



THE TORONTO AND REGION CONSERVATION AUTHORITY

Watershed Management Advisory Board Meeting #6/06

Chair:

Vice Chair:

Members:

Maria Augimeri

Gay Cowbourne

Frank Dale

Grant Gibson

Bonnie Littley

Shelley Petrie

Richard Whitehead

Dick O'Brien - Chair, Authority

February 9, 2007

10:30 A.M.

VICTORIA ROOM, BLACK CREEK PIONEER VILLAGE

AGENDA

- | | <u>Pages</u> |
|--|--------------|
| 1. ELECTION OF CHAIR FOR WATERSHED MANAGEMENT ADVISORY BOARD MEETING #6/06 | |
| 2. MINUTES OF MEETING #5/06, HELD ON DECEMBER 8, 2006 (Summary document enclosed herewith on <u>BLUE</u>) | |
| 3. BUSINESS ARISING FROM THE MINUTES | |
| 4. DISCLOSURE OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF | |
| 5. DELEGATIONS | |
| 6. PRESENTATIONS | |
| 6.1 A presentation by a representative of Parish Geomorphic, in regards to monitoring results of the Morningside Heights Tributary. | |

- 6.2 A presentation by Laurian Farrell, Water Resource Engineer, Etobicoke/Mimico/West Humber (Brampton), TRCA, in regards to item 9.1 - Flood Forecasting and Warning Program.

7. **CORRESPONDENCE**

8. **SECTION I - ITEMS FOR AUTHORITY ACTION**

- 8.1 **EROSION SEDIMENT CONTROL GUIDELINE FOR URBAN CONSTRUCTION**
(December 2006) 3-4

- 8.2 **CANADA-ONTARIO AGREEMENT RESPECTING THE GREAT LAKES BASIN ECOSYSTEM**
Renewal, Amendments and Development of New Annexes 5-18

- 8.3 **DUFFINS CARRUTHERS WATERSHED RESOURCE GROUP**
Appointment of Members 19-21

- 8.4 **SNELGROVE HABITAT REGENERATION** 22-25

9. **SECTION IV - ITEMS FOR THE INFORMATION OF THE BOARD**

- 9.1 **FLOOD FORECASTING AND WARNING PROGRAM** 26-32

- 9.2 **HUMBER RIVER WATERSHED PHOTO BOOK** 33-34

- 9.3 **WATERSHED COMMITTEE MINUTES**

- 9.3.1 **ROUGE PARK ALLIANCE**
Minutes of Meeting #6/06, held on September 22, 2006

- 9.3.2 **ROUGE WATERSHED TASK FORCE**
Minutes of Meeting #7/06, held on September 14, 2006
Minutes of Meeting #8/06, held on October 5, 2006
Minutes of Meeting #9/06, held on October 19, 2006

10. **NEW BUSINESS**

NEXT MEETING OF THE WATERSHED MANAGEMENT ADVISORY COMMITTEE #1/07
APRIL 20, 2007 AT 10:30 A.M. IN THE SOUTH THEATRE,
BLACK CREEK PIONEER VILLAGE

Brian Denney
Chief Administrative Officer

/af

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #6/06, February 9, 2007

FROM: Deborah Martin-Downs, Director, Ecology

RE: **EROSION SEDIMENT CONTROL GUIDELINE FOR URBAN CONSTRUCTION**
(December 2006)

KEY ISSUE

Approval of the Erosion and Sediment Control Guideline for Urban Construction (December 2006) prepared for the Greater Golden Horseshoe Conservation Authorities.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT the report entitled Erosion and Sediment Control Guideline for Urban Construction (December 2006) prepared for the Greater Golden Horseshoe Conservation Authorities (GGH CAs) be approved;

AND FURTHER THAT staff be directed to disseminate the report to municipal staff, the development industry and other agencies through technology transfer workshops and a posting on the Sustainable Technologies Evaluation Program website.

BACKGROUND

Each year thousands of tons of sediment are transported and deposited in rivers, lakes and wetlands, destroying fish habitat and impairing water quality. A major cause for this damage to the environment is poor sediment control at construction sites. To mitigate these impacts, sediment and erosion control measures have been required on construction sites for over a decade.

To achieve effective erosion and sediment control during construction, various conservation authorities and municipalities developed guidelines (such as the Toronto and Region Conservation Authority (TRCA) Erosion and Sediment Control Guidelines for Construction, April 1994) that provided technical and procedural guidance for the planning and design of erosion and sediment controls. However, even on sites where recommended practices are applied, sediment continues to be discharged at concentrations above those required to protect aquatic life.

RATIONALE

In an effort to improve sediment and erosion control, TRCA in collaboration with the GGH CAs have updated the existing guidelines and developed a consistent approach to erosion and sediment control across the GGH. The GGH CAs include Toronto and Region Conservation Authority, Conservation Halton, Credit Valley Conservation, Central Lake Ontario Conservation Authority, Lake Simcoe Region Conservation Authority, Nottawasaga Valley Conservation Authority, Grand River Conservation Authority, Hamilton Conservation Authority, and Niagara Peninsula Conservation Authority.

This new guideline titled “Erosion and Sediment Control Guideline for Urban Construction (December 2006)” includes best management practices from various erosion and sediment control guidelines currently applied within the GGH.

It provides proponents and practitioners with:

- a review of erosion and sedimentation processes;
- an overview of the current regulatory framework in which these undertakings are reviewed;
- clarifies the roles and responsibilities of those involved in the construction process;
- new best management practices and technologies;
- improved site plan guidance such as the importance of a multi barrier approach (e.g. erosion prevention measures followed by sediment controls);
- dynamic plans; and,
- improved inspection, monitoring and maintenance protocols.

The Erosion and Sediment Control Guideline for Urban Construction (December 2006) document has been reviewed by the GGH CAs, Fisheries and Oceans Canada, Environment Canada, Ontario Ministry of Natural Resources, consulting engineers, the development industry and municipalities. It is intended to be applied within the GGH watersheds to protect and preserve the water quality, aquatic and terrestrial habitats, and form and function of their natural water resources. A compact disc (CD) copy of the Erosion and Sediment Control Guideline for Urban Construction (December 2006) is included with the agenda package. The document can also be found on the Sustainable Technologies Evaluation Program website < <http://www.sustainabletechnologies.ca/>> .

To ensure the success of this guideline, it is important that staff be directed to disseminate this document to municipal staff, the development industry as well as other agencies through technology transfer workshops, publications and the internet. A workshop scheduled for Spring 2007 will introduce this guideline to municipal staff, consulting engineers, contractors and the development industry.

FINANCIAL DETAILS

Financial contributions to develop and produce the guideline were provided by the Government of Canada’s Great Lakes Sustainability Fund, Fisheries and Oceans Canada, Environment Canada and the Ministry of Environment through the Toronto and Hamilton Remedial Action Plans (RAPs).

Costs to deliver the training workshop will be provided by the financial contributions from the agencies listed above.

