



THE TORONTO AND REGION CONSERVATION AUTHORITY

Watershed Management Advisory Board Meeting #8/04

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

February 11, 2005
10:30 A.M.

SOUTH THEATRE, BLACK CREEK PIONEER VILLAGE

AGENDA

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| 1. MINUTES OF MEETING #7/04, HELD ON DECEMBER 10, 2004
(Enclosed herewith on Blue) | |
| 2. BUSINESS ARISING FROM THE MINUTES | |
| 3. DISCLOSURE OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF | |
| 4. DELEGATIONS | |
| 4.1 Jim Robb, Member, Friends of the Rouge Watershed, speaking in regards to the Morningside Heights Tributary. | |
| 5. PRESENTATIONS | |
| 5.1 A 20 minute presentation by Steve Holysh, Conservation Authorities Moraine Coalition, in regards to the York-Peel-Durham-Toronto Groundwater Study. | |
| 6. CORRESPONDENCE | |

- 7. SECTION I - ITEMS FOR AUTHORITY ACTION**
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- 7.4 YORK-PEEL-DURHAM-TORONTO GROUNDWATER STUDY**
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NEXT MEETING OF THE WATERSHED MANAGEMENT ADVISORY COMMITTEE #1/05
APRIL 15, 2005, IN THE SOUTH THEATRE, BLACK CREEK PIONEER VILLAGE

Brian Denney
Chief Administrative Officer

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TO: Chair and Members of the Watershed Management Advisory Board
Meeting #8/04, February 11, 2005

FROM: Adele Freeman, Director, Watershed Management

RE: REGION OF PEEL EDUCATION CURRICULUM RESOURCE FOR WATER

KEY ISSUE

Promotion and integration of the Peel Water Story Project.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT staff continue to work with the Peel Water Story Project partners to facilitate the program within the Regional Municipality of Peel and promote and integrate this work and its resources into other Toronto and Region Conservation Authority (TRCA) education programs, projects and initiatives.

BACKGROUND

In 2002, the Region of Peel Public Works Department expressed the desire to have educational resources available to teachers in Peel Region that provided local, relevant context to water concerns and issues in the region. Representatives from TRCA , Credit Valley Conservation, Peel District School Board and the Dufferin-Peel Catholic District School Board were contacted to form the Peel Water Curriculum Resource organizing committee. The objectives established for this project were to develop an education resource that:

- demonstrated an innovative design encouraging exploration of the local watershed across all subjects and/or learning strategies (i.e. arts, science, social science, drama, music, etc.);
- allows for flexible application to all levels, kindergarten to grade 12;
- provides relevant, local information about water use in Peel Region, past and present;
- provides sufficient resource information and support to enable teachers and students to become the experts on water in their local community;
- supports and inspires the education community to initiate action projects that improve the health of local watersheds; and
- provides a forum for teachers and students to share project ideas and successes.

The development process over the last 2 years has resulted in the completion of the Peel Water Story Project, an education resource that promotes local, watershed based, learning about water and the environment.

RATIONALE

The Peel Water Story Project successfully achieves all of the project objectives. Its resources emphasize awareness and understanding of watershed management within the region and taking action within the community.

Three integrated facets make up the project:

1. The Peel Water Story - A book which assists educators in learning about water systems and water issues in an integrated and locally-relevant fashion, especially as they relate to the sustainability of water resources in Peel Region. Within the book, the watersheds of Peel Region are explored through natural and human systems using the Jonathan Swift allegory of a giant in *Lilliput* (adults/teachers see the watersheds from Gulliver's perspective while students perceive the environment as a Lilliputian). The written story is supported by relevant photographs and unique graphics produced specifically for the resource. Using case studies and an action project guide, the Peel Water Story assists teachers and students in initiating and undertaking environmental action projects.

The story is accompanied by a resource CD that links teachers and students to supporting web-based resources, including a digital fly-over of Peel Region, Teacher/Student geographic information system (GIS) tools and water-based learning activities for all grades.

