



THE TORONTO AND REGION CONSERVATION AUTHORITY

Watershed Management Advisory Board Meeting #4/07

Chair: Richard Whitehead
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Members: Maria Augimeri
Bryan Bertie
Gay Cowbourne
Grant Gibson
Lois Griffin
Bonnie Littley
John Parker
Alissa Sugar
Gerri Lynn O'Connor - Chair,
Authority

October 19, 2007

10:00 A.M.

SOUTH THEATRE, BLACK CREEK PIONEER VILLAGE

AGENDA

- | | | <u>Pages</u> |
|-----|--|--------------|
| 1. | MINUTES OF MEETING #3/07, HELD ON SEPTEMBER 14, 2007
(Minutes Summary enclosed herewith on <u>BLUE</u>) | |
| 2. | BUSINESS ARISING FROM THE MINUTES | |
| 3. | DISCLOSURE OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF | |
| 4. | DELEGATIONS | |
| 5. | PRESENTATIONS | |
| 5.1 | A presentation by Bud Purves, President, York University Development Corporation, in regard to item 7.1 - York University (Keele Campus) Stormwater Management, Secondary Plan and Environmental Sustainability. | |

- 5.2 A presentation by Brian Peterkin, Stewardship Coordinator, York Environmental Stewardship, Ministry of Natural Resources, in regard to item 7.2 - Ontario Ministry of Natural Resources Stewardship Ranger Program 2006 - 2007.
- 5.3 A presentation by Gabe D'Ouste, President, Landscape Planning Limited, in regard to item 7.3 - Bartley Smith Greenway Business and Community Outreach Initiative.
- 5.4 A presentation by Jack Imoff, National Biologist, Trout Unlimited Canada, in regard to item 7.4 - Centreville Creek Community Outreach and Environmental Stewardship Program.
- 5.5 A presentation by Gord MacPherson, Manager, Restoration and Environmental Monitoring Projects, TRCA, in regard to item 7.6 - Management of Colonial Waterbirds at Tommy Thompson Park.

6. CORRESPONDENCE

7. SECTION I - ITEMS FOR AUTHORITY ACTION

- 7.1 **YORK UNIVERSITY (KEELE CAMPUS) STORMWATER MANAGEMENT, SECONDARY PLAN AND ENVIRONMENTAL SUSTAINABILITY** 4-7
- 7.2 **ONTARIO MINISTRY OF NATURAL RESOURCES STEWARDSHIP RANGER PROGRAM**
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- 7.3 **BARTLEY SMITH GREENWAY BUSINESS AND COMMUNITY OUTREACH INITIATIVE**
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- 7.4 **CENTREVILLE CREEK COMMUNITY OUTREACH AND ENVIRONMENTAL STEWARDSHIP PROGRAM**
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- 7.5 **ALTONA FOREST WETLAND CREATION PROJECT** 16-19
- 7.6 **MANAGEMENT OF COLONIAL WATERBIRDS AT TOMMY THOMPSON PARK**
Report to Follow

8. NEW BUSINESS

NEXT MEETING OF THE WATERSHED MANAGEMENT ADVISORY COMMITTEE #5/07
DECEMBER 14, 2007 AT 10:00 A.M. IN THE HUMBER ROOM,
HEAD OFFICE

Brian Denney
Chief Administrative Officer

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Item 7.1

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #4/07, October 19, 2007

FROM: Carolyn Woodland, Director, Planning and Development

**RE: YORK UNIVERSITY (KEELE CAMPUS) STORMWATER MANAGEMENT,
SECONDARY PLAN AND ENVIRONMENTAL SUSTAINABILITY**

KEY ISSUE

Overview of York University's campus planning initiatives highlighting the current stormwater management plans, City of Toronto Secondary Plan update and environmental sustainability at the Keele Campus. This report accompanies a presentation that will be made by Bud Purves, President, York University Development Corporation, at the October 19, 2007 Watershed Management Advisory Board meeting.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT Toronto and Region Conservation Authority (TRCA) commend York University for its contribution to healthy rivers and shorelines, regional biodiversity and sustainable communities through past planning and development initiatives;

THAT York University be encouraged to continue to apply principles of environmental sustainability in all facets of its activities and to collaborate when appropriate with TRCA to obtain advice and technical support in pursuit of such goals;

AND FURTHER THAT staff be authorized and directed to continue its liaison with York University to ensure appropriate assistance and information is available to the university as it pursues its sustainability initiatives.