Report prepared by: Dana Khademi, extension 5353

For Information contact: Glenn MacMillan , extension 5212

Date: January 30, 2007

Attachments: A digital copy (CD) of guideline is included in the agenda package

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #6/06, February 9, 2007

FROM: Adele Freeman, Director, Watershed Management

RE: **CANADA-ONTARIO AGREEMENT RESPECTING THE GREAT LAKES BASIN ECOSYSTEM**
Renewal, Amendments and Development of New Annexes

KEY ISSUE

The current Canada - Ontario Agreement (COA) will expire March 31, 2007. The Government of Ontario is seeking public comment on a proposal to work with the Government of Canada to renew the current COA for up to three years with the possibility of amending the existing Annexes and/or developing new Annexes to the agreement.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT Toronto and Region Conservation Authority (TRCA) submit comments on the Environmental Bill of Rights Registry (EBR) to the Government of Ontario acknowledging strong support for the three year extension of the Canada-Ontario Agreement (COA) to ensure COA related activities to protect the Great Lakes are maintained;

THAT the Government of Ontario be encouraged to develop new Annexes which aim to conserve biological diversity, encourage the promotion of sustainable communities, better understand the impacts of climate changes on the Great Lakes and determine strategies to adapt to a changing climate and protect the Great Lakes as a source of drinking water and unique ecosystem of global significance;

THAT the provincial and federal governments be requested to increase the funding for TRCA's jurisdiction which includes Toronto Remedial Action Plan (RAP) Area to \$200,000,000 (2007-2010) to provide partner funding to significantly advance the implementation of the City of Toronto's Wet Weather Flow Management Master Plan and other plans now in place to move the Toronto Area of Concern closer to a target of becoming an "Area of Recovery";

THAT the federal and provincial governments be urged to fund the Healthy Great Lakes proposal submitted previously by Conservation Ontario to address watershed management issues throughout Ontario;

AND FURTHER THAT TRCA's watershed municipalities and Conservation Ontario be advised of TRCA's comments regarding COA.

BACKGROUND

COA is a framework through which the governments of Canada and Ontario work cooperatively to restore, protect and conserve the aquatic health of the Great Lakes Basin Ecosystem. COA assists the Government of Canada in meeting commitments under the Canada - United States (U.S.) Great Lakes Water Quality Agreement (GLWQA). The ministries of the Environment, Natural Resources, and Agriculture, Food and Rural Affairs are Ontario's signatories to the current COA and are responsible for Ontario's commitments under the agreement. Signed in March 2002, the current COA expires on March 22, 2007.

The first COA was signed in 1971 in advance of the 1972 Canada-U.S. Great Lakes Water Quality Agreement. Subsequent COAs were signed in 1976, 1982, 1986, 1994 and 2002 in response to changes to the GLWQA, emerging priorities for Great Lakes rehabilitation and protection, and the need for a broader aquatic ecosystem approach.

As the Government of Ontario is actively participating in the current review of the GLWQA, the Government of Ontario is proposing a three-year extension to the current COA and is exploring the notion of amending existing Annexes, or developing new ones. This will allow the province to: (1) participate fully in the review of the GLWQA; (2) respond to potential changes to the GLWQA that are ultimately proposed and any subsequent renegotiation of the GLWQA; and (3) address emerging issues with a comprehensive renegotiation of COA following the conclusion of the GLWQA process.

There are four Annexes to the current COA:

- 1) Areas of Concern –There are currently 15 Canadian Areas of Concern at various stages of progress toward completion of their remedial action plans. Toronto and Region is considered an AOC.
- 2) Harmful Pollutants
- 3) Lake-wide Management
- 4) Monitoring and Information Management.

The Proposal

The Government of Ontario is seeking public comment regarding their proposal to work with the Government of Canada to renew the current COA for up to three years with the possibility of amending the existing Annexes and/or developing new Annexes to the agreement. The topics proposed for possible amendment of existing and/or development of new Annexes include the following: (1) Reduction of harmful pollutants; (2) Conservation of biological diversity; (3) Promotion of sustainable great lakes communities; (4) Climate change and adaptation; and (5) Protection of Great Lakes as sources of drinking water. Submissions with respect to this proposal will be shared with the Government of Canada.

Recommendations to the Governments

- In lieu of the possible review of the GLWQA, TRCA is supportive of the Government of Ontario's rationale for extending the current COA by three years.
- TRCA is encouraged by the forward thinking to expand COA to include issues not presently addressed in the current COA. Several of the issues listed on the EBR for comment are of critical importance to TRCA, as described below.

Conservation of Biological Diversity

The Toronto and Region is one of the fastest growing regions in North America, with population anticipated to increase by 48% in the Greater Toronto Area the next 25 years. As the region grows so does the pressure it places on the environmental resources, including biological diversity. TRCA is presently working with its municipal and provincial partners to ensure the best possible strategy is developed to protect terrestrial natural heritage in the region, in light of current and expected population and development. It is a significant challenge for this region. On Friday January 26, 2007, the Authority unanimously approved the Toronto and Region Terrestrial Natural Heritage System Strategy (TNHSS) – a significant milestone in regional cooperation and planning. The TNHSS aims to protect natural heritage as a functional ecosystem unit and enables municipalities, planners and biologists to establish targets for the quality, distribution and quantity of terrestrial natural heritage needed in the landscape in order to promote biodiversity.

TRCA staff has been involved with development of the Lake Ontario Biodiversity Conservation Strategy, a Lake Wide Management Planning (LaMP) initiative lead by the Nature Conservancy of Canada and the U.S. Nature Conservancy. This initiative is focused on making the linkage between the protection of biological diversity in the Great Lakes Basin and protection of ecosystem function – making the connection of the importance of the watershed to the lake.

- **TRCA supports the Government of Ontario in elevating the importance of conserving biodiversity by focusing attention on the issue. TRCA recommends that the Government of Ontario consider the aforementioned initiatives as partnership opportunities.**

Promotion of Sustainable Great Lakes Communities

The Toronto and Region exerts tremendous environmental pressure on Lake Ontario. TRCA recognized there was a need to go beyond the protection of greenspace and ensuring water quality in order to preserve and protect life in this region. The need for sustainable communities is important to protect the Great Lakes ecosystem, as well as the health and economy of the people living and working in the region. TRCA has adopted a vision for The Living City – a vision for the region to be greener, cleaner and healthier. With this vision, TRCA is pushing the envelope, moving into sectors that go beyond what is traditionally considered a conservation authorities (CAs) environmental role – partnering with others to green hospitals, retail and other businesses; demonstrating the utility of sustainable technologies and other means to improve energy efficiency in industry, schools and homes. This work contributes directly to current government initiatives to establish a “Culture of Conservation”.

A key component to encourage the promotion of sustainable Great Lakes communities is to engage the local municipalities in the discussion and development of germane plans and policies. Local governments have direct influence on activities that will impact the Great Lakes; their input is critical in order to make plans and policies relevant.

- **TRCA is supportive of the Government of Ontario strengthening partnerships with organizations such as the Great Lakes and St. Lawrence Cities Initiative in order to increase local governments’ voice in Great Lakes planning initiatives.**

- **TRCA recommends that CAs continue to have a vital role in the implementation of COA initiatives.**

Protection of the Great Lakes as Sources of Drinking Water – link to watershed planning

The importance of the Great Lakes as a source of drinking water cannot be emphasized enough; for example Lake Ontario provides drinking water to over 50% of Ontario residents. Studies show that the protection of drinking water, particularly for the western half of Lake Ontario will require a regional “watershed to receiving water quality based focus” for source water protection due to the intensive urbanization, projected growth and complex lake currents in the nearshore.

Through source water protection funding, work is underway by a Lake Ontario collaborative partnership amongst conservation authorities in the proposed source water protection regions from Niagara to Prince Edward County, respective municipalities responsible for operating municipal drinking water systems, Environment Canada and the Ontario Clean Water Agency. The collaborative's work is aimed at identifying the risks to drinking water and measures contributing to the protection of water quality in Great Lakes nearshore areas, tributaries and aquifers. In light of such work already being carried out under the auspices of source water protection, TRCA considers it imperative not to duplicate such work where it is underway using COA resources, provided that source water protection funding and initiatives are not in jeopardy – but to provide for complementary initiatives. For example, COA could set water quality and quantity targets for the individual Great Lakes which can be used to ensure that locally-based source protection plans will provide sufficient protection to the overall Great Lakes. Such targets can also be used for monitoring trends. Likewise efforts at assessing and limiting emerging chemical and pharmaceutical threats to drinking water are best done at the international-federal-provincial level. TRCA encourages the province to take on a leadership role of promoting integrated watershed management, of which drinking water protection is one component. The work underway by partner CAs to characterize their watersheds will help to provide a basis for the development of integrated watershed plans and risk management plans. COA support for the development and implementation of these plans will also address other COA objectives including such topics as biodiversity, natural heritage and climate change. (See below: Focus on Watershed Planning).