2. Community Action Projects - Action projects provide many opportunities for experiential learning while making a contribution to the community. Educators involved in the delivery of the Peel Water Story curriculum resource are provided with guides and resources to mentor action projects that contribute to the sustainability of the local watershed. Examples demonstrating how educators can facilitate students' exploration of their local watershed through creative writing, scientific study, art, drama and other learning areas are provided. Existing, ongoing action projects are highlighted as case studies.
3. Peel EcoFair - Action projects that demonstrate a benefit to Peel Region's watersheds are eligible to participate at the annual Peel EcoFair, held during the Peel Children's Water Festival at the TRCA Heart Lake Conservation Area. The Peel EcoFair is the forum by which projects are recognized and celebrated for their contribution to the community. It provides project participants an opportunity to share ideas, promote their achievements and explore other ways of reaching out to their community. In 2004, youth from grade 4 to university participated in the EcoFair.

Beginning in January 2005 and for five months, the Peel Water Story Project will be field tested by a focus group of Peel Region teachers. Thereafter, teacher feedback will be incorporated into the finished Peel Water Story Project resource, which is scheduled to be distributed to all Peel Region schools in October 2005.

DETAILS OF WORK TO BE DONE

The Peel Water Story Project supports many initiatives of the TRCA, including healthy rivers and biodiversity within the communities of Peel Region. It offers an exciting and innovative approach to learning. Through participation in the development of the resource and the ongoing implementation, TRCA staff have formed new and important relationships within the education community.

To continue to build on the successes to date, TRCA staff will work with Peel Region on the following priority actions:

- Provide continued partnership support for the field testing and the finalized Peel Water Story Project curriculum resource.
- Work with the Region of Peel to promote and market The Peel Water Story resource guide to other school boards, conservation authorities and municipalities.
- Work with the region to investigate the incorporation of The Peel Water Story in the Ontario EcoSchools program.
- Establishing website links that connect the TRCA education webpage to The Peel Water Story resources available online.

FINANCIAL DETAILS

The program development and ongoing implementation is supported by the Region of Peel Public Works Department with in-kind support by the other participants.

Report prepared by: Dave Green, extension 5234

For Information contact: René Jarrett, extension 5315

Date: January 21, 2005

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #8/04, February 11, 2005

FROM: Adele Freeman, Director, Watershed Management

RE: OAK RIDGES MORAINÉ WATERSHED PLANNING STUDIES

KEY ISSUE

To provide an update on status and 2004 accomplishments of Toronto and Region Conservation Authority (TRCA) watershed planning studies within the Oak Ridges Moraine.

RECOMMENDATION

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

AND FURTHER THAT staff report back in one year on status and 2005 accomplishments of Oak Ridges Moraine watershed planning studies.

BACKGROUND

The *Oak Ridges Moraine Conservation Act, 2001* and Oak Ridges Moraine Conservation Plan (ORMCP) requires upper tier and single-tier municipalities to ensure that up-to-date watershed plans are in place for all rivers and streams originating on the Oak Ridges Moraine by April 23, 2007.

With the introduction of the ORMCP, staff from York Region, Lake Simcoe Region Conservation Authority and TRCA, together developed a generic outline of plan components and a five year work plan to fulfill the ORMCP watershed planning requirements. Detailed work plans have subsequently been developed for the individual watershed planning studies at the onset of each study process.

The four TRCA watersheds draining from the Oak Ridges Moraine are the Humber River watershed, Don River watershed, Rouge River watershed, and Duffins Creek watershed. Watershed planning studies have been completed to various degrees in all four watersheds through partnerships between the TRCA, its member municipalities and the community. Therefore, the approach to fulfilling the ORMCP watershed planning requirements has been tailored to fill information gaps and address the needs of each watershed and its community.

RATIONALE

The final delivery of each of these watershed plan updates is staggered between the end of 2005 and the end of 2006. A draft of the Rouge watershed plan is scheduled to be completed by the end of 2005 with final delivery by June 2006. For the Humber and Don Rivers, a draft plan is scheduled for delivery by the end of June 2006 with finalization towards the end of 2006, and for Duffins Creek the watershed plan has been completed and the implementation policies are scheduled for completion in the first half of 2005.

Oak Ridges Moraine watershed planning study accomplishments as of December 31, 2004, by watershed, include:

Rouge Watershed Plan

- Established a 35 member, multi-stakeholder task force to guide the development of the watershed plan.
- Published a draft state of the watershed (SOW) report, including an assessment of watershed functions and current conditions, based on a set of watershed management goals and objectives. Incorporated stakeholder and peer review comments and will maintain the SOW report as a draft document during the study, so that updates can be made as new information emerges.
- Interpretation of newly collected field data and results of other ongoing regional studies in an integrated watershed context, addressing groundwater systems and their interaction with stream baseflow, surface water use, thermal monitoring, water quality, and aquatic and terrestrial natural heritage systems.
- Defined future scenarios of watershed land use and management approaches for modeling analysis to determine watershed response and effective management strategies. Initiated modeling and analysis studies.
- Formed an implementation subcommittee of the task force to guide the development of more strategic implementation directions for the final watershed plan.