BACKGROUND

In July of 2003, the Canadian Tennis Association began construction of the Tennis Canada - Rexall Centre facility (hereafter referred to as Tennis Canada). The facility was built on land owned by York University and adjacent to TRCA's 5 Shoreham Drive Head Office. The property is bound to the east, south and west by valley corridors and tributaries associated with the Black Creek. In order to accommodate the Tennis Canada facility, an existing culvert under Shoreham Drive was extended, a combination stormwater management and wetland facility was constructed and a significant section of Hoover Creek was restored and naturalized. The stormwater management facility was designed to not only treat on-site runoff, but to also voluntarily improve the water quality of a portion of the untreated water which currently flows from upstream.

During review of the Tennis Canada proposal, TRCA, City of Toronto and various other agencies and interest groups raised concerns with the overall management of the Hoover Creek subwatershed. At TRCA Executive Committee Meeting #5/03, held on June 6, 2003, Resolution #B72/03 was approved as follows in part:

... THAT York University be requested to commit to develop and implement over time a comprehensive water management plan in consultation with TRCA and the City of Toronto...

York University Development Corporation committed to this request. On July 4, 2003, TRCA's Executive Committee approved the permit application for the Tennis Canada development and also passed Resolution #B97/03 which stated in part:

THAT the City of Toronto be requested, through the implementation of the Wet Weather Flow Master Plan, to work with York University to develop a comprehensive stormwater management plan...for the entire Hoover Creek catchment area as it relates to York University stormwater, including retrofitting Stong Pond and the naturalization of the surrounding landscape....

The University has committed to this and other initiatives, including an update of the City of Toronto's Secondary Plan.

Stormwater Management

Since the latter resolution was passed, York University Development Corporation and Tribute Communities worked in partnership with TRCA and City of Toronto staff to prepare and finalize stormwater management master plans for the north and south precincts of the Keele Campus. The results are comprehensive plans that will guide water management as the campus builds out.

The north precinct is located north of The Pond Road, west of Keele Street, south of Steeles Avenue West and east of Murray Ross Parkway. This precinct includes the main campus, Tennis Canada - Rexall Centre, Ice Gardens and significant areas of undeveloped lands along Steeles Avenue West which will accommodate future transit supportive mixed use developments. The ultimate build out of the north precinct will be serviced by a quality and quantity control retrofit of Stong Pond, located in the University's arboretum east of The Pond Road, as well as the Tennis Canada combination stormwater management and wetland facility. Approximately 20 hectares of drainage not currently being treated by the Tennis Canada facility will be diverted to the Stong Pond and some drainage areas located south of The Pond Road will be diverted from Stong Pond to the south precinct system (see below). The plan is predicated on including source and conveyance control features such as rainwater harvesting, green roofs, bioretention areas and vegetation filter strips in future development. In the summer of 2007, Shoreham Drive and The Pond Road were reconstructed and stormwater is now treated in a series of conveyance facilities (bioretention areas and vegetated filter strips) before discharging to the ponds. Stong Pond is currently being retrofitted and naturalized. The completion of the pond and planting of native species in the conveyance facilities and the pond is expected to take place this autumn. The project represents a commitment to implementing the City of Toronto's Wet Weather Flow Management Master Plan.