- **TRCA encourages the Government of Ontario to take on a leadership role of promoting integrated watershed management.**

Climate Change Understanding and Adaptation

Adaptation

Recognizing the impact climate change will have on our watershed, TRCA staff has begun to incorporate climate change scenarios into the development of the next generation of watershed plans. Significant on-ground projects such as the Don Mouth Naturalization and Portlands Flood Protection have also been designed with some parameters of climate change (i.e. higher intensity storms).

Understanding

Improving our understanding of how our region will be altered under a new climate regime is imperative as TRCA continues to develop and update plans. Our planning needs to consider climate change impacts on ecosystem function (including biodiversity), nearshore impacts, infrastructure (such as water supply and waste water) and perhaps most importantly, its impact on water quality. And while, TRCA supports future research and the development of regional and local scale models, we stress that the implementation of adaptation and mitigation measures cannot be delayed in lieu of exacting the science.

Mitigation

The Living City vision and the projects stemming from it aim to reduce impacts on the environment with a significant focus on reducing greenhouse gas emissions. TRCA, through The Living City projects, aims to demonstrate the practical means we currently have available to reduce greenhouse gases emissions.

Developing partnerships is key as TRCA moves into sectors which have not been traditionally considered by CAs. TRCA is actively pursuing public-private partnerships such as that which has developed at Block 39 where TRCA, the City of Vaughan, Powerstream, zerofootprint and several major builders are developing a sustainable neighbourhood to showcase energy efficiency, on-site stormwater controls and geothermal heating and cooling. The City of Toronto is actively pursuing green building standards.

Stormwater management is a core function of CAs. As the predictions of more intense and increased flooding concern our core function, TRCA staff is working with business and academic partners to further the research into technologies that will reduce stormwater quantity (i.e. greenroofs, porous pavement) as well as to develop guidelines to improve stormwater quality (i.e. sediment and erosion control guidelines).

- **TRCA encourages the Government of Ontario to focus attention on issues relating to climate change – include adaptation, mitigation and understanding in the next COA.**

Focus on Watershed Planning

As mentioned above, TRCA is supportive of the Government of Ontario to include the issues discussed above in the extended COA. However, TRCA strongly encourages the inclusion of a watershed annex and/or the concept of watershed planning to be integrated into these issues. Watershed plans are required under the Oak Ridges Moraine Conservation Plan and the Clean Water Act; these plans are necessary to help direct development and accommodate growth. The integrated watershed plans being developed by TRCA focus on the interdependencies among watershed systems and evaluate proposed actions based on their ability to achieve multiple and synergistic benefits (i.e. co-benefits).

- **TRCA recommends the inclusion of a watershed management Annex or at least strong references to the importance of watershed planning and management in the next COA.**
- **TRCA recommends the government of Ontario explore means to strengthen the linkages between watershed planning and management and the Lake wide Management Plans.**

RAP

The TRCA jurisdiction includes areas which lie within and outside of a designated Area of Concern. The funding provided through RAP has assisted in making TRCA one of the leading agencies in stormwater management. Ideas for monitoring, research and development of stormwater technologies are incubated in the RAP area and distributed to a wider area. This has helped reduce harmful pollutants from reaching the Lake – one of the key objectives of the current COA. However, there is a recognition that we must think beyond remedial actions and need to be more protective in protecting those watersheds which lie outside the AOC designations.

On behalf of Environment Canada and the Ontario Ministry of the Environment, TRCA has been responsible for the administration of the Toronto and Region Remedial Action Plan since 2002. Over the past five years, the RAP funds have been extremely important in providing leverage and seed money. Important monitoring activities, education and stewardship and habitat works have been accomplished as a result of this funding. It is well acknowledged that the scale of Toronto's issues requires a substantial amount of financial commitment in order to restore environmental conditions. As a result, the Toronto and Region RAP Management Team has adopted resourceful methods to use the funds provided through COA; for example funding is spent to develop staff capacity in our municipal partners by providing them with the information and knowledge about green technologies, improved stormwater management techniques and improved spills response. TRCA encourages the governments of Ontario and Canada to continue this source of funds and would strongly encourage them to increase funding levels in order to meet the level of challenge we have in this region to restore environmental conditions in a rapidly developing area and become more aligned with the scale of funding contributed from the municipalities.

- **TRCA requests that the provincial and federal governments increase the funding for TRCA's jurisdiction which includes Toronto Remedial Action Plan (RAP) Area to \$200,000,000 (2007-2010) to provide partner funding to significantly advance the implementation of the City of Toronto's Wet Weather Flow Management Master Plan and other plans now in place to move the Toronto Area of Concern closer to a target of becoming an "Area of Recovery".**

Recognizing the role of Conservation Authorities in protecting the Great Lakes

While the CAs complete most of their work in the watersheds, we recognize that ultimately this contributes to the protection and restoration of the Great Lakes. Recognizing this important role, Conservation Ontario (CO) in November 2006, hosted a workshop to discuss CA priorities as they relate to the Great Lakes. A paper was prepared on the outcomes of the workshop and CO Council endorsed a Position on Great Lakes Sustainability in December 2006 (Attachment 1).

Land use and its associated impacts on the Great Lakes remains a significant challenge and impediment to protecting Great Lakes water quality. In the past, the federal and provincial governments were able to work within their jurisdictions to improve conditions in the Great Lakes (i.e. legislation, point source controls and reductions in toxics). However, land use planning and management are fundamentally the responsibility of local governments. The CAs are well positioned institutionally to work with municipalities to implement watershed management plans and other initiatives that protect water quality in the watershed and ultimately the Great Lakes.

- **TRCA recommends that the Government of Ontario strengthen its partnership with, and build capacity in, the CAs.**

Monitoring

Funds provided by the Government of Ontario through the RAP program are leveraged with municipal contributions to support the Regional Monitoring Network (RMN). The RMN aims to fill in water quality data gaps created when the province reduced its water quality monitoring network. The RMN is designed to provide information regarding ambient conditions; it does not provide detail regarding the impacts of wet weather flow on the lake or capture the conditions of water quality within the nearshore. Monitoring to better understand these conditions/situations is necessary – it is recommended the Government of Ontario strengthen its commitment to provide for additional monitoring stations and provide the technical expertise required to analyze the information generated.

- **TRCA recommends that the Government of Ontario strengthen its commitment to monitoring and provide assurances that analysis of the data will be undertaken and reported out to the public in a timely manner.**

Report prepared by: Kelly Montgomery, extension 5576
For Information contact: Adele Freeman, extension 5238
Date: January 26, 2007
Attachments: 2

1) Conservation Ontario Great Lakes Positioning

#C.W. 62/06 Moved by: Jim Kelleher Seconded By: Fred Nix

THAT the Conservation Ontario proposed positioning for the Great Lakes Water Quality Agreement Review be utilized in a submission to the Parties responsible for the Review and shared with the Great Lakes Cities Initiative

AND THAT the associated "Conservation Ontario Position on Great Lakes Sustainability" be endorsed

AND THAT involvement with the Great Lakes Cities Initiative be pursued.