Humber Watershed Plan

- Prepared a detailed work plan in consultation with municipal staff and with the broader community via the Humber Watershed Alliance.
- Completed 2004 data collection and assessments including baseflow monitoring, water use assessment, surface water and groundwater quality and quantity, and aquatic and terrestrial natural heritage systems.
- Set up and calibrated a hydrological/water quality/water budget model.

Don Watershed Plan

- Prepared a study work plan in consultation with the Don Watershed Regeneration Council and municipal staff.
- Completed 2004 data collection and assessments including baseflow monitoring, field verification of water use and terrestrial natural heritage system.
- Initiated water budget model development.

Duffins Creek Watershed Plan

- *A Watershed Plan for the Duffins and Carruthers Creek Watershed* was completed in 2003.
- Model implementation policy project has been initiated, but was delayed pending the completion of a broader generic policy project.

DETAILS OF WORK TO BE DONE

Work to be completed in 2005 is summarized as follows:

Rouge Watershed Plan

- Completion of the modelling and analysis of future land use scenarios and management strategies (Phase 2 Report).
- Preparation of a preliminary watershed plan (draft Phase 3 Report), including summary of background conditions, preferred management strategy and implementation plan.
- Development of draft model implementation policy, including water budget and water allocation strategy.
- Consultation and partner involvement in reviewing analytical results and developing the draft plan.

Humber Watershed Plan

- Completion of reports on current conditions pertaining to groundwater quality and quantity, surface water quality and quantity, fluvial geomorphology, and aquatic and terrestrial natural heritage systems.
- Completion of modelling and analysis of future land use scenarios and management strategies (Phase 2 Report).
- Preparation of preliminary watershed plan including summary of current conditions and preliminary management strategy (draft Phase 3 Report).
- Development of implementation plan outline, including model policy.
- Consultation and partner involvement in reviewing analytical results and developing the draft management plan.

Don Watershed Plan

- Development of an updated and integrated understanding of current watershed conditions, based on new technical information, including groundwater modelling, water budget, terrestrial systems, aquatic systems and surface water modelling.
- Preliminary screening to identify regeneration priorities to direct additional field work.
- Definition and analysis of a limited number of future scenarios describing potential management approaches, including retrofits of stormwater management infrastructure to determine effectiveness.
- Consultation and partner involvement.

Duffins Creek Watershed Plan

- Completion of model policy to guide implementation of the watershed plan.

Delays in assembling required data sets and preparing models for the Rouge watershed and Humber watershed surface water flow and water quality modelling/analysis studies have delayed those projects by approximately four months. Due to the nature of the integrated watershed plan, these delays in turn cause delays in other inter-related study components (e.g. groundwater and aquatic systems) which rely on this data also. However, these delays allowed access to several improved databases that will enhance the final products and should not affect the end-date for delivery of the overall watershed plans.

FINANCIAL DETAILS

Funds for the work to be conducted in 2005 on TRCA's watershed planning studies within the Oak Ridges Moraine have been identified in the 2005 preliminary capital budget discussions with the Regional Municipality of Peel, Regional Municipality of York, Regional Municipality of Durham and City of Toronto.

Report prepared by: Dean Young, extension 5662

For Information contact: Sonya Meek, extension 5253

Date: February 02, 2005

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #8/04, February 11, 2005

FROM: Adele Freeman, Director, Watershed Management

RE: YORK REGION FOREST CONSERVATION BY-LAW

KEY ISSUE

York Region's proposed Forest Conservation By-Law, replacing the existing Tree By-law.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT WHEREAS the Tree By-laws or Forest Conservation By-laws have been identified as one of the tools to assist in the protection and management of the terrestrial natural heritage system consistent with Toronto and Region Conservation Authority's (TRCA) draft Terrestrial Natural Heritage System Strategy;

WHEREAS York Region has demonstrated an ongoing commitment to protecting forest resources and supporting the natural environment through its land use planning and Greening Strategy initiatives, including such things as the significant woodlands study, stewardship, and public education and awareness;

