



Corporate Report

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EC.10.ENV
(2007)

DATE: February 26, 2008

TO: Chair and Members of Planning and Development Committee
Meeting Date: March 17, 2008

FROM: Edward R. Sajecki
Commissioner of Planning and Building

SUBJECT: **Mississauga Natural Areas System**

- RECOMMENDATION:**
1. That the report titled "*Mississauga Natural Areas System*" dated February 26, 2008 from the Commissioner of Planning and Building be endorsed as the basis for an action plan for future initiatives to continue to protect, enhance and restore the Natural Areas System.
 2. That the Planning and Building Department co-ordinate the preparation of an action plan for future Natural Areas System protection, enhancement and restoration initiatives with the Community Services Department and Transportation and Works Department.
 3. That the report titled "*Mississauga Natural Areas System*" dated February 26, 2008 from the Commissioner of Planning and Building, be forwarded, by the City Clerk, to Credit Valley Conservation, Toronto and Region Conservation, Conservation Halton and the Region of Peel.

BACKGROUND: On April 16, 2007, Planning and Development Committee considered a corporate report on the main findings of the Natural Areas Survey update work completed in 2006 and recommended that a presentation on the City's efforts to protect, enhance and restore the City's natural

areas be made to the Environmental Advisory Committee and Planning and Development Committee.

The Environmental Advisory Committee received a presentation on October 2, 2007 which included future actions for the long-term preservation of natural areas. The Committee endorsed, in principle, the information presented and recommended that priority be given to the following objectives:

- strengthening the protection of natural areas located on tablelands;
- identifying additional opportunities to secure lands within the Natural Areas System; and
- improving by-law enforcement for encroachment onto natural areas.

The following information was prepared in consultation with staff in the Community Services Department and Transportation and Works Department.

COMMENTS:

The “Natural Areas Survey Report (1996)” identified the natural areas system for the City based on an ecosystem planning approach, and recommended strategies and guidelines for the long-term protection of Mississauga’s natural areas. The recommendations of the report were implemented through the City’s strategic planning documents.

The City’s strategy for protecting, enhancing and restoring the Natural Areas System consists of initiatives in the following areas:

- Strategic Planning Documents;
- Information Management and Monitoring;
- Regulation;
- Land Securement;
- Stewardship;
- Promotion and Education;
- Naturalization/Restoration; and
- Management.

A summary of initiatives in each strategic area and actions being undertaken by City Departments is contained in this report. Other potential initiatives, currently dependent on the preparation of information or availability of resources, are also included for future

consideration in preparing an action plan to address the long-term protection and preservation of natural areas.

Strategic Planning Documents

The direction for the long-term protection of Mississauga's natural areas is contained in the City's "*Strategic Plan 2000 for the New Millennium*". The Strategic Plan, which provides the link for all City plans and strategies, includes the environmental objectives to:

- conserve significant environmentally or ecologically sensitive areas; and
- foster community stewardship of the natural environment.

Actions to achieve the environmental objectives are:

- monitor and update the Natural Areas Survey;
- establish policies and guidelines to ensure that adequate consideration is given to the environmental implications of development;
- establish appropriate policies for the use or preservation of environmentally and ecologically sensitive areas identified in the City's planning documents; and
- promote community environmental awareness forums, celebrate environmentally friendly innovations and support education.

"*Mississauga Plan*" (Official Plan) establishes the means to direct land use and development decisions to protect the natural areas system. The Natural Heritage Policies include the following measures to promote the long-term protection and preservation of natural areas:

- placing those areas identified for protection and preservation through development applications in the appropriate zoning to ensure long-term protection;
- discouraging the fragmentation of ownership of natural areas and buffers;
- using native materials and species, and reducing and/or eliminating existing non-native plant species to improve ecological value;
- retaining areas in a natural condition and/or allowing them to regenerate to assume a natural state;

- controlling activities which may be incompatible with the retention of natural forms, functions and linkages;
- the promotion of stewardship within privately-owned natural areas;
- regulation of encroachment by the public; and
- control of non-native plant species.