CARRIED

Attachment 2 - From Conservation Ontario Council Agenda #6/06, December 11, 2006

To: *Conservation Ontario Council - Committee of the Whole*

From: *Bonnie Fox (CO)*

Subject: *Conservation Ontario Great Lakes Positioning*

Date: *November 23, 2006*

Background

- The review of the GLWQ Agreement (working group reports due end of December 2006) and the renegotiation of the Canada-Ontario Agreement (current COA expires March 2007; discussions on a 2 year renewal are underway) are opportunities for Conservation Ontario to champion the watershed approach and to establish our collective abilities and roles in the furtherance of the health, protection and restoration of the Great Lakes.
- Council endorsed Conservation Authority participation in the review of the Great Lakes Water Quality Agreement (the Review) in April 2006.
- To assist CA representatives on the GLWQA review groups, a *Great Lakes Priorities Workshop* was held (co-sponsored by Toronto and Region CA and Conservation Ontario) on November 9, 2006.
- 15 CAs were represented with a total of 22 staff in attendance, as well as, CO staff, Craig Mather, and Dr. Gail Krantzberg. Dr. Gail Krantzberg prepared a paper "Setting Conservation Ontario's Great Lakes Priorities" to facilitate discussions at the workshop. In closing the workshop, attendees were asked to provide additional comments in writing to CO by November 13th. Gail finalized the workshop discussion paper to include the workshop outcomes as the basis from which recommended Great Lakes priorities could flow and it was circulated by CO to all CAs and workshop attendees for feedback. The full document can be accessed on CO's "members only" website at http://www.conservation-ontario.on.ca/members/member_policy_planning/great_lakes/great_lakes_index.htm
- Based on feedback received, the proposed Vision/Mission/Principles (see Attachment 1) have been modified from the workshop report as a basic positioning framework for the sustainability of the Great Lakes and St. Lawrence ecosystem.

Upcoming Points of Influence/Participation:

Great Lakes Water Quality Agreement (GLWQA) - Review

- Working group reports are due by end of December. Elements of proposed **CO positioning** to submit by end of December:
 - CO supports the International Joint Commission's *Special Report to Governments* with regard to:
 - Development of a Binational Action Plan with achievable goals and timelines, measures for evaluating performance, and provisions for

- monitoring and reporting for greater accountability when it comes to clean up of the Great Lakes
 - Invitation of municipalities to join in development of the Binational Action Plan
 - Identification of watersheds as the geographic units to coordinate, integrate and implement programs called for by the Agreement and set out in the Binational Action Plan
 - Inclusion of human health as a clear objective
 - Utilization of an ecosystem approach. As stated in the IJC report, “The comprehensive watershed planning conducted by the Conservation Authorities in Ontario also constitutes an ecosystem approach”
(NOTE: CO calls it integrated watershed management)
 - Ontario’s Conservation Authorities have a strong track record in delivery of watershed-based, on-the-ground partnered actions to protect and restore the waters and associated lands of the Great Lakes at the local and regional scale.
 - Conservation Authorities as representative of “watershed communities” are prepared to work with all levels of government and other stakeholders to meet the goals and objectives of the Great Lakes Water Quality Agreement.
 - Conservation Ontario has a Position on Great Lakes Sustainability (Attachment 1)
 - Conservation Ontario respectfully requests a seat at the table for development of a Binational Action Plan recommended by the International Joint Commission (IJC).
- Governance and Institutional Arrangements (Nov 29-30 workshop)
 - Don Pearson received an invitation as a “Municipal Government” representative to participate in two day discussions regarding the governance and institutional arrangements supporting the GLWQA.
 - This event is “by invitation only” and represents a significant opportunity to liaise with the key, binational Great Lakes leaders and to explore the best way to position “watershed communities” (and therefore, Conservation Authorities) in the GLWQA.

Canada/Ontario Agreement Respecting the Great Lakes Basin Ecosystem (COA) -
Renewal

- In the Environmental Commissioner of Ontario’s Annual Report 2005-2006 “Neglecting our Obligations”, *The ECO recommends that the MOE ensure transparency and a mechanism of public involvement and accountability in the new COA agreement.*
- On December 4, 2006, the Ministry of the Environment is hosting a “**Great Lakes Municipalities Workshop**: Great Lakes Drinking Water, Clean Water Act, and COA Renewal”. Representatives from ERCA and CO will be attending the workshop to participate in two breakout groups after a day of presentations. The COA Group will be examining options and priorities for COA renewal/renegotiation while a Source Protection Group will be discussing issues and ideas with regard to the Great Lakes elements of source protection.
- There will be a brief presentation on the Great Lakes & St. Lawrence Cities Initiative.

- This event is “by invitation only” and represents a significant opportunity to liaise with the key municipal Great Lakes leaders and the key provincial staff responsible for renegotiating COA and, as appropriate, to test the proposed positioning for the GLWQA (see above).

Environmental Commissioner of Ontario & Pollution Probe Roundtables and Public Meetings re: Future of the Great Lakes

- Roundtable discussions and public meetings on the Future of the Great Lakes will be occurring across the Province from Nov 28th – Dec 7th; as well as, the week of January 7th in Toronto.
- All Conservation Authorities have received notice and CA staff as well as CO staff will be participating at various locations.
- This is an additional opportunity to promote the fact that Healthy Great Lakes rely upon Healthy Watersheds and the importance of watershed-based, partnered actions by CAs.

Conclusion:

Great Lakes positioning will evolve through ongoing involvement in the Review of the Great Lakes Water Quality Agreement and the Renewal of the Canada-Ontario Agreement. The Review and Renewal initiatives present significant opportunities for Conservation Ontario to champion and further develop the understanding of an integrated watershed management approach and of the Great Lakes as a source of drinking water. The Review and Renewal also present an opportunity to formally establish our collective abilities and roles in the furtherance of the health, protection and restoration of the Great Lakes.

Strategic Plan link

- **Strategic Direction #1: Influence Policy Development**
 - Strategic Action #1.** Develop and promote a model comprehensive policy framework for integrated watershed management in Ontario.
 - Strategic Action #2.** Capitalize on new legislation/regulations and funding opportunities & program support for Source Water Protection and water
 - Strategic Action #5.** Manage opportunities to promote CA collective policy priorities.

Recommendations:

THAT the Conservation Ontario proposed positioning for the Great Lakes Water Quality Agreement Review be utilized in a submission to the Parties responsible for the Review and shared with the Great Lakes Cities Initiative,

AND THAT the associated “Conservation Ontario Position on Great Lakes Sustainability” be endorsed for use by staff attending consultations on Great Lakes Water Quality Agreement Review and the renewal of the Canada Ontario Agreement,

AND THAT the governments of Ontario and Canada be informed that Conservation Ontario is concerned with, the approaching expiry of the Great Lakes Canada Ontario Agreement in March 2007 and, the associated loss of funding support for actions to protect and restore Healthy Great Lakes,

AND FINALLY THAT involvement with the Great Lakes Cities Initiative be pursued.

Attachment 1

**CONSERVATION ONTARIO
POSITION ON GREAT LAKES SUSTAINABILITY**

VISION:

The Great Lakes Basin is a global treasure and the Great Lakes and St. Lawrence region is one where people, the environment and the economy are healthy and thrive for generations to come.

MISSION:

Conservation Ontario will work with all orders of government and basin residents as stewards to protect and improve the unique, shared Great Lakes and St. Lawrence ecosystem for present and future generations.

GUIDING PRINCIPLE FOR THE GREAT LAKES:

Apply an integrated watershed management approach to planning and implementation in order to protect and improve the Great Lakes and St. Lawrence Ecosystem.

PRINCIPLES FOR HEALTHY GREAT LAKES

Behaviors and actions implemented through an integrated watershed management approach should ensure a sustainable and resilient Great Lakes and St. Lawrence ecosystem that encompasses environmental, social, and economic health.

Environmental

The Great Lakes and St. Lawrence ecosystem must provide ecological functions and natural heritage systems, to support a diverse, healthy, balanced, self-sustaining biological community. The ecological balance of the resource has been damaged by a wide range of invasive species, unsustainable land use, ongoing and emerging contamination, and other threats, and Conservation Ontario must focus policies and programs to help reduce and ultimately eliminate these threats.

