HUMBER RIVER
WATERSHED PLAN
PATHWAYS TO A HEALTHY HUMBER

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Prepared by:
Toronto and Region Conservation
ACKNOWLEDGEMENTS

This Humber River