The south precinct is located south of The Pond Road, west of Keele Street and north of Murray Ross Parkway. This precinct currently includes Phase I and Phase II of the Tribute Communities developments and student housing. In future, the precinct will also accommodate future transit supportive mixed use developments. The ultimate build out of the south precinct will be serviced by an expanded Tribute Communities stormwater management pond located on tableland adjacent to the Hoover Creek valley. The plan is predicated on including source and conveyance control features such as rainwater harvesting, green roofs, bioretention areas and vegetative filter strips. These control features will be implemented through Site Plan Control as the campus redevelops. The stormwater management pond is currently being expanded to service Phase II of the Tribute Community and will meet TRCA water quality and quantity control criteria, as well as resulting in significant enhancement of the valley vegetation.

Secondary Plan

The City of Toronto has initiated a process to update the existing York University Secondary Plan. TRCA Planning and Development and Black Creek Pioneer Village staff are represented on the Secondary Plan Update Steering Committee. The update will include review and approval of a natural heritage study that includes the protection and enhancement of the existing woodlots and Black Creek/Hoover Creek valley corridor, the development of natural linkages to connect the four core woodlots with the valley corridor and the preparation and implementation of management plans for the woodlots. As mentioned above, projects currently underway include renaturalization of the Tribute Communities stormwater management pond, Stong Pond, conveyance facilities associated with The Pond Road reconstruction and a portion of the Hoover Creek valley corridor. The secondary plan will also incorporate principals of sustainable development to be implemented as the campus builds out.

Sustainable Development

In 2002, York University made a public commitment to sustainability and became an official signatory of the Talloires Declaration, a ten-point action plan for incorporating sustainability and environmental literacy in teaching, research, operations and outreach at colleges and universities. York University has made a commitment to improving its existing operations as well as ensuring that new development on campus lands is sustainable.

For example, the Department of Facilities Services has adopted planning and operational principals aimed at reducing the University's ecological footprint such as reduced grass cutting, use of fertilizers and pesticides; development and enhancement of naturalized spaces; increased use of porous paving; and increased recycling, among others. In 2006, the University launched a multi-year Energy Management Program which will see \$40 million infused into new electrical and mechanical systems in older campus buildings to reduce energy consumption.

A number of buildings have recently been completed or construction is underway. The Computer Science and Engineering Building was constructed with a green roof, the function of which is being monitored by TRCA staff through the Sustainable Technologies Evaluation Program (STEP). The Atkinson Apartments, built in 1973, recently underwent an upgrade of the building envelope to increase energy efficiency and longevity. This included the installation of high-efficiency windows. The Government of Ontario is constructing a new Archives of Ontario building on the north-east side of the University Common. This building was located to take advantage of the extension of the York-Spadina subway line and will be designed to meet the Leadership in Energy and Environment Design (LEED) silver certification.

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Date: September 28, 2007

Item 7.2

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #4/07, October 19, 2007

FROM: Nick Saccone, Director, Restoration Services

RE: **ONTARIO MINISTRY OF NATURAL RESOURCES STEWARDSHIP RANGER PROGRAM**
2006 - 2007

KEY ISSUE

Staff report on Toronto and Region Conservation Authority involvement with the Ontario Ministry of Natural Resources 2006 - 2007 Stewardship Ranger youth employment program.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT the Toronto and Region Conservation Authority (TRCA) continue to work with the Ministry of Natural Resources' Ontario Stewardship Ranger Program.

BACKGROUND

The Ontario Ministry of Natural Resources (MNR) introduced the Ontario Stewardship Ranger (OSR) Program as a pilot project in 1998. It is modelled after MNR's well-known Ontario Junior Ranger Program, which is now in its 59th year of operation. A key difference between the two programs is that OSR Program participants live and work in their communities instead of living at an Ontario Ranger camp for eight weeks of the summer. Since its inception, TRCA has utilized the OSR Program to help deliver many habitat restoration projects throughout the TRCA jurisdiction.