Working with municipal, provincial, federal agencies and partners for the sustainability of the Great Lakes and St. Lawrence ecosystem, Conservation Ontario will:

- contribute to management of water and other physical elements to ensure the natural hydrologic cycle is able to sustain a balanced variety of uses

- advance programs so that sustainable natural processes, pathways and landscapes are maintained and improved so that water quality and quantity support natural biodiversity and ecosystem functions.
- engage Great Lakes stakeholders in policies and programs such that the built environment and urban fabric are compatible with and enhances the natural environment.

Social

An overarching social principle necessary for Great Lakes protection is that the citizens understand and take responsibility for the Great Lakes and St. Lawrence River ecosystem to provide present and future generations opportunities for enhanced quality of life. Conservation Ontario must focus policies and programs to advance stewardship and human health.

Working with municipal, provincial, federal agencies and partners for the sustainability of the Great Lakes and St. Lawrence ecosystem, Conservation Ontario will:

- develop and implement watershed plans that foster good health by addressing threats to the quality and quantity of source water, noting that the Great Lakes is a source of drinking water to 8 million people in Ontario.
- work with stakeholders to educate citizens about the links between the environment and human health, and promote respect for and stewardship of the ecosystem in which they live.

Economic

The Great Lakes and St. Lawrence Region should have a healthy economy and business climate that delivers quality goods and services, making use of natural resources in a manner that protects those natural assets for future generations. Conservation Ontario must focus policies and programs to encourage application of full-cost accounting to emphasize the value of natural capital and therefore encourage sustainable use.

Working with municipal, provincial, federal agencies and partners for the sustainability of the Great Lakes and St. Lawrence ecosystem, Conservation Ontario will:

- advance innovative technologies and programs to support the development of new and existing public and private sector businesses that can operate in harmony with the vision for the Basin and add wealth to the region.
- work with all orders of government and other stakeholders to advance sustainable infrastructure and necessary improvements to infrastructure.
- support initiatives that increase the Region's attractiveness to new and existing industry and business for capital investment.

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #6/06, February 9, 2007

FROM: Adele Freeman, Director, Watershed Management

RE: **DUFFINS CARRUTHERS WATERSHED RESOURCE GROUP**
Appointment of Members

KEY ISSUE

The formal appointment of watershed residents, regional and local municipal members and community council representatives, public agency representatives, representatives from community groups, businesses and business organizations, academic institutions and Toronto and Region Conservation Authority's member to the Duffins Carruthers Watershed Resource Group.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT the appointments, as set out in the staff report, be approved, effective immediately, until December 31, 2007;

AND FURTHER THAT Regional Councillor Colleen Jordan and Gary Bowen, Duffins Carruthers Watershed Specialist, remain as Toronto and Region Conservation Authority's (TRCA) appointed members to the Duffins Carruthers Watershed Resource Group (DCWRG).

BACKGROUND

Members of the DCWRG had requested that the term of their committee be extended in order to fulfill the mandate of the committee and to ensure that sufficient progress was made with respect to implementing A Watershed Plan for Duffins Creek and Carruthers Creek. Approval for this extension was granted at Authority Meeting #3/06, held on April 28, 2006 (Resolution #A91/06). The term of the Duffins and Carruthers Watershed Resource Group was extended for one year and will end on December 31, 2007.

In the interest of maintaining consistency and momentum through to the end of 2007, it is preferred that current members continue their commitment to the DCWRG for the duration of the extension. Consideration will also be given to new appointments of citizen and non-governmental organizations interested in working on implementation of the watershed plan, and it is requested that municipal partners suggest appropriate candidates.

Due to the municipal elections held in November, 2006, it is appropriate that watershed municipalities confirm their appointments. Letters were sent to regional and local municipalities and community council representatives, requesting that they appoint delegates to the DCWRG. Letters were also sent out to former members (watershed residents, representatives from community groups, businesses, business organizations and public agency representatives) to inquire whether they wished to continue. Both Fisheries and Oceans Canada and Transport Canada have confirmed their continued participation on DCWRG. We expect to hear back from the Ministry of Natural Resources on their appointment and anticipate that the Ontario Ministry of Agriculture and Food and Rural Affairs and the Ontario Ministry of Environment will no longer be participating.

It is also recommended that the previous TRCA appointments of Regional Councillor Colleen Jordan and Gary Bowen, Duffins Carruthers Watershed Specialist, continue to serve as TRCA's representatives.

The following table summarizes the DCWRG for 2007.

| |
|--------------------------|
| TRCA APPOINTMENTS |
|--------------------------|

| Member | Representing |
|------------------|------------------------|
| To be Determined | Chair of the Authority |
| Gary Bowen | Watershed Specialist |
| Colleen Jordan | Town of Ajax |

| |
|---|
| REGIONAL AND LOCAL MUNICIPALITIES AND COMMUNITY COUNCILS |
|---|

| Member | Representing |
|-------------------------------|---------------------------------|
| Joe Dickson | Town of Ajax |
| Scott Crawford (alternate) | Town of Ajax |
| Jack Heath | Town of Markham |
| Lilli Duoba (alternate) | Town of Markham |
| David Pickles | City of Pickering |
| Rick Johnson (alternate) | City of Pickering |
| David Ryan | Regional Municipality of Durham |
| Alex Georgieff (alternate) | Regional Municipality of Durham |
| Jack Heath | Regional Municipality of York |
| Laura Atkins-Paul (alternate) | Regional Municipality of York |
| Susan Self | Township of Uxbridge |
| Wayne Emmerson | Town of Whitchurch-Stouffville |
| Clyde Smith (alternate) | Town of Whitchurch-Stouffville |

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|----------------------------|
| WATERSHED RESIDENTS |
|----------------------------|

| Name | Representing |
|------------------|----------------------|
| Dr. Doug Dodge | Town of Ajax |
| Dr. Neil Burnett | Town of Ajax |
| Alan Wells | Township of Uxbridge |

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|------------------------|
| PUBLIC AGENCIES |
|------------------------|

| Name | Representing |
|----------------------|-----------------------------|
| Steve Woolfenden | Fisheries and Oceans Canada |
| Patricia Short-Gallé | Transport Canada |

| |
|-------------------------------|
| BUSINESS ORGANIZATIONS |
|-------------------------------|

| Name | Representing |
|----------------|------------------------|
| Mr. Neil Acton | Deer Creek Golf Course |

Report prepared by: Joanna Parsons, extension 5575
For Information contact: Gary Bowen, extension 5385
Date: January 26, 2007

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #6/06, February 9, 2007

FROM: Adele Freeman, Director, Watershed Management

RE: SNELGROVE HABITAT REGENERATION

KEY ISSUE

To update the Authority on the completion of the 2003-2006 Snelgrove Reach Habitat Regeneration Project.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT staff continue to work with the Region of Peel, City of Brampton and community partners to implement and monitor restoration activities upstream and downstream of the Snelgrove Reach to increase ecosystem connectivity and strengthen community participation within this portion of the Etobicoke Creek watershed.

BACKGROUND

At Authority Meeting #7/03, held on September 26, 2003, Resolution #A201/03 was approved, as follows:

THAT the 2003 - 2006 Snelgrove Reach Habitat Regeneration Plan be approved;

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

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

In 1994, the Valley and Stream Corridor Reach Plan for Snelgrove was developed to guide future terrestrial and aquatic habitat enhancements in this area. The Snelgrove reach plan was updated in 1999 to be consistent with new water quality, aquatic habitat, flora and fauna surveys and land use information, and incorporated information about regeneration efforts in the area that were undertaken during this time. This plan recommended further site specific management activities to be undertaken over time as opportunities were presented. Based on this, as well as updated flora and fauna surveys (2001), a habitat regeneration plan, titled "2003 - 2006 Snelgrove Reach Habitat Regeneration Plan", was developed for implementation.