The “*2004 Future Directions for Recreation and Parks*”, which is the strategic plan for the provision of park amenities and services, includes the following recommendations for natural areas and urban forest:

- greenbelt acquisition should become the number one parkland acquisition priority for the City, particularly given the increased emphasis on trail system development and connectivity;
- the urban forest needs to be inventoried and assessed for degree of vulnerability to withstand negative impact from human interaction as well as for fiscally responsible forestry management. First priority should be the inventory of street trees and the inventory needs to be maintained on a regular basis;
- the City should identify spaces within existing and future parks for naturalization/restoration initiatives;
- the City should look to partnerships with the community to increase public awareness of best management of natural and forested areas; and
- the City should undertake a review to determine natural areas that would be appropriate for inclusion within the open space system.

Information Management and Monitoring

The Natural Areas System information includes a digital database and fact sheets with mapping for each site. Further to the Strategic Plan objectives, the information is monitored and updated on an annual basis.

The digital database maintains information on plant and wildlife species, vegetation communities, the size and significance of natural areas and summary statistics. The information in the database assists in monitoring the effectiveness of the Natural Heritage Policies and in the management of natural areas by facilitating decisions on appropriate uses, protection measures and priority for acquisition.

The database has also been provided to the Credit Valley Conservation and Toronto and Region Conservation for use in their natural heritage system planning and inventory studies.

Fact sheets for each site in the Natural Areas System, which include information on the location, significance and management needs, are posted on the City's web page for use by residents, project consultants, and City staff.

Actions which are being undertaken include:

- preparation of recommendations for including additional natural areas, which are being identified through the annual Natural Areas Survey update project work (Planning and Building Department, Community Services Department and Transportation and Works Department).

Future actions include:

- consideration of modifications to the digital database to include additional information such as land ownership (Planning and Building Department and Transportation and Works); and
- consideration of improvements to the design of the Natural Areas Survey web page to provide easier access to natural areas information (Planning and Building Department and Transportation and Works).

Regulation

Land uses and activities which cause destruction and loss of natural areas and features are regulated through Mississauga Plan policies and City by-laws.

The *Planning Act* and Provincial Policy Statement establish the requirements for the long-term protection, maintenance and restoration of "ecological systems, including natural areas, features and functions". Mississauga Plan Schedule 3, Environmental Areas, (attached as Appendix 1) shows the general location of the City's Natural Areas System. Most lands in the Natural Areas System occur in valley lands and are designated as "Greenbelt", "Open Space" or "Parkway Belt West" on Mississauga Plan's Planning District Land Use Maps. These land use designations only permit uses for flood and erosion management, conservation purposes and passive recreation,

where appropriate.

The remaining natural areas which occur on tableland landform features, which are not designated as “Greenbelt” or “Open Space”, are subject to the Natural Heritage Policies. These policies require that development applications, within or adjacent to lands in the Natural Areas System, prepare an Environmental Impact Study to evaluate the appropriateness of the development proposal and to demonstrate that the ecological function of the natural area is being maintained or enhanced.

The City uses a number of by-laws to restrict uses adjacent to publicly-owned natural areas and to prevent negative impacts on natural features. These by-laws include the Encroachment By-law, Tree Permit By-law, Fencing By-law, Parks By-law, Anti-Litter By-law and Swimming Pool By-law. Mississauga’s new Zoning By-law also protects natural features through a Greenbelt Zone category and through requirements for development setbacks from lands designated “Greenbelt”.

Actions which are being undertaken include:

- reviewing development proposals to mitigate impacts on natural areas and enhance the Natural Areas System and advising project proponents on the preparation of Environmental Impact Studies (Planning and Building Department);
- review of Greenbelt and Environment policies and preparation of recommendations on policy revisions to strengthen protection of the Natural Areas System, as part of the Mississauga Plan Five - Year Review (Planning and Building Department); and
- implementation of an Encroachment Management Program to work proactively to better manage publicly owned natural areas and open space (Community Services Department).

Future actions include:

- consideration of recommendations for a Heritage Tree By-law (Community Services Department);
- consideration of a new Street Tree By-law (Community Services Department); and
- consideration of requirements for retrofitting old greenbelt fencing (Community Services Department).

Land Securement

Lands containing natural areas are secured through land dedication during the approval of development applications, through purchase using Cash-In-Lieu (CIL) of parkland dedication funds and through natural heritage easements which enable the City to manage lands on behalf of conservation authorities.

