areas, all development and site alteration with respect to land in a subwatershed are prohibited if they would cause the total percentage of the area of the subwatershed that has impervious surfaces to exceed, (a) 10 per cent; or	The interim report, <i>Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i> , includes recommendations regarding changes or enhancements to existing environmental monitoring programs and other area, site-or issue-specific monitoring requirements that provide for, or improve capacity for monitoring of the water budget.	<i>Don River Watershed – Conformity to Sections 24 and 25 of the ORMCP</i> (TRCA, March 2007).
27.(1) cont'd	(b) any lower percentage specified in the applicable watershed plan.	Current and projected future per cent impervious cover has been assessed for each Oak Ridges Moraine subwatershed (based on methods suggested in draft Technical Paper #13 which exclude Settlement Areas, utilizing subwatershed boundaries defined in draft Technical Paper #9). These estimates indicate that no Oak Ridges Moraine subwatersheds in the Don River Watershed exceed the 10% impervious cover criteria for current conditions (based on 2002 land use), nor will they exceed 10% upon build-out of municipal official plans approved as of February 2006. No lower percentage is specified.	See <i>Don River Watershed Impervious Cover Assessment Technical Briefing Note</i> (TRCA, 2007).

¹ Endnotes

- Ministry of the Environment (2005) Oak Ridges Moraine Conservation Plan – Watershed Plans, Technical Paper #9, June 2005.
- Ministry of the Environment (2005) Oak Ridges Moraine Conservation Plan – Water Budgets, Technical Paper #10, June 2005.
- Ministry of the Environment (2005) Oak Ridges Moraine Conservation Plan – Water Conservation Plans, Technical Paper #11, June 2005.
- Ministry of the Environment (2005) Oak Ridges Moraine Conservation Plan – Subwatersheds (Impervious Surfaces), Technical Paper #13, June 2005.

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #1/07, April 20, 2007

FROM: Carolyn Woodland, Director, Planning and Development

RE: **CONSERVATION AUTHORITIES MORAINÉ COALITION**
2006 Accomplishments

KEY ISSUE

Receipt of the 2006 accomplishments of the Conservation Authorities Moraine Coalition

RECOMMENDATION

IT IS RECOMMENDED THAT the report and brochure on the 2006 Accomplishments of the Conservation Authorities Moraine Coalition be received.

BACKGROUND

The nine conservation authorities with watersheds on the Oak Ridges Moraine (ORM) partnered together in late 2000 as the Conservation Authorities Moraine Coalition (CAMC). The mission of the CAMC is to:

- advance the science and understanding of the Oak Ridges Moraine; and
- work toward government, agency and community support for the form, function and linkages of the ORM.

The goals of the CAMC are to:

- define and protect natural heritage and water resource systems of the ORM through watershed studies and monitoring;
- support an accessible trail system;
- ensure effective stewardship services on the moraine; and
- build partnerships to provide education, information and land securement opportunities on the ORM.

Wayne Wilson, Chief Administrative Officer for the Nottawasaga Valley Conservation Authority, served as Chair of CAMC for 2006. David Burnett, Manager, Provincial and Regional Policy, Toronto and Region Conservation Authority (TRCA), has been the coordinator of the CAMC since mid-2001.

2006 ACCOMPLISHMENTS

Details of the 2006 Accomplishments of the CAMC are found in the brochure in Attachment 1 that has been distributed to municipal councils and senior staff, provincial MPPs, federal MPs, CAMC partners and ORM stakeholders. The brochure is also posted on the CAMC page on the TRCA website.