RATIONALE

Within the Etobicoke and Mimico creeks watersheds, the Habitat Implementation Plan (HIP) defines a strategic framework for comprehensive and meaningful watershed strategy implementation at the site level. Initially identified as a high priority HIP site, the 2003 – 2006 Snelgrove Reach Habitat Regeneration Plan was further developed and identified a range of in-stream, reforestation and wetland restoration opportunities. The implementation of this plan focused on achieving the 2006 targets for Terrestrial Habitat Quantity, Riparian Zone and Biodiversity indicators of the Etobicoke and Mimico creeks watersheds revitalization strategy, *Greening Our Watersheds* (Toronto and Region Conservation Authority (TRCA), 2002). The plan also helped to achieve the following Remedial Action Plan (RAP) goals: Rehabilitation of Fish and Wildlife Habitat and, Watersheds and Ecosystem Observation. Project deliverables included approximately 5 hectares of forest, floodplain and riparian restoration, the installation of nearly 40 habitat features including nest boxes, hibernacula, bank stabilization and a series of in-stream pool and riffle structures.

PROJECT ACCOMPLISHMENTS

To date, implemented components and achievements of the 2003-2006 Snelgrove Reach Habitat Regeneration Plan include:

- 655 volunteers;
- 1,300+ volunteer hours;
- 6,000+ plants in the ground through community and staff planting events;
- 6.5 hectares of wetland, woodlot and riparian restoration;
- 57 migratory song bird nest boxes;
- 2 critical habitat features including 1 snake hibernaculum.

Key project activities include:

Annual Community Planting Events (2003 - 2006)

A key component of the plan, annual community planting events focused on increasing native flora and fauna habitat in the Etobicoke Creek floodplain and raising community awareness about watershed issues. Events emphasized education and action through hands-on tree planting and informative displays including birds, wildlife, habitat, organic lawn care and native plants. Community partnerships were developed with organizations such as Scouts Canada and the Girl Guides of Canada.

Snake Hibernaculum (2004)

The number of natural snake hibernation sites is limited within the Snelgrove Reach. The primary role of this habitat feature within the regeneration plan is to prevent further unnatural losses in the snake population. A secondary function of placing the hibernaculum within the Snelgrove Reach is to increase public awareness and tolerance for snakes. Building artificial hibernacula may benefit humans and the overall ecology of an area by helping to maintain a healthy snake population, which play a vital role in the food chain, as well as a biological pest control agent.

Wetland Construction (2005)

In 2005, TRCA completed the construction of a wetland in the north end of the Snelgrove tract. The site is situated on an area that was historically farmed. Two agricultural ditches which captured upstream flows and drained surface run-off from an adjacent old farm field was negatively impacting the creek by increasing sediment load and causing downstream erosion. The project focused on reversing these hydrologic impacts caused by the past farming practices. Through subtle re-contouring of the site, the agricultural ditches were removed, and a swamp/marsh wetland complex was constructed that reflected similar conditions adjacent to the area. The site was planted with wet tolerant tree and shrub species. In addition wood duck, owl and songbird boxes have been installed on and surrounding the site and will be monitored on a regular basis. Natural regeneration of native aquatic herbaceous material established very quickly. Also, a variety of amphibians and songbirds have begun to use the site.

Brampton Communities In Bloom (2006)

In 2006, TRCA worked closely with staff from the City of Brampton in their successful bid for Communities In Bloom. This national competition focuses on civic pride, environmental responsibility and beautification through community participation. A key component of this project was environmental awareness through the recognition and protection of local natural heritage. During the preparation for the Communities In Bloom competition, staff from TRCA and the City of Brampton collaborated on ways to effectively highlight the partnerships and projects that have been implemented within the city's valley lands. In doing so, partnerships amongst partner organizations were strengthened, future collaborative project planning was initiated and Brampton captured first place in the Over 100,000 Category and received the Best Blooming Community in Canada Award.

MNR Ontario Stewardship Ranger Program (2006)

In 2006, the Ministry of Natural Resources (MNR) Ontario Stewardship Rangers assisted TRCA staff with the naturalization of the newly constructed wetland in the Snelgrove Reach. This collaborative educational and work experience program enabled youth to learn about local natural heritage, the roles of conservation authorities and their relationships with municipal and provincial agencies and to gain hands on experience with stewardship activities within the Etobicoke watershed. In addition to assisting and participating in the City of Brampton's successful bid for Communities In Bloom, the Rangers helped transplant native aquatic plants, build and erect nest boxes for migratory song birds and remove encroaching invasive species within the newly constructed wetland.

DETAILS OF WORK TO BE DONE

Future Projects

In 2007 several culminating projects will be undertaken that will reflect upon the previous four years of work. The annual autumn community planting, which has received tremendous support from Scouts Canada and the Girl Guides of Canada, will include a survey of previous planting sites and will provide an opportunity for interested volunteers to become involved in longer term monitoring of the Snelgrove Reach. Providing valuable information on the success and impact of habitat enhancement projects, a community-based monitoring program will also continue to foster the vital connection of individuals and groups to the natural heritage within their watersheds.

The Snelgrove Reach Habitat Regeneration Plan will play a pivotal role in connecting these upstream and downstream ecosystems. Beginning in 2007 restoration efforts within this area of the Etobicoke watershed will move downstream to Wexford Park and the Valleybrook corridor (City of Brampton) and upstream into the community of Valleywood (Town of Caledon) where wetland and community planting initiatives are currently underway. From an ecological perspective, future habitat enhancement projects will factor the work undertaken at Snelgrove into their design in order to optimize ecosystem structure and function. Additionally, the momentum of community involvement that Snelgrove has gathered will inspire further support in these surrounding areas and will provide a linkage between these and other individuals and groups throughout the watershed.

Educational Signage

In an effort to continually inform and educate citizens about our valley lands and watersheds, a series of interpretive signs will be developed and installed at key features throughout the Snelgrove Reach. Highlighting the tremendous work that has been accomplished through the 2003-2006 Snelgrove Reach Habitat Regeneration Plan, topics for the signs will include Restoration and Stewardship, Riparian Corridors and Migratory Song Birds, Woodlot Management and Community Watershed Management.

Loafers Lake Shoreline Restoration

Two deliverables from the 2003-2006 Snelgrove Reach Habitat Regeneration Plan which have yet to be completed include shoreline restoration at Loafers Lake and several sites that require bioengineering erosion control. These aspects of the original regeneration plan are currently being pursued through partnerships with the City of Brampton and will be integrated within future work plans.

FINANCIAL DETAILS

In addition to other funding sources and regeneration funding from the Region of Peel, a substantial contribution from in-kind sources was made to this project. Of particular note are those contributions of volunteers from partnerships with Brampton Area Scouts and Girl Guides, as well as staff and resources from the City of Brampton and Region of Peel.

| | |
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| In-Kind TRCA & Partner Contributions | \$36,200.00 |
| TD Friends of the Environment Foundation | \$9,500.00 |
| MNR Community Wildlife Involvement Project | \$1,000.00 |
| Region of Peel | \$148,000.00 |
| Total Project Cost | \$194,700.00 |

Report prepared by: Dushan Jojkic, extension 5667

For Information contact: John Stille, extension 5396 or Dushan Jojkic, extension 5667

Date: January 19, 2007

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #6/06, February 9, 2007

FROM: Deborah Martin-Downs, Director, Ecology

RE: FLOOD FORECASTING AND WARNING PROGRAM

KEY ISSUE

Annual update on the status of Toronto and Region Conservation Authority's Flood Forecasting and Warning Program.

RECOMMENDATION

IT IS RECOMMENDED THAT the Toronto and Region Conservation Authority (TRCA) Flood Forecasting and Warning Program 2006 status report and 2007 work plan as they relate to the Greater Toronto Conservation Authorities (GTCA) Flood Forecasting and Warning Standards be received.

BACKGROUND

TRCA staff has continued to work throughout 2006 to achieve the objectives outlined in the 2006 work plan. The work plan was created to allow the program to continue to be developed and updated toward meeting and exceeding our obligations under the adopted GTCA Flood Forecasting and Warning Standards.