Actions which are being undertaken include:

- use of Cash-in-Lieu of parkland dedication funds to acquire significant natural areas (Community Services Department);
- development of a new Parkland Acquisition Strategy to include acquisition of natural areas as a parkland acquisition priority for the City (Community Services Department); and
- requesting dedication of natural areas to the City through the approval of development applications (Planning and Building Department, Community Services Department and Transportation and Works Department).

Future actions include:

- identification of additional opportunities to secure lands within the Natural Areas System from Provincial ministries and agencies such as the Ministry of Transportation and Ontario Realty Corporation (Community Services Department and Planning and Building Department); and
- review of other opportunities for securing natural areas, such as land owner agreements through conservation easements and opportunities for funding through partnerships such as the Region of Peel Greenlands Securement Project (Community Services Department and Planning and Building Department).

Stewardship

The City has initiated a number of stewardship projects and also provides grants to community groups which may be used for community planting projects through the Corporate Grant Program.

A successful project has been the Malton Environmental Stewardship Project which includes activities designed to help revitalize the portion of Mimico Creek that flows through Malton. This project was initiated in partnership with the Toronto and Region Conservation through a grant from the Ontario Trillium Foundation. The project's success can be attributed to having a co-ordinator dedicated to engaging Malton citizens, community groups, schools and businesses, in habitat enhancement, clean-up and environmental education.

Actions which are being undertaken include:

- provision of financial support to community groups through the Corporate Grant Program (Community Services Department).

Future actions include:

- identification of additional stewardship project opportunities throughout the City in partnership with conservation authorities, community and environmental groups such as the Credit River Anglers Association and Ecosource, the Ontario Ministry of Natural Resources, the Ontario Trillium Foundation and major corporations (Community Services Department).

Promotion and Education

Publications which promote and educate on important issues such as the benefits of natural areas, natural areas protection, and stewardship of natural areas include:

- *“Mississauga’s Natural Areas, What Everyone Should Know About Our Protected Natural Areas”*;
- *“Neighbours of Mississauga’s Natural Areas, A Comprehensive Information Booklet for Property Owners Living Near Natural Areas”*;
- *“Britannia Woods Community Forest Stewardship Program”*;
- *“Cawthra Woods Stewardship Program”*;
- *“Malton Environmental Stewardship Project”*; and
- *“McKechnie Woods Stewardship Program”*.

In addition, the Mississauga Garden Council offers a variety of education programs at Riverwood Park, which give students an opportunity to interact with and study wildlife.

Actions which are being undertaken include:

- promotion and education on Mississauga's natural areas through individual activities with teachers, principals, and environmental clubs (Community Services Department); and
- encouragement of partnerships with conservation authorities and groups such as Evergreen and Ecosource for community outreach projects (Community Services Department).

Future actions include:

- development of broader education programs in partnership with community, special interest and environmental groups, conservation authorities and the Peel Region School Boards (Community Services Department);
- consideration of improved signage for natural areas to better educate and promote their significance (Community Services Department); and
- consideration of new communications methods and materials to promote and educate on the Natural Areas System (Corporate Services Department, Community Services Department and Planning and Building Department).

Naturalization/Restoration

Each year, a naturalization program is undertaken which includes the planting of 10,500 trees and shrubs at community tree planting events, 4,000 trees and shrubs in partnership with the conservation authorities, and the donation of an average of 700 seedlings for Arbor Day. A street tree inventory, completed in 2006, identified approximately 50,000 future tree planting sites.

Actions which are being undertaken include:

- completion of an Urban Forestry Plan to provide a strategy and direction for management and enhancement of Mississauga's urban forest (Community Services Department);

- tree and shrub planting and stream restoration projects in partnership with community groups (Credit River Anglers Association, EcoSource), conservation authorities, Ontario Ministry of Natural Resources, Ontario Trillium Foundation, and Environment Canada's EcoAction Program (Community Services Department); and
- native species planting in association with watercourse improvement projects and storm water management ponds (Transportation and Works Department and Community Services Department).