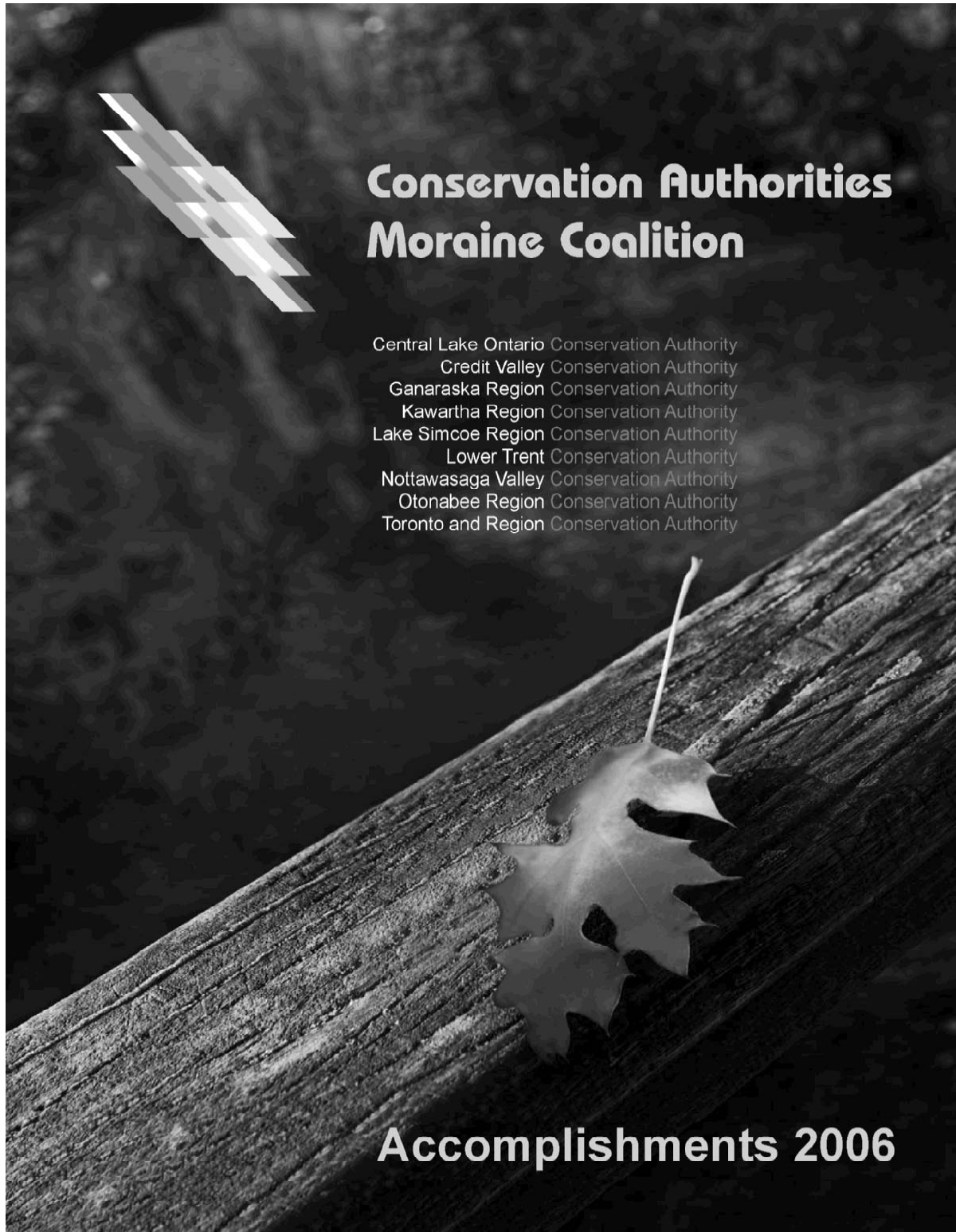
The close of 2006 marked the 5th year since Oak Ridges Moraine legislation was passed in December 2001. 2006 also marked the first full year of the "Caring for the Moraine Project", a strategic partnership among stewardship organizations to deliver coordinated outreach, education and watershed stewardship services to private landowners across the moraine. This resulted in 39 stewardship projects across the moraine in 2006 by CAMC member authorities, equalling in one year almost half the number of conservation authority stewardship projects on the ORM in the preceding 4 years (83 projects in total from 2002 to 2005).

Similarly, land securement projects (acquisitions, donations, conservation easements) on the ORM by conservation authorities in 2006 have shown great momentum since the enactment of the moraine legislation. From 2002 to 2005 CAMC member authorities secured a total of 1,842 acres of land. In 2006 alone, CAMC members secured 1,850 acres of environmentally sensitive ORM lands. Details for both stewardship and land securement projects are found in the Attachment 1.