Highlights of the 2006/2007 Work Plan

In 2006, a number of significant goals were realized and are highlighted below:

1. A pilot project was initiated in the Don River watershed for a real-time, web-based gauging system that will greatly improve the flood warning system's response time and reliability. Additional gauges will be installed to provide coverage over the entire jurisdiction once the pilot project is assessed.
2. A maintenance database was developed for TRCA-owned flood control structures that will facilitate the inspection process and establish priorities for maintenance works.
3. Documentation for the August 19, 2005 storm was completed.
4. Safety improvements and maintenance were undertaken for G. Ross Lord Dam, Claireville Dam and Stouffville Dam. Dam Operations Manual updates were initiated.
5. An Emergency Operations Centre was constructed at Head Office.

The GTCA Flood Forecasting and Warning Standards identify four program delivery areas: i) Program Delivery/Administration, ii) Forecasting, iii) Communications and iv) Flood Operations. A status report detailing the works completed in 2006 under each delivery area and a work plan for 2007 is attached to this report.

The main elements of the 2007 work plan as they relate to the four program delivery areas are listed below:

i) Program Delivery/Administration

The Flood Forecasting and Warning Program has been identified as one of the key services provided by TRCA to our municipal partners. As such, one significant change has been added to the Flood Operations component of the work plan for 2007. To date, Flood Duty Officers (FDO's) have relied on the technical guidance and experience of a limited number of trained staff during a flood event. In an effort to make the program more robust, it was identified that the number of staff involved be increased and additional senior water management staff be trained in the technical aspects of the flood warning program. To ensure that more senior staff are involved on a daily basis, a Chief Flood Duty Officer role has been created (effective January 1, 2007). Operationally, a Chief Flood Duty Officer (CFDO) will now be on call along with a Flood Duty Officer (FDO) 24 hours a day, 7 days per week. The CFDO will be responsible for major decision making during a flood event and will provide additional technical support to the FDO's.

A comprehensive training program was developed in 2006 and implementation will continue through 2007. In addition, a number of studies will be initiated in 2007 to improve TRCA's operation and maintenance of flood control structures. The real-time gauging network will be expanded and hydrometrics operations will continue.

ii) Forecasting

TRCA staff will continue flood forecasting and warning operations. The Greater Toronto flood group is currently working on updates to the Flood Forecasting Model with input from TRCA staff.

iii) Communications

Flood Warning staff is currently working with TRCA's Marketing and Communications department to create a flood warning page on the website that will assist the public and media in accessing information on flood events in a timely manner. A media communications protocol has been developed.

iv) Flood Operations

The Emergency Operations Centre is now open and equipment upgrades will be made as required. The River Watch Program is a key component to the program during significant events and as part of the 2007 work plan staff will receive annual training to ensure program delivery standards are achieved.

FINANCIAL DETAILS

Funds have been identified in the 2007 capital budget request to undertake the activities identified in the 2007 work plan.

Report prepared by: Laurian Farrell, extension 5601

For Information contact: Laurian Farrell, extension 5601 or Don Haley, extension 5226

Date: January 26, 2007

Attachments: 1

Attachment 1

TRCA Flood Forecasting and Warning Program 2006/2007

Section 1: Program Delivery/Administration

To develop and maintain an administrative framework to facilitate and support flood forecasting and warning.

| GTCA Flood Forecasting and Warning Standards Component | Work Completed in 2006 | Work Proposed for 2007 |
|--|---|---|
| Develop Baseline Knowledge of Watershed | <ul style="list-style-type: none"> • development of a maintenance database for flood control structures completed • flood control channel inspections carried out, sites prioritized for maintenance works • field visits carried out to flood forecast locations to familiarize staff • tours and training conducted for G. Ross Lord Dam and Claireville Dam • Flood Protection and Prioritization of Remedial Capital works project initiated | <ul style="list-style-type: none"> • annual field inventory, assessment and prioritization for all flood control facilities to be carried out • flood protection and remedial works study to be completed (to include field inventory, development of database and location map, flood risk assessment and cost-benefit analysis) • develop and implement program to review rainfall/runoff events to determine better understanding of watershed response • update thresholds |
| Establish Monitoring Network | <ul style="list-style-type: none"> • installation of 4 Real-time web based gauging stations (pilot project in the Don River watershed) and staff training • installation of new stream gauge at Wilket Creek • continued operation and maintenance of 17 existing stream gauges • continued monitoring at 10 snow course locations, one location relocated at Claireville • completed annual report for City of Mississauga Monitoring Program • installed, maintained, monitored and retrieved rainfall data from 31 precipitation stations • installed GEONOR snow gauge at Cold Creek in Bolton | <ul style="list-style-type: none"> • installation of 8 new real-time web based gauging stations • upgrades to 5-10 existing precipitation stations to allow for remote access • installation of approximately ten new stream gauge stations • continue operation and maintenance of 21 existing stream gauges • continue operation and maintenance of 22 existing precipitation gauges • continue monitoring at 10 snow course locations • review need for ice monitoring program and prepare documentation • annual report to be completed for Mississauga Monitoring Program • installation of conductivity sensors in 5 (estimated) watercourses for a study on road salt contamination in partnership with the City of Toronto |
| Undertake Yearly Training of Staff | <ul style="list-style-type: none"> • 4 training modules completed by staff including: <ul style="list-style-type: none"> • Flood Warning Program Overview • Daily Planning Cycle • Major Event Operations • Dam Operating Procedures | <ul style="list-style-type: none"> • Completion of 4 remaining training modules including: <ul style="list-style-type: none"> • Watershed Response • Hydrometrics • Meteorology • Safety • Additional external training to include: <ul style="list-style-type: none"> • First Aid Training • Media Training • Emergency Response Training (City of Toronto OEM) |
| Document Historical Flow Events | <ul style="list-style-type: none"> • completion of the August 19, 2005 flood documentation (reported to the Board at Meeting #2/06 on June 16, 2006) | <ul style="list-style-type: none"> • analysis of historical events in TRCA jurisdiction to be conducted by staff |

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|---|--|--|
| Maintain Liaison with Municipalities and Local Emergency Response Groups | <ul style="list-style-type: none"> ongoing as needed | <ul style="list-style-type: none"> ongoing as needed continue to work with the GTA Flood Forecasting and Warning Group and the Provincial Flood Warning Group to advance the program Partnership between GTA Flood Group and Environment Canada to examine IDF curve updates to be developed |
| Maintain Adequate Flood Plain Mapping and Hydraulic Model in Accordance with FDRP Technical Standards | <ul style="list-style-type: none"> Don River mapping south of Steeles completed West Don mapping completed Rouge River mapping completed Petticoat Creek mapping completed | <ul style="list-style-type: none"> Mimico Creek Hydrology Update to be completed in March 2007 (80% complete at start of 2007) Mimico Creek Hydraulic Update to be completed in July 2007 (60% complete at start of 2007) Etobicoke Creek Hydrology Update to be completed in February 2007 (pending final review by staff) Etobicoke Creek Hydraulic Update to be completed in May 2007 (60% complete start of 2007) Humber River Mapping projects to be completed in February 2007 pending final review by staff (including 2 mapsheets for Albion Creek and 2 mapsheets for tributaries H4 and H5) – both were 90% complete at start of 2007 East Don River mapping to be completed in February 2007 (pending final review by staff) Highland Creek mapping to be completed in February 2007 (pending final review by staff) Carruthers Creek mapping to be completed in April 2007 Millers Creek (Duffins Watershed) to be completed in April 2007 Pine & Dunbarton Creek mapping to be completed in February 2007 |
| Develop and Maintain the Flood Forecasting (FFOR) Model | <ul style="list-style-type: none"> working with GTA Flood Forecasting and Warning Group to develop the FFOR model | <ul style="list-style-type: none"> complete and implement use of FFOR |
| Develop and Maintain a Flood Site Database | <ul style="list-style-type: none"> Data input completed for Don, Petticoat Creek and Frenchman's Bay | <ul style="list-style-type: none"> data input ongoing as hydraulic updates completed, total jurisdiction will be complete in 2007 |
| Conduct Yearly Update of Flood Contingency Manual | <ul style="list-style-type: none"> update completed and distributed to partners | <ul style="list-style-type: none"> annual update to be completed (Spring 2007) |
| Develop and Maintain Operations Manual | <ul style="list-style-type: none"> ongoing updates to Flood Warning Manual G. Ross Lord Dam Manual Update initiated by consultant | <ul style="list-style-type: none"> complete G. Ross Lord Dam Maintenance and Surveillance Manual complete Claireville Dam Operation Maintenance and Surveillance Manual ongoing updates to the Flood Warning Manual |