Future actions include:

- identification of opportunities to remove underutilized park amenities and naturalize parkland, further to the Parkland Acquisition Strategy (Community Services Department); and
- review of recommendations from conservation authority studies currently in progress, such as the Cooksville Creek and Sheridan Creek Subwatershed Studies, the Lake Ontario Shoreline Study and the Peel Region Urban Tree Canopy Study, to evaluate targets for natural area coverage and priorities for restoration projects (Planning and Building Department, Transportation and Works Department and Community Services Department).

Management

Management plans have been prepared to maintain natural areas in a number of parks such as Cawthra Woods, Jack Darling Park and Creditview Wetland. Parks management measures such as fencing to limit public access to natural areas and the removal of invasive non-native plant species have also been implemented to maintain and enhance the Natural Areas System.

Management of natural areas on a watershed basis will be considered following the completion and receipt of relevant conservation authority natural heritage planning studies, prepared further to Ontario's Biodiversity Strategy (2005). This strategy encourages the identification of natural heritage systems, such as the Natural Areas System, to assist in the conservation and restoration of healthy ecosystems in southern Ontario.

Actions which are being undertaken include:

- integrated pest management practises involving the use of various control measures to minimize pest problems, such as gypsy moth infestation, which jeopardize the sustainability of natural areas (Community Services Department); and
- active management of invasion species such as Norway Maple, Garlic Mustard, European Buckthorn, Purple Loosestrife, Dog Strangling Vine, Japanese Knotweed and others to avoid the loss of native plant species in a number of natural areas (Community Services Department).

Future actions include:

- preparation of management and conservation plans for natural areas as identified in the Natural Areas Survey Update reports (Community Services Department and Planning and Building Department); and
- review of recommendations from conservation authority studies to establish targets for the amount of land which should be included in the natural areas system to maintain ecosystem health. These studies include the Credit River Watershed Target Natural Heritage System, Lake Ontario Shoreline Restoration Study/ Cooksville Creek and Sheridan Creek Watershed Studies, Toronto and Region Conservation Authority's Terrestrial Natural Heritage System Strategy and the Mimico Creek and Etobicoke Creeks Watersheds Report Card (Planning and Building Department, Community Services Department and Transportation and Works Department).

FINANCIAL IMPACT: The Community Services, Planning and Building and Transportation and Works Department's Capital and Operating Budgets for 2008 contain provisions to carry out current actions for protecting, enhancing and restoring the Natural Areas System. The financial and resource implications of potential future actions, requiring additional funding, will be identified when relevant information is available.