Lastly, the 2006 Accomplishments brochure reports the highlights of the ongoing York, Peel, Durham, Toronto (YPDT) CAMC Groundwater Study, including the launch of the public web site. The brochure also lists and thanks the numerous partners that the CAMC has worked with in bringing these projects to fruition.

Hard copies of the CAMC 2006 Accomplishments brochure will be available at the board meeting upon request.

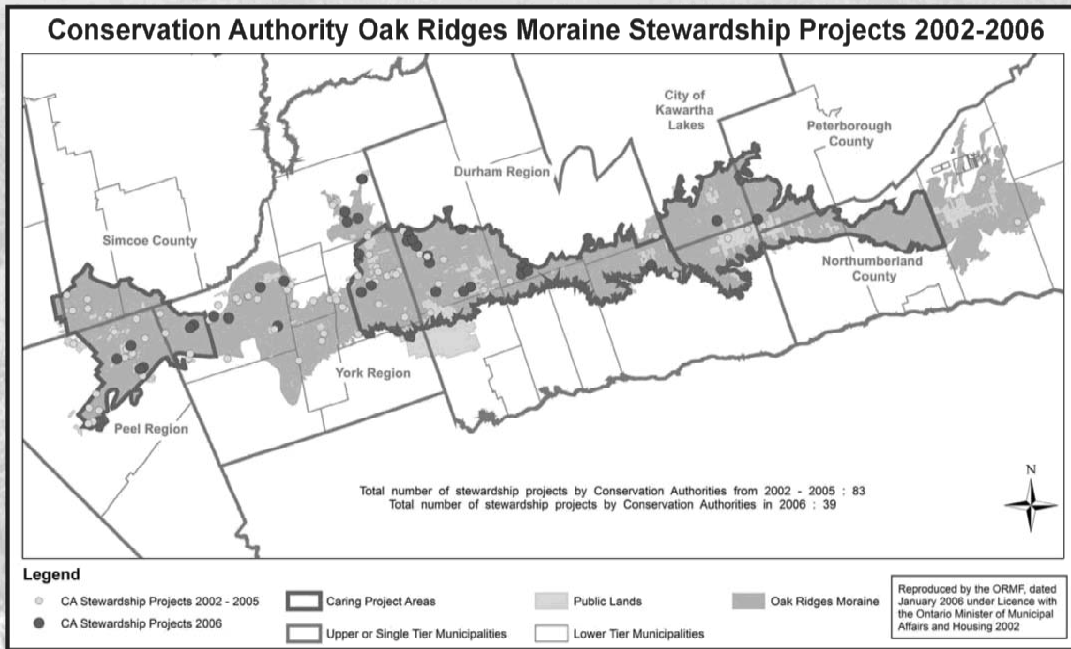
Report prepared by: David Burnett, extension 5361
For Information contact: David Burnett, extension 5361
Date: March 26, 2007
Attachments: 1



Conservation Authorities Moraine Coalition

Central Lake Ontario Conservation Authority
Credit Valley Conservation Authority
Ganaraska Region Conservation Authority
Kawartha Region Conservation Authority
Lake Simcoe Region Conservation Authority
Lower Trent Conservation Authority
Nottawasaga Valley Conservation Authority
Otonabee Region Conservation Authority
Toronto and Region Conservation Authority

Accomplishments 2006



Stewardship Highlights

A strategic partnership among stewardship organizations called the "Caring for the Moraine Project" (CMP) was officially launched in 2006. With funding from the Oak Ridges Moraine Foundation and the project partner organizations, the CMP partners are working together to provide coordinated services for landowners across the moraine. Following are the stewardship accomplishments from year one achieved through the CMP partnership.