WHEREAS harmonization with local municipal Tree By-laws would regulate cutting in woodlands between 0.2ha (0.5 ac) and 1ha (2.5 ac) (similar to the existing regional by-law) and provide a consistent, streamlined approach to regulating forest management and tree cutting;

AND WHEREAS conservation authority forest management activities would be subject to the new permitting process under the Forest Conservation By-law;

THEREFORE LET IT BE RESOLVED THAT York Region be notified of TRCA's support for the proposed Forest Conservation By-law and York Region's ongoing commitment to the protection and management of the region's natural heritage system;

THAT the region and local municipalities be encouraged to seek a harmonized approach to regulating forest management and tree cutting to include woodlands greater than 0.2 ha.;

AND FURTHER THAT staff be directed to meet with the region to clarify and streamline the permitting process as it relates to TRCA's forest management activities to ensure the effective and efficient delivery of these programs.

BACKGROUND

York Region, is proposing to enact a new Tree By-law under the Municipal Act, 2001. The region's current Tree By-law was enacted in 1991 under the Trees Act. Tree cutting by-laws under the Municipal Act have generally been referred to as forest conservation by-laws. This reflects the natural heritage or ecosystem based intent of the administration of the by-laws. The proposed new by-law demonstrates York Region's continuing commitment to protecting forest resources and supporting the natural heritage system.

In the past 200 years in southern Ontario, the landscape has been altered from a predominantly forested landscape to one dominated by a wide variety of agricultural, industrial and urban land uses. Over 70% of the original woodlands have been lost in southern Ontario. By the early 20th century in York Region, many areas had lost over 90% of their original forest cover. It is recognized that woodlands provide a variety of important environmental and economic benefits. These benefits include erosion prevention, water retention, provision of wildlife habitat, recreation and the sustainable harvest of woodland products.

While the provisions for Tree By-laws set out in the Municipal Act, 2001 can help regulate the destruction or injuring of trees, this may not result in a healthier forest if used alone. Initiatives such as stewardship, public education and awareness, are critical to the overall protection of forest resources.

York Region has an important strategic role to implement sustainable planning and regulation of woodlands, through the official municipal planning process, and through the enactment and implementation of a forest conservation by-Law

A copy of the new Forest Conservation By-law is available upon request or is available at www.region.york.on.ca. Changes from the existing Tree By-law are highlighted in Table 1. The following are the key elements or changes in the proposed by-law:

- Restriction of the region's jurisdiction to woodlands greater than one hectare (currently 0.2 hectares) in accordance with the Municipal Act.
- Expansion of regional tree protection abilities and powers through agreements with local municipalities. The region can protect woodlands less than one hectare in size through an agreement with the local municipalities. Through this arrangement, the region's by-law would apply to woodlands greater than 0.2 hectares (0.5 acres) in size (as it does today under the existing by-law).
- Exemptions – statutory exemptions, most of which applied to the existing by-law, are carried forward in the new legislation. These include: activities undertaken by a municipality or a local board, activities conducted under the Surveyors Act, or according to a Planning Act approval. Additional exemptions have been included for (a) personal use of up to five cords of wood per 12-month period, and (b) building permits involving the clearing of less than one hectare of forest. Forest management and tree cutting activities undertaken by conservation authorities are not exempt under the new by-law.

- More effective administrative instruments, including a permit system for tree cutting activities. The current by-law does not provide for permits, but allows Council to consider tree clearing activities and grant minor exceptions. The proposed permit system comprises the following 3 categories of permit:

Good Forestry Practices Permit (1A) – permit fee \$25.00. For sustainable selective harvest activities. Where the services of a Registered Professional Forester (R.P.F.) have been secured to prescribe and direct the harvesting activities. A harvest prescription is written, the woodlot is marked and the trees are cut according to the prescription. Region staff review the application and issue a permit with conditions.

Harvest Permit (1B) – permit fee \$250.00. For sustainable selective harvest activities. Where a woodlot is marked in accordance with good forestry practices and/or where the basal area and minimum circumference limits are met as set out in the by-law. Region staff review the application in accordance with the by-law and the decision tree screening process, and issue a permit with conditions.

Special Permit (2A and 2B) – permit fee \$500.00. This permit would be available to consider tree destruction activities not consistent with good forestry practices e.g. clear cutting. Region staff will review the proposal in accordance with policies adopted by Regional Council, particularly with reference to the special criteria and principles developed for agricultural applications, with a decision by staff for ‘minor’ tree clearing of less than 0.2 hectares of forest (2A), and a Council decision on all other proposed ‘major’ tree clearing applications (2B), similar to the Minor Exception review process under the existing by-law.