The goal of the OSR Program is to be both a work and educational experience program that involves interested young people in a variety of natural resource management projects in their communities. This youth employment program recruits local 17-year olds for summer employment in an effort to connect the participants with local conservation initiatives. In 2006 and 2007, the TRCA Restoration Services division secured two stewardship ranger crews to assist in the projects and programs of the division. During both summers, a crew was dedicated to restoration activities at the Claireville Conservation Area and the other crew worked on a variety of projects throughout the TRCA jurisdiction.

This Ontario Stewardship Ranger crew had the opportunity to spend their summer participating in a number of conservation projects. At Claireville Conservation Area, the rangers assisted with cattail transplants and aquatic plantings, installing bird and fish habitat, as well as monitoring fish and wildlife, tree plantings and water quality in the Humber River. In addition, the ranger crews worked on a variety of activities throughout the jurisdiction including goose management, fish sampling, colonial water bird management, rabies control and fish and wildlife habitat restoration.

The OSR Program is beneficial to TRCA's collective work because:

- it connects conservation areas and restoration initiatives with local young people;
- TRCA is able to support a meaningful youth employment program developed and delivered by a partner agency;
- the program is an excellent value and a significant source of labour for TRCA projects; and
- Stewardship Rangers are enthusiastic and contribute significantly to the success of TRCA's projects.

This labour intensive work is challenging and provides valuable lessons on good work ethics, hands on job experience and a high degree of personal development. The Stewardship Ranger Program is centred around a ranger crew which includes a vehicle, supervisor and four rangers. Each ranger is provided with workplace safety training, personal safety equipment and job specific and resource management training. The daily work and exposure to conservation activities and programs has given these young people a valuable foothold in natural resource management and environmental careers.

FINANCIAL DETAILS

The cost of each crew is roughly \$30,000 and they are employed during a seven week period in July and August. One crew was supported by the City of Toronto in 2006 and the Regional Municipality of Peel in 2007. The second crew was supported by a variety of our Restoration Services projects in 2006 and 2007.

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Date: September 27, 2007

Item 7.3

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #4/07, October 19, 2007

FROM: Adele Freeman, Director, Watershed Management

RE: **BARTLEY SMITH GREENWAY BUSINESS AND COMMUNITY OUTREACH INITIATIVE**
Partner recognition

KEY ISSUE

Completion of the Bartley Smith Greenway Business and Community Outreach Initiative.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT members and partners both past and present be recognized and thanked for their contributions and efforts towards the success of the Bartley Smith Greenway Business and Community Outreach Initiative.

BACKGROUND

Bartley Smith Greenway (BSG) is a 15 kilometre valley corridor that follows the upper west Don River subwatershed through the City of Vaughan, the most rapidly expanding urban community within the Greater Toronto Area. The corridor is named after Anne Bartley Smith of Aurora who, in 1994, made a generous bequest to TRCA for restoration of the Don River.

Lands surrounding the BSG will soon be fully developed, creating increased demand on BSG for recreational trails and scenic natural open spaces. The BSG Business and Community Outreach Initiative protects and enhances the ecological health of the BSG through naturalization projects and stewardship activities. In addition, the initiative creates passive recreational opportunities for visitors and local residents. Thanks to the BSG Business and Community Outreach Initiative, the BSG is one of the most successful regeneration efforts in the entire Don watershed.

The first large scale restoration piece in the BSG was Langstaff EcoPark, which officially opened in June, 1997. It was the result of a visionary plan realized by a partnership of the Don Watershed Task Force with local businesses, community groups and government agencies who contributed design expertise, labour, materials and financial support. Langstaff EcoPark with its centrepiece, the Keffer Marsh, is the most significant natural regeneration area in the upper West Don. The park now supports a diverse range of flora and fauna both terrestrial and aquatic, despite being surrounded by the Langstaff industrial-commercial district, a 90 hectare site that comprises over 1,000 businesses.