- made 11 presentations to local groups and partner organizations
- contacted 63,658 landowners through newspaper flyers
- contacted 4,072 landowners through direct mail
- conducted 8 landowner workshops
- contacted nearly 20% of the Moraine residents
- visited 79 Moraine properties
- planted 2,500 prairie plants
- planted 170,500 trees over 86 hectares¹
- restored 2.4 kilometres of stream
- created 3 hectares of wetland
- protected 58 new hectares of wetland through 10-year agreements
- restored 6 hectares of prairie vegetation
- completed 14 well decommissioning and wellhead protection projects¹

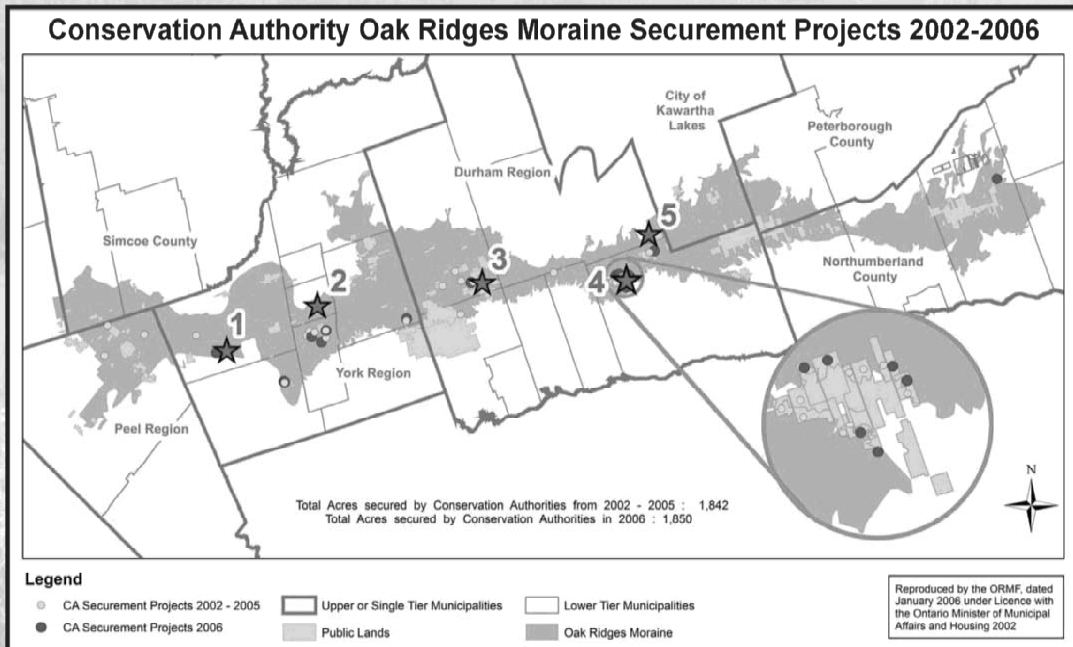
¹ includes several non-CMP projects by Conservation Authorities



Coffey Creek. Photo: Jeff Hladun, Trout Unlimited



THE MORaine. FOR LIFE.
The Oak Ridges Moraine Symposium
February 12-13, 2007
www.ormf.com/symposium



Securement Highlights

1. Slokker Canada Inc.

This purchase of 69 hectares in the Township of King contains part of the Black Duck Wetland Complex and tributaries of the Humber River. Funding partners include: the Regional Municipality of York, City of Toronto, Township of King, Oak Ridges Moraine Land Trust, the Conservation Foundation of Greater Toronto, and Slokker Canada Inc.

2. McLeod Wood Nature Reserve

The McLeod family donated 16 hectares of hardwood forest in Aurora, including a block of mature forest and part of the upper headwaters of the East Holland River watershed. The Town of Aurora, the Oak Ridges Moraine Land Trust, and Lake Simcoe Region Conservation Authority are consulting to manage the land in its natural state in perpetuity.

3. Wilder Forest and Wildlife Area

These 100 hectares in the Township of Uxbridge, in the headwaters of Duffins Creek, include a portion of the provincially significant Glen Major Wetland Complex. The Wilders donated seven hectares through the federal Ecogift Program plus \$1 million in stock and cash to the Conservation Foundation of Greater Toronto. The Foundation, the Toronto and Region Conservation Authority, the City of Toronto and the Regional Municipality of Durham contributed the balance.