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| Prepare for Emergency Operations | <ul style="list-style-type: none"> • All flood warning personnel have been equipped with 24/7 access to Head Office under the new security system • Probable Maximum Flood modelling refinement for G. Ross Lord Dam • borehole drilling and piezometer installation at Claireville Dam as per recommendations from Dam Safety Review • water level loggers were installed in eight wells • implementation of safety booms and public safety signage at Claireville and G. Ross Lord Dams • electrical upgrades completed at G. Ross Lord Dam • maintenance of spillway valve at Stouffville Dam completed • testing and maintenance of spillway valve to be carried out at Stouffville Dam | <ul style="list-style-type: none"> • develop a business continuity strategy for the flood warning program to be added to the Operations Manual • improved new Flood Warning stream gauges will be programmed to call out to FDO's if high rainfall or water levels are present allowing for improved response times during flood events • risk assessment and emergency plan update to be completed for G. Ross Lord and Claireville Dams |
|----------------------------------|---|--|

Section 2: Forecasting
To understand and quantify the response and potential impacts within watersheds to specific events

| GTCA Flood Forecasting and Warning Standards Component | Work Completed in 2006 | Work Proposed for 2007 |
|--|--|--|
| Follow Daily Planning Cycle | <ul style="list-style-type: none"> • ongoing on a daily basis with improvements/modifications as needed | <ul style="list-style-type: none"> • ongoing on a daily basis with improvements/modifications as needed |

Section 3: Communications
To inform clients of the potential or actual impact of flood events in a concise and timely manner.

| GTCA Flood Forecasting and Warning Standards Component | Work Completed in 2006 | Work Proposed for 2007 |
|---|--|--|
| Establish Internal and External Communications Protocol | <ul style="list-style-type: none"> • established media communications protocol with TRCA Marketing Department • provided on-going information and advice to municipal clients and CA staff | <ul style="list-style-type: none"> • create Flood Warning page on TRCA's website in cooperation with the Marketing Department • continue to provide information and advice to municipal clients and CA staff |

Section 4: Flood Operations
To provide on-going information and advice to municipal clients and CA staff.

| GTCA Flood Forecasting and Warning Standards Component | Work Completed in 2006 | Work Proposed for 2007 |
|--|--|--|
| Maintain an Emergency Operations Centre | <ul style="list-style-type: none"> • Flood Forecasting and Warning Program Emergency Operations Centre constructed at Head Office | <ul style="list-style-type: none"> • continue to operate EOC at Head Office and upgrade equipment as required. |
| Monitor Flood Events | <ul style="list-style-type: none"> • ongoing as needed | <ul style="list-style-type: none"> • ongoing as needed |
| Follow Reasonable Safety Procedures | <ul style="list-style-type: none"> • ongoing as needed | <ul style="list-style-type: none"> • ongoing as needed, staff will be provided with targeted Safety Training in Spring 2007 |

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|--|---|---|
| Document Flood Events | <ul style="list-style-type: none"> • completion of the August 19, 2005 flood documentation (reported to the Board at Meeting #2/06 on June 16, 2006) | <ul style="list-style-type: none"> • ongoing as needed |
| Document Communications with Internal and External Clients | <ul style="list-style-type: none"> • communications documented on daily planning cycle spreadsheet and in log book - all documents on file | <ul style="list-style-type: none"> • ongoing as needed |
| Support Internal and External Clients | <ul style="list-style-type: none"> • ongoing as needed | <ul style="list-style-type: none"> • ongoing as needed |
| Debrief Authority Staff | <ul style="list-style-type: none"> • ongoing as needed | <ul style="list-style-type: none"> • ongoing as needed |
| Debrief River Watch Personnel | <ul style="list-style-type: none"> • no formal program in place during 2006 | <ul style="list-style-type: none"> • Enforcement staff will be rejoining the River Watch Program in 2007. Program development followed by training of appropriate personnel will be conducted. |

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #6/06, February 9, 2007

FROM: Adele Freeman, Director, Watershed Management

RE: HUMBER RIVER WATERSHED PHOTO BOOK

KEY ISSUE

Receipt of staff report on the photo book on the Humber River watershed.

RECOMMENDATION

IT IS RECOMMENDED THAT the staff report regarding the publication of the Humber River Watershed Photo Book, showcasing its rich natural and human heritage in celebration of the Humber River's 10th anniversary as a Canadian Heritage River, subject to available funding, be received.

BACKGROUND

In 1999, the Humber River was designated as a Canadian Heritage River based on its unique examples of human heritage. Rivers designated under the Canadian Heritage Rivers System (CHRS), Canada's national river conservation program, have outstanding natural and/or cultural values and showcase the benefits and enjoyment of healthy river environments. Every river under the CHRS system has been designated because it strengthens Canadian identity and enables citizens to better understand, appreciate and celebrate the country's rich river heritage. The Humber River is the only designated heritage river in the Greater Toronto Area. There are approximately 31 designated rivers in Canada including the Fraser (British Columbia), Athabasca (Alberta), Thelon (Nunavut), South Nahanni (North West Territories) and Grand (Ontario).

A photo book will be produced in mid-2008 in celebration of the upcoming 10th anniversary of the Humber River as a Canadian Heritage River and the 50th anniversary of Toronto and Region Conservation Authority (TRCA) which will reflect the diversity and range of appreciation for this beautiful Canadian landscape. The book will consist of pages of colourful photographs, short stories and quotes from people familiar with the river, anecdotal information and facts and figures.

The general content of the book includes:

- TRCA and The Living City.
- Human and cultural heritage significance of the Humber River.
- The Humber River's CHRS heritage designation.
- Conservation Foundation.

A “Capture the Humber” photo contest has been initiated to invite the public to share their memories and experiences of this historical Canadian landscape. Organizers are looking for images from all seasons that represent the beauty of the Humber River and its watershed. The themes include: plants and animals, culture and heritage, recreation, people, places, events, landscapes and communities. Awards will be given for best overall photograph and for best photograph in each of the theme categories. Selected photographs will be compiled into a book that will honour this historical river.

The Humber River watershed photo book will be sold at TRCA parks and facilities, online at www.trca.on.ca and hopefully at other book stores including Chapters and at the McMichael Art Gallery to name a few.

DETAILS OF WORK TO BE DONE

- Finalize text.
- Obtain quotes to print the document.
- Develop a marketing strategy.
- Promote and advertise the book and photo contest (i.e. through website, flyers, media release, etc.).
- Select photographs from TRCA photo collections and public submissions.
- Seek sponsorships to help cover the costs.
- Form a committee to comment on book content.

FINANCIAL DETAILS

- Existing funding is available from account 118-61. Additional funding of \$35,000 has been identified in the 2007 capital budget.
- The cost to research and write the text is approximately \$10,000.
- The approximate printing cost is \$59,380 for 5,000 copies (11.5" x 9", 160 pages, hardcover).
- Design, layout concept and editing to be done in-house.
- Advertising costs approximately \$2,000.

Report prepared by: Sonia Dhir, extension 5291
For Information contact: Sonia Dhir, extension 5291
Date: January 25, 2007