Upon completion of the Langstaff EcoPark, it was discussed that regeneration and environmental awareness should expand to the entire valley corridor. In 2001, a need was identified for a full time stewardship coordinator working solely in the BSG to carry on various stewardship and restoration initiatives.

In 2002 the Vaughan Chamber of Commerce, in partnership with the City of Vaughan, the Langstaff EcoPark Steering Committee and TRCA obtained a \$280,000, five-year grant from the Ontario Trillium Foundation (OTF). These funds allowed for the continued environmental regeneration and outreach in the BSG.

The main objectives of the Bartley Smith Greenway Business and Community Outreach Initiative are:

- provide environmental awareness to the local community and offer opportunities for stewardship programs;
- improve the quality of water and aquatic habitats within the upper west Don River through the development of wetlands;
- establishment of riparian habitats to provide provision of in-stream cover while controlling excessive river bank erosion;
- increase diversity of habitats through planting a variety of native trees and shrubs species to attract/sustain local and migratory wildlife.
- contribute to the linked recreational trail system, within or adjacent to the Don River valley to improve the health and enjoyment of residents and visitors.

As per Authority Resolution #A169/02 of Meeting #7/02, held on July 22, 2002, the Bartley Smith Greenway Stewardship and Planning Advisory Committee (BSGAC) was established through the preparation of a collaborative terms of reference and the hiring of a full time project ecologist. The role of the project ecologist has been to implement the work plan as outlined in the OTF proposal with support of the BSGAC.

The mandate of the BSGAC is to provide input to the City of Vaughan and TRCA regarding future regeneration and development of the valley corridors associated with the West Don River for the purposes of enhancing natural area management, water management, community involvement and access for trail and related recreational uses.

Over the past 5 years the BSGAC and its key partners have played a prominent role in delivering stewardship outreach activities, identifying regeneration opportunities and working to develop further trail linkages in the BSG corridor. As of July 1, 2007 the OFT grant commitment has ended and a final report to OTF is underway.

Program Accomplishments 2002-2007

Partnerships

- 37 partnerships with local business and community groups.

Trail planning and construction

- Trail construction and development - 4 kilometres.
- Pedestrian bridges - 2.
- Trail maintenance - 7 kilometres.

Habitat Enhancements

- Planted 10,000 native trees and shrubs.
- Planted 1,000 aquatic plants.
- 250 nesting boxes for birds installed and monitored.
- 3 wetlands developed, 7 hectares in total.
- 2 fish barriers removed.
- 2 hectares of evasive flora removed.
- 11 habitat structures constructed.

BSG Stewardship and outreach

- Hosted 20 educational workshops.
- 8 quarterly newsletters distributed to over 2,000 residents.
- Bird Checklist developed for the BSG.
- Biological inventory of BSG completed for flora and fauna, utilizing the TRCA's Terrestrial Natural Heritage System Strategy.
- BSG invasive control report.
- BSG website developed - www.barlteysmithgreenway.org.
- 5 newspaper articles and 2 radio interviews given.
- Organized 14 community planting events.
- Organized 5 corporate planting events.
- Worked with 6 local business to educate on lot level waste and on site clean up.
- Worked with 6 local business to promote pollution prevention.
- Worked with 22 school groups in planting events and aquatic plant programs.
- Engaged 7,500 individuals/volunteers, including students, community groups, local residents and businesses.
- 2 monitoring programs achieved.
- 8 interpretive signs installed.

DETAILS OF WORK TO BE DONE

- Prepare and submit final report to project partners.
- Assist on plans and budget requirements for 1.8 kilometres of new trail development.
- Assist in new pedestrian bridge planning.
- Install 4 new interpretive signs.
- Construct a trailhead kiosk.
- Give one workshop on the Healthy Yards program.

FINANCIAL DETAILS

Key funding in the amount of \$616,340 over the 5 years has been provided by OTF, the Regional Municipality of York, The Conservation Foundation of Greater Toronto, Great Lakes Sustainability Fund, City of Vaughan, local businesses and this includes funding for the work to be done.