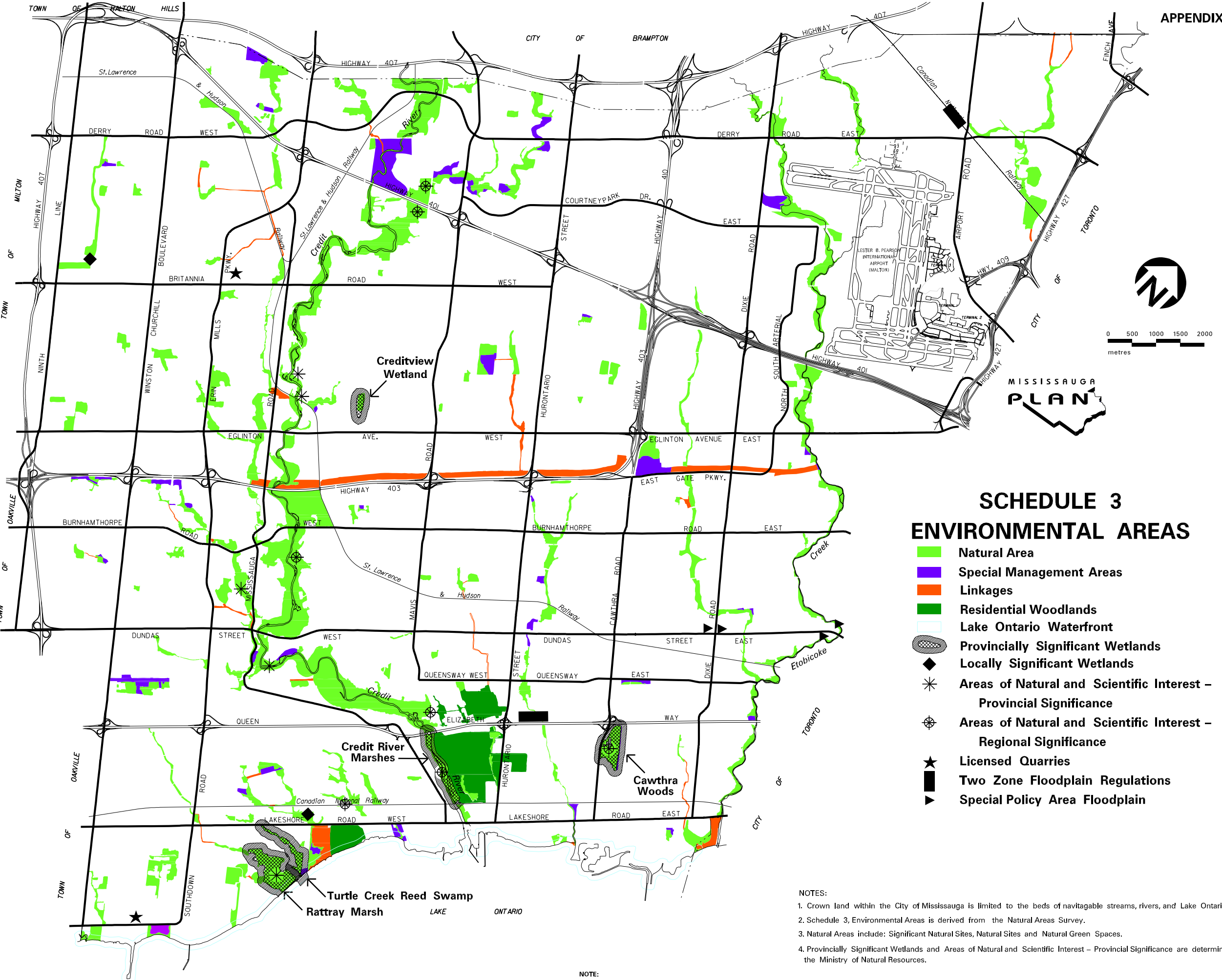
CONCLUSION: The City's leadership in recognizing the importance of a healthy natural environment is reflected in the strategy for protecting and maintaining the Natural Areas System. An existing interdepartmental program, illustrated in Appendix 2, reviews the effectiveness of the strategy and identifies actions to maintain and enhance ecosystem health and the long-term protection and preservation of natural areas. Through this program several future actions have been identified for consideration in the preparation of an action plan to deal with new development pressures for intensification and redevelopment, and to address the impacts of invasive species and climate change.

ATTACHMENTS: APPENDIX 1: Schedule 3 Environmental Areas
APPENDIX 2: Mississauga Natural Areas System Interdepartmental Program

Original Signed By:

Edward R. Sajecki
Commissioner of Planning and Building

Prepared By: Eva Kliwer, Policy Planner



SCHEDULE 3 ENVIRONMENTAL AREAS

- Natural Area
- Special Management Areas
- Linkages
- Residential Woodlands
- Lake Ontario Waterfront
- Provincially Significant Wetlands
- Locally Significant Wetlands
- ✱ Areas of Natural and Scientific Interest – Provincial Significance
- ✳ Areas of Natural and Scientific Interest – Regional Significance
- ★ Licensed Quarries
- Two Zone Floodplain Regulations
- Special Policy Area Floodplain

NOTES:

1. Crown land within the City of Mississauga is limited to the beds of navigable streams, rivers, and Lake Ontario.
2. Schedule 3, Environmental Areas is derived from the Natural Areas Survey.
3. Natural Areas include: Significant Natural Sites, Natural Sites and Natural Green Spaces.
4. Provincially Significant Wetlands and Areas of Natural and Scientific Interest – Provincial Significance are determined by the Ministry of Natural Resources.

NOTE:
 ANY PART OF THE ROAD NETWORK SHOWN OUTSIDE THE CITY BOUNDARIES IS SHOWN FOR INFORMATION PURPOSES ONLY.

This Consolidation includes Latest Amendment – No. 25
 OMB Order No. 2622 2007 September 10

MISSISSAUGA NATURAL AREAS SYSTEM
INTERDEPARTMENTAL PROGRAM