- A right of appeal to the Ontario Municipal Board in accordance with the Municipal Act. Under the current By-law Council decisions on Minor Exceptions are final.
- Enhanced enforcement tools and penalties; including the ability to use a ‘set fine’ process for ticketable offences, and “stop work” order provisions.

Tree By-law Harmonization

The region is proposing that in partnership with the local municipalities, and at their request, the region would assume local powers to regulate tree cutting in woodlands between 0.2 hectares (0.5 acres) and one hectare (2.5 acres). Once the new Forest Conservation By-law is in place, local municipalities will be advised of individual permit applications as part of the review process.

The intent is for local municipalities to evaluate their needs and define tree protection which best suits their purposes. The Town of Aurora has a new Tree By-law in place, and the Town of Markham, Town Newmarket and the Township of King are currently reviewing or advancing the development of Tree By-laws under the new Municipal Act.

Under the Oak Ridges Moraine Conservation Act, 2001 (ORMCA), local municipalities with lands on the Oak Ridges Moraine may be required to pass Tree By-laws. It is anticipated that the region's woodlot protection harmonization efforts with local municipalities will reflect the intent of the ORMCA.

Public review and consultation has been ongoing for the past year. The final draft of the Forest Conservation By-Law is proposed to be submitted for Council endorsement in February, 2005, for enactment in April, 2005, following a communications campaign.

Table 1
Existing Tree By-law Compared to a Forest Conservation By-law

Provisions	Existing Tree By-law (Trees Act)	Proposed Forest Conservation By-law (Municipal Act)
Woodland Protection	> 0.2 ha (0.5 acres)	> 1 ha (2.5 acres) by York Region > 0.2 ha (0.5 acres) < 1 ha* by York Region in agreement with local municipalities
Notification/ applications	· Minor Exceptions (Regional Council)	· Permits (staff/ Regional Council)
Appeal Process	· None	· Ontario Municipal Board
Enforcement Tools	· Charges	· Charges · Ticketable fines · Stop work orders
Penalties	· \$5,000 per occurrence · 3 months imprisonment · Replant court order	· \$10,000 or \$1,000 per tree · Subsequent conviction \$25,000 or \$2,500 · Replant court order

* In York Region 681 ha (1.7% of all woodlands) of woodlots are between 0.2 and 1 ha.

NOTE: > means greater than, and < means less than

IMPLICATION FOR TRCA'S PROGRAMS AND OPERATIONS

As the population of the region expands, the need for forest protection and restoration is increasing. The need for an expanded and improved terrestrial natural heritage system has been highlighted in TRCA's draft Terrestrial Natural Heritage System Strategy as critical to achieving "The Living City" objective for Regional Biodiversity. The development and administration of a Forest Conservation By-law linked to the regional Official Plan and the promotion of good forestry practices demonstrates York Region's commitment to protecting forest resources and the natural environment and is consistent with TRCA's draft Terrestrial Natural Heritage System Strategy.

The refinement of the region's Tree By-law to a Forest Conservation By-law within a sound and complimentary policy and administrative framework, will provide more effective tools, raise the profile of forest management and advance forest cover protection in York Region.

Under the Municipal Act, TRCA would be subject to the permitting provisions of the new Forest Conservation By-law for our forest management and tree-cutting activities. TRCA is currently acquiring the necessary credentials to comply with the "Good Forestry Practices" Permit and many of our lands are already covered by a Managed Forest Tax Incentive Plan (MFTIP). However, there is concern that the process for permit applications could cause delays tendering and implementing our management activities in a cost effective manner. In addition, if local Tree By-laws are not harmonized with the region's Forest Conservation By-law there may be additional delays. TRCA staff have had preliminary discussions with region staff to outline the concerns. Regional staff have indicated a desire to clarify and streamline the permitting process for conservation authority tree cutting and forest management activities and further discussions are planned. Lake Simcoe Region Conservation Authority has expressed interest in joining these discussions to ensure a consistent approach in the region.

Report prepared by: Dena Lewis, extension 5225
For Information contact: Dena Lewis, extension 5225
Date: January 28, 2005

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #8/04, February 11, 2005

FROM: Adele Freeman, Director, Watershed Management

**RE: TORONTO AND REGION CONSERVATION AUTHORITY FLOOD
FORECASTING AND WARNING PROGRAM
2004 Status Report and 2005 Work Plan**

KEY ISSUE

Annual update on status of Toronto and Region Conservation Authority (TRCA) Flood Forecasting and Warning Program.