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Date: September 19, 2007

Item 7.4

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #4/07, October 19, 2007

FROM: Adele Freeman, Director, Watershed Management

**RE: CENTREVILLE CREEK COMMUNITY OUTREACH AND ENVIRONMENTAL
STEWARDSHIP PROGRAM**
Final Report

KEY ISSUE

The accomplishments of the Centreville Creek Community Outreach and Environmental Stewardship Program.

RECOMMENDATION

THE BOARD RECOMMENDS TO THE AUTHORITY THAT the Toronto and Region Conservation Authority (TRCA) thank and acknowledge the project partners who contributed to the success of the Centreville Creek Environmental Stewardship Program.

BACKGROUND

At Authority Meeting #3/06, held on July 14, 2006, Resolution #A169/06 was approved as follows:

THAT Toronto and Region Conservation Authority (TRCA) continue to implement the Centreville Creek Environmental Stewardship Program (CCESP) in partnership with Trout Unlimited Canada, Ontario Trillium Foundation and the Region of Peel;

AND FURTHER THAT staff continue to provide an annual project progress report that highlights the milestones and the accomplishments of the program.

On July 16, 2004, the Watershed Management Advisory Board (WMAB) approved the commitment to support the Centreville Creek Environmental Stewardship Program (CCESP) in partnership with Trout Unlimited Canada, Ontario Trillium Foundation and the Regional Municipality of Peel.

In 2004, the CCESP was granted \$159,000 in financial support from the Ontario Trillium Foundation (OTF). This three-year community stewardship program was designed to increase awareness and educate the community about environmental issues impacting the Centreville Creek subwatershed, while protecting, restoring and enhancing the ecological health of the area through naturalization projects and stewardship activities. This program included hands-on initiatives such as monitoring, habitat creation, watershed clean-ups and tree plantings that empowered and engaged the community.

The Authority received a program update at Meeting #4/06, held on July 14, 2006, which identified accomplishments to date and work plan priorities for 2006/07. Since that time, the work plan has been completed, the OTF grant commitment and the CCESP has come to an end.

The program has recently completed its third and final year. The expected targets and actual achievements are summarized below:

Expected Targets	Program Accomplishments
Engage 1,200 individuals	Engaged 3,500 individuals
Deliver 12 community planting events	Organized and implemented 25 community planting events
Deliver 12 community clean-up events	Organized and implemented 12 community clean-up events
Work with 12 school groups	Worked with 57 school groups
Plant 600 aquatic plants	Planted 1,900 aquatic plants
Plant 9,000 native trees and shrubs	Planted 17,200 native trees and shrubs
Install 50 wildlife habitat structures (duck nesting structures, songbird nesting boxes, snake hibernaculums, etc.)	Installed 90 wildlife habitat structures
Complete 8 community monitoring programs	Completed 9 monitoring programs
Deliver 2 educational workshops	Hosted 4 educational workshops
Assist 3 private landowner with private land stewardship initiatives	Assisted 33 private landowners with private land stewardship initiatives

These deliverables were achieved through the following program components:

- public community events;
- a partnership with Albion Hills Conservation Area and the Albion Hills Field Centre; and
- private landowner outreach.

DETAILS OF WORK TO BE DONE

Work plan priorities for 2007, as agreed upon by all project partners, include:

- prepare and submit final report to project partners; and
- develop and install project signage.

FINANCIAL DETAILS

Key funding in the amount of \$340,000 for the CCESP has been provided by OTF and through the Regional Municipality of Peel Remedial Action Plan (RAP) Regeneration Fund, Community Fisheries/Wildlife Involvement Program, Great Lakes Sustainability Fund, Izaak Walton Fly Fishing Club, Ontario Streams, Shell Environmental Fund, TD Friends of the Environment Foundation, Trout Unlimited Canada and Winter Hatches Fly Fishing Club.