4. Enniskillen Valley Land Acquisition Project

This 530 hectare green space was identified for public acquisition in the early 1960s. It features groundwater resources, open meadows, mature forests and wetlands in the headwaters of Clarington's Bowmanville Creek. The Oak Ridges Moraine Foundation, the Region of Durham, Ontario Ministry of Natural Resources and Nature Conservancy Canada have provided financial support for more than 485 hectares since 2004. In 2006, six new parcels (200 ha) were added.

5. East Cross Forest

Mr. Erast Huculak donated 223 hectares to the Nature Conservancy of Canada, who transferred title to Kawartha Region Conservation Authority (KRCA). It is Kawartha's newest natural area, and the first to lie within the Township of Scugog. This environmentally sensitive forest, farmland and pine plantation contains the headwaters of the East Cross Creek and lies entirely within the Oak Ridges Moraine. KRCA is planning to open a multi-use conservation area in 2009.

York Peel Durham Toronto Groundwater Study Highlights

Database

- an updated, 2006 version of the database has been distributed to all partner agencies
- now includes new data from Geological Survey of Canada, MOE, MNR (Oil & Gas wells), and Environment Canada

Geological Layer Construction

- now incorporates all of Peel, York, Durham and Toronto as well as areas to the east
- the geology of the Niagara Escarpment and the linkages to the sediments below the escarpment have been built into the layers along the west

Numerical Groundwater Flow Model

- completed a comprehensive report on the initial modeling work in York Region and the Toronto and Region Conservation Authority watershed
- expanded the model westward to the Credit and Humber watersheds and eastwards to cover the Central Lake Ontario watershed and some of the Kawartha watershed
- peer review of the model initiated
- continued to use model for local projects (e.g. southeast collector study to connect the York sewer system to a Lake Ontario treatment plant)

Other Initiatives

- launched project website (www.ypd-t-camc.ca)
- undertook seismic studies in Queensville and Port Perry
- assisted source water protection with technical expertise



More information @

Central Lake Ontario (CLOCA)
www.cloca.com - 905-579-0411

Credit Valley (CVC)
www.creditvalleycons.com - 905 670-1615

Ganaraska Region (GRCA)
www.grca.on.ca - 905-885-8173

Kawartha Region (KRCA)
www.kawarthaconservation.com - 705-328-2271

Lake Simcoe Region (LSRCA)
www.lsrca.on.ca - 905-895-1281

Lower Trent (LTC)
www.ltc.on.ca - 613-394-4829

Nottawasaga Valley (NVCA)
www.nvca.on.ca - 705-424-1479

Otonabee Region (ORCA)
www.otonabee.com - 705-745-5791

Toronto and Region (TRCA)
www.trca.on.ca - 416-661-6600

Conservation Authorities Moraine Coalition
www.trca.on.ca/corporate_info/conservation_authorities/

Caring for the Moraine Project
www.ormf.com/whats_Caring.html

YPDT Groundwater Study
www.ypd-t-camc.ca

Thank You to Our Partners

City of Toronto
Conservation Ontario
Great Lakes Sustainability Fund
Geological Survey of Canada
Landowners
Nature Conservancy of Canada
Oak Ridges Trail Association
Ontario Geological Survey
ORM Foundation
ORM Land Trust
ORM Municipalities
ORM Stewardship Councils
Province of Ontario
Save The Oak Ridges Moraine Coalition
Seneca College - King Campus
Wetland Habitat Fund/Wildlife Habitat Canada

CAMC Mission

- to advance the science and understanding of the Oak Ridges Moraine
- to work toward government, agency and community support for the conservation and protection of the form, function and linkages of the Oak Ridges Moraine

CAMC Goals

- to define and protect natural heritage and water resource systems of the Oak Ridges Moraine through watershed science and monitoring
- to support an accessible trail system
- to ensure effective stewardship services on the Oak Ridges Moraine
- to build partnerships to provide education, information and land securement opportunities on the Oak Ridges Moraine

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