RECOMMENDATION

IT IS RECOMMENDED THAT the 2004 status report and the 2005 work plan for the TRCA Flood Forecasting and Warning Program, as they relate to the GTA (Greater Toronto Area) Flood Group Standards, be received.

BACKGROUND

At Authority Meeting #10/03, held on January 9, 2004, Resolution #A282/03 was approved as follows:

THAT the 2004 Work Plan based on GTA Flood Standards be approved;

THAT staff be directed to base Flood Warning and Forecasting budgets and future work plans on fulfilling compliance with the GTA Flood Standards;

THAT staff report annually on compliance progress to the Watershed Management Advisory Board;

AND FURTHER THAT staff report back on the liability of flood programs and the reliability of the flood standards, and on the public consultation process.

TRCA staff have continued to work throughout 2004 to achieve the objectives outlined in the 2004 work plan as approved by the Authority. The work plan was developed with the intention of moving the TRCA Flood Forecasting and Flood Warning Program towards meeting or exceeding our obligations under the adopted GTA Flood Standards. The GTA Flood Standards were adopted at Authority Meeting #5/03, held on June 27, 2003, by Resolution #A130/03. The standards identify four program delivery areas: Program Delivery/Administration, Forecasting, Communications and Flood Operations. A status report outlining the works completed in 2004 and the 2005 work plan is attached to this report.

Staff of the TRCA, including the Director, Watershed Management and the Director, Finance and Business Development met over the past year to discuss the issue of TRCA's liability in adopting the GTA Flood Standards as a means of direction for the development and implementation of TRCA's Flood Forecasting and Warning Program. Following a discussion around past and current standards related to this program, it was determined that the risk to the TRCA will be reduced by delivering this program with a defined set of standards to which we either currently meet, or are working towards meeting, than to be in a position where we have no specified set of delivery standards. Therefore, by adopting the GTA Flood Standards, TRCA would be reducing our current risk with respect to this program.

In terms of the reliability of these standards, the GTA Flood Standards were forwarded to the province through the Provincial Flood Forecasting and Warning Committee (PFFWC). The PFFWC is the body that reviews flood warning and forecasting issues and provides direction on behalf of Conservation Ontario and the Ministry of Natural Resources. This committee has reviewed the GTA standards and found them to be both comprehensive and functional. More recently, the GTA Flood Group standards have been used as a template for the development of a provincial set of program standards through the PFFWC. The provincial committee has just released its Draft Generic Standards for Flood Forecasting and Warning to Conservation Ontario for review and comment.

The delivery of the Flood Forecasting and Warning Program is carried out in accordance with achieving the goals of the Natural Hazards Policies of the Provincial Policy Statement, section 3.1 of the Planning Act. The development of the standards has been seen as an implementation or a set of technical guidelines and as such has not required a formal public process. Such a process was undertaken for the provincial Planning Act.

FINANCIAL DETAILS

Funds have been identified in the 2005 preliminary budget to undertake the activities identified in the 2005 work plan.

Report prepared by: Don Haley, extension 5226

For Information contact: Don Haley, extension 5226, or Patricia Lewis, extension 5218

Date: November 22, 2004

Attachments: 1

Attachment 1

TRCA Flood Forecasting and Warning Program		
Section 1. Program Delivery/Administration - to develop and maintain an administrative framework to facilitate and support flood forecasting, flood warning and flood operations.		
GTA Flood Standard Component	Work Completed in 2004	Work to be carried out in 2005
Develop Baseline Knowledge of Watershed	<ul style="list-style-type: none"> • field visits carried out to flood forecast locations to familiarize staff • flood control channel inspections carried out, sites prioritized for maintenance works • watershed response descriptions developed and included in Flood Warning Manual 	<ul style="list-style-type: none"> • field inventory, assessment and prioritization for all flood control facilities to be carried out • flood control channel capacity assessment to be carried out at priority sites • flood protection and remedial works study to be completed (to include filed 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
Establish Monitoring Network	<ul style="list-style-type: none"> • three new stream gauges installed • five new precipitation gauges installed • review of existing snow course network carried out and manual developed • continued operation and maintenance of 18 existing stream gauges • continued operation and maintenance of 17 existing precipitation gauges • continued monitoring at 10 snow course locations • completed annual report for City of Mississauga Monitoring Program 	<ul style="list-style-type: none"> • installation of five new precipitation monitoring stations • upgrades to 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 • need to review need for ice monitoring program and prepare documentation • annual report to be completed for Mississauga Monitoring Program
Undertake Yearly Training of Staff	<ul style="list-style-type: none"> • weather training provided by The Weather Network and through the annual workshop of the Provincial Flood Forecasting and Warning Committee • snow course monitoring training provided • G. ROSS Lord operations training provided • staff attended Emergency Management Courses offered through Toronto Office of Emergency Management 	<ul style="list-style-type: none"> • media training (Spring 05) • Emergency Response Training (Spring 05) • annual refresher training for flood duty officers • Metronet training • ice monitoring (if required)
Document Historical Flow Events		<ul style="list-style-type: none"> • consultant to be hired to prepare analysis of historical events in TRCA jurisdiction

GTA Flood Standard Component	Work Completed in 2004	Work to be carried out in 2005
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
Maintain Adequate Flood Plain Mapping and Hydraulic Model in Accordance with FDRP Technical Standards	<ul style="list-style-type: none"> • hydrology for Don Watershed completed • hydraulic updates and mapping completed for Don south of Steeles • Humber hydraulics and mapping completed • Mimico hydrology update initiated • Etobicoke hydrology update ongoing • Etobicoke hydraulic update initiated • Rouge hydrology update completed • Rouge hydraulics and mapping update 90% completed • Petticoat Creek hydrology and hydraulic updates initiated • hydrology update completed for the Highland • hydraulic and mapping updates completed for Duffins 	<ul style="list-style-type: none"> • finalize hydraulic and mapping updates for West Don north of Steeles and the East Don • finalize Mimico hydrology • initiate Mimico hydraulics • finalize Rouge hydraulics and mapping • finalize Petticoat Creek hydrology, hydraulic and mapping updates • finalize Etobicoke hydrology, hydraulics and mapping • initiate hydraulic and mapping updates for Highland • initiate hydrology, hydraulic and mapping updates for Carruthers, Pine, Amberlea, Dunbarton, Krosno
Develop and Maintain the Flood Forecasting (FFOR) Model	<ul style="list-style-type: none"> • input parameters calculated for Duffins, Rouge and Humber and Don 	<ul style="list-style-type: none"> • input parameters to be calculated for remaining watersheds
Develop and Maintain a Flood Site Database	<ul style="list-style-type: none"> • Data input completed for Duffins, Humber, Krosno, and Rouge as per updated flood plain mapping • spatial link with GIS underway 	<ul style="list-style-type: none"> • spatial link with GIS - ongoing customization • data input ongoing as hydraulic updates completed
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
Develop and Maintain Operations Manual	<ul style="list-style-type: none"> • ongoing updates to Flood Warning Manual 	<ul style="list-style-type: none"> • finalize G. Ross Lord and Claireville Operation, Maintenance and Surveillance Manuals as per recommendations from Dam Safety Reviews completed in 2004 • review of operating procedure for G. Ross Lord Dam to be completed by a consultant
Prepare for Emergency Operations	<ul style="list-style-type: none"> • completion of Dam Safety Reviews for Claireville, G. Ross Lord, Milne and Stouffville Dams • electrical upgrades completed at Claireville Dam 	<ul style="list-style-type: none"> • risk assessment and emergency plan update to be completed for G. Ross Lord and Claireville Dams • electrical upgrades to be completed at G. Ross Lord Dam • Probable Maximum Flood modelling refinement for G. Ross Lord Dam • testing and maintenance of spillway valve to be carried out at Stouffville Dam • borehole drilling and piezometer installation at Claireville Dam as per recommendations from Dam Safety Review • implementation of safety booms and public safety signage at Claireville and G. Ross Lord Dams

Section 2. Forecasting - to understand and quantify the response and potential impacts within watersheds to specific events		
GTA Flood Standard Component	Work Completed in 2004	Work to be carried out in 2005
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		
GTA Flood Standard Component	Work Completed in 2004	Work to be carried out in 2005
Establish Internal and External Communications Protocol	<ul style="list-style-type: none"> updates completed to communications system (fax, email, internet, voice messages) for dissemination of flood messages 	<ul style="list-style-type: none"> continue following established protocol
Section 4. Flood Operations - to provide on-going information and advice to municipal clients and CA staff		
GTA Flood Standard Component	Work Completed in 2004	Work to be carried out in 2005
Maintain an Emergency Operations Centre	<ul style="list-style-type: none"> corporate initiative underway 	<ul style="list-style-type: none"> ongoing
Monitor Flood Events	<ul style="list-style-type: none"> ongoing 	<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
Document Flood Events	<ul style="list-style-type: none"> Hurricane Isabel - communication to Water Board 	<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 at this time 	<ul style="list-style-type: none"> review and update required to River Watch Program followed by training of appropriate personnel

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #8/04, February 11, 2005

FROM: Adele Freeman, Director, Watershed Management

RE: **DON WATERSHED REGENERATION COUNCIL MINUTES**
Minutes of Meeting #6/04, November 18, 2004 and Minutes of Meeting #7/04,
December 16, 2004

KEY ISSUE

The Minutes of Meeting #6/04, held on November 18, 2004 and Meeting #7/04, held on December 16, 2004.

RECOMMENDATION

IT IS RECOMMENDED THAT the Minutes of the Don Watershed Regeneration Council Meeting #6/04, held on November 18, 2004 and Meeting #7/04, held on December 16, 2004, be received.

BACKGROUND

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

Report prepared by: Alex Blasko, extension 5280
For Information contact: Alex Blasko, extension 5280
Date: February 03, 2005

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #8/04, February 11, 2005

FROM: Adele Freeman, Director, Watershed Management

RE: **DUFFINS CARRUTHERS WATERSHED RESOURCE GROUP MINUTES**
Minutes of Meeting #1/04, held on September 15, 2004

KEY ISSUE

The Minutes of Meeting #1/04, held on September 15, 2004, are provided for information.

RECOMMENDATION

IT IS RECOMMENDED THAT the Minutes of Duffins Carruthers Watershed Resource Group Meeting #1/04, held on September 15, 2004, be received.

BACKGROUND

Copies of the minutes of the Duffins Carruthers Watershed Resource Group are forwarded to the Authority through the Watershed Management Advisory Board. These minutes constitute the formal record of the work of the Duffins Carruthers Watershed Resource Group, and serve to keep the Authority members informed of the steps being undertaken to implement A Watershed Plan for Duffins Creek and Carruthers Creek.

Report prepared by: Brent Bullough, extension 5392
For Information contact: Gary Bowen, extension 5385
Date: January 20, 2005

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #8/04, February 11, 2005

FROM: Adele Freeman, Director, Watershed Management

RE: ROUGE PARK ALLIANCE
Minutes of Meeting #5/04, October 8, 2004

KEY ISSUE

The Minutes of Meeting #5/04, held on October 8, 2004, are provided for information.

RECOMMENDATION

IT IS RECOMMENDED THAT the Minutes of Rouge Park Alliance Meeting #5/04, held on October 8, 2004, be received.

BACKGROUND

Copies of the minutes of the Rouge Park Alliance are provided to the Toronto and Region Conservation Authority through the Chair of the Authority, who is a member of the Rouge Park Alliance, and forwarded to the Watershed Management Advisory Board for their information.

Report prepared by: Andrea Fennell, extension 5254
For Information contact: Adele Freeman, extension 5238
Date: January 25, 2005

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #8/04, February 11, 2005

FROM: Adele Freeman, Director, Watershed Management

RE: **ROUGE WATERSHED TASK FORCE MINUTES**
Minutes of Meeting #5/04, October 28, 2004 and Minutes of Meeting #6/04,
December 9, 2004.

KEY ISSUE

Minutes of Meeting #5/04, held on October 28, 2004 and Minutes of Meeting #6/04, held on December 9, 2004 are provided for information.

RECOMMENDATION

IT IS RECOMMENDED THAT the minutes of Rouge Watershed Task Force meetings #5/04 and #6/04 held on October 28, 2004 and December 9, 2004, respectively, be received.

BACKGROUND

Copies of the minutes of the Rouge Watershed Task Force are forwarded to the Authority through the Watershed Management Advisory Board. These minutes constitute the formal record of the work of the Rouge Watershed Task Force and serve to keep the Authority members informed of the steps being undertaken to develop the Rouge Watershed Plan.

Report prepared by: Sylvia Waters, extension 5330
For Information contact: Sylvia Waters, extension 5330
Date: January 28, 2005