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Date: September 24, 2006

Item 7.5

TO: Chair and Members of the Watershed Management Advisory Board
Meeting #4/07, October 19, 2007

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

RE: ALTONA FOREST WETLAND CREATION PROJECT

KEY ISSUE

Construction of a wetland in Altona Forest as a joint project of Toronto and Region Conservation Authority, the Altona Forest Stewardship Committee and the Toronto Zoo.

RECOMMENDATION

THAT THE BOARD RECOMMENDS TO THE AUTHORITY THAT the Altona Forest Stewardship Committee, the Toronto Zoo, the City of Pickering and the Regional Municipality of Durham be advised of the implementation of the project to construct a wetland in Altona Forest.

BACKGROUND

The Toronto and Region Conservation Authority (TRCA) owns approximately 53 hectares of environmentally significant land known as the Altona Forest. The property is located in the City of Pickering, south of Finch Avenue and north of Sheppard Avenue, between Rosebank Road and Altona Road. A key feature of the property is the 12 hectare J. Murray Speirs Ecological Reserve that is dedicated to the protection and observation of birds, plants and other wildlife.

The area immediately surrounding the Altona Forest has been developed over the past five years for residential and institutional uses. The Altona Forest property consists of mature forest with old growth characteristics and numerous early to mid successional vegetation communities, such as old fields and wet meadows.

Environmental Management Plan

Following the property acquisition in 1995, TRCA developed an environmental management plan to secure the site and to protect and maintain the ecological integrity of the property. The management plan was developed with input from other agencies, landowners and community groups.

At Authority Meeting #5/95, held on June 23, 1995, Resolution #A160/95 was adopted as follows:

THAT the Altona Forest Environmental Management Plan, dated June 23, 1995, be approved;

THAT any additional comments received before June 23, 1995 from Dr. Speirs, the Friends of Altona Forest and Petticoat Creek or other be incorporated into the plan, where appropriate, and staff bring any substantive changes to the attention of the Authority;

AND FURTHER THAT the 10ha ecological Reserve be formally designated the J. Murray Speirs Ecological Reserve, once Dr. Speirs has donated approximately 2.8ha of his land to be included as part of the Altona Forest property.

Altona Forest Hydrologic and Water Balance Analysis

In 2003, staff contracted Clarifica to prepare a report on the hydrology and water balance of Altona Forest. This was prompted by visual observations and reports that suggested a trend of reduced surface water existence within typically-wet areas of the forest. In addition, staff had noted changes in the health of the vegetation community consistent with a reduced surface water supply. The purpose of the study was to carry out a review and analysis of the pre-development and post-development drainage conditions within the Altona Forest and to provide preliminary remediation activities that could restore the natural hydrologic regime and protect the ecological integrity of the Altona Forest property.

The report found that adjacent subdivisions have resulted in surface water features being removed or partially removed and surface flow paths being disturbed or removed, resulting in reduced water supply to Altona Forest. The report recommended a number of short-term and long-term measures to remediate the effects of reduced water supply to the forest, including:

- creating a check dam/berm to pond water at or nearer to wet pockets;
- integrating a trail around the wet pocket feature; and
- developing a monitoring program to assess water levels and to provide information to direct future long-term water retention actions.

The Altona Forest Stewardship Committee has been working with the Toronto Zoo since 2003 to implement the Amphibian Monitoring Program. The Amphibian Monitoring Program, or Frogwatch, is a community-based monitoring program administered through a partnership between the Ecological Monitoring and Assessment Network Coordinating Office (EMAN), Environment Canada, the Canadian Nature Federation and coordinators in each province and territory. In Ontario, the Toronto Zoo administers and promotes Frogwatch through the Adopt-A-Pond program. The information that is submitted to the program is assessed to identify changes in local ecosystems, which helps to locate areas of concern so further research can be done.

The goal of the Amphibian Monitoring Program was to determine how the rehabilitation of a wetland in Altona Forest, called Lacey's Pond, affected the frog population. Wetland samples taken from Lacey's Pond in the early 1990's revealed 5 species of frogs. This same pond was later drained, decimating the frog populations. In 2003, a berm was built at Lacey's Pond in Altona Forest in an effort to retain wetland features and provide habitat for a variety of species, including green frogs and wood frogs.

The project was very successful in creating habitat for these as well as other fauna species. Each year the study has shown the number of wood frogs increasing. Other frog species have been recorded in the wetland, but they are not breeding there as the wetland is not of sufficient size or quality. The results of the annual monitoring indicate a need for additional wetland habitat to provide breeding areas for additional amphibian species, as well as to provide additional habitat for the frog species already present in the forest.

In response to the recommendations of the Altona Forest hydrologic and water balance analysis and the Amphibian Monitoring Program, the Altona Forest Stewardship Committee, in partnership with the Toronto Zoo and TRCA staff, developed a wetland creation proposal. The proposal recommends the creation of a wetland to provide habitat for amphibians and other wetland flora and fauna species.

The wetland construction project will consist of subtle re-grading to create ephemeral open water pockets targeting frog species. The size and depth of the wetland will depend on the final design and location, but will range in size from 130 – 280 square meters. The wetland bottom will be non-uniform, with deep and shallow areas. Pond depths will range from 0.25 – 0.75 metres. Woody debris will be placed within and at the edges of the wetland. Wherever possible existing plants will be maintained and transplanted, and additional plants will be brought in as necessary. During pond construction, invasive exotic vegetation will be removed from the surrounding area. An interpretive trail will be built from the existing main trail, and will feature interpretive signage, a boardwalk and a small viewing area.

The proposal also includes the implementation of a water monitoring regime in the forest. Information from this regime will be used to develop short and long-term recommendations for managing water levels throughout the forest.

RATIONALE

TRCA staff is partnering with the Toronto Zoo and the Altona Forest Stewardship Committee to continue implementation of the environmental management plan and the recommendations of the hydrologic and water balance analysis by creating additional wetlands in Altona Forest.

The annual amphibian monitoring that has taken place in Altona Forest has indicated that wetland creation and rehabilitation is critical to the success of frog species in the forest. Combined with the results of the hydrologic and water balance analysis, this work has led to the recommendation that a wetland be created in the north end of Altona Forest.

In addition, this project is supported by the staff of the Toronto Zoo, who have indicated that a wetland in the north end of the forest could successfully capture and retain flow entering the forest and provide habitat for a variety of amphibians and reptiles, particularly wood frogs and grey treefrogs.

DETAILS OF WORK TO BE DONE

The priority actions for 2007 will be to finalize the location of the wetland and to implement the water monitoring regime. This will be done in consideration of the water table at the site, as well as flora and fauna features. Once the location is finalized, site preparation, including removal and treatment of invasive species, will begin. Construction is slated for late 2007 and early 2008. The timing of construction will be dependant on weather and ground conditions so as to minimize disturbance to the site. An interpretive trail, boardwalks and signage will also be implemented. The project will be completed by the end of spring, 2008.

FINANCIAL DETAILS

It is estimated that the project will cost \$16,800.

The funds for the wetland creation project has been secured from the following sources:

- TD Friends of the Environment = \$5,000
- Ontario Power Generation = \$5,000
- Durham Terrestrial Natural Heritage Implementation fund = \$5,000
- Toronto Zoo = \$1,000
- Altona Forest Environmental Management Plan fund = \$800 +

The Durham Terrestrial Natural Heritage Implementation fund will contribute to machinery and equipment costs under account code 109-15. The balance of the project cost, including any additional expenses that may arise, have been budgeted for in 2007 as part of the implementation of the Altona Forest Environmental Management Plan, under account code 408-46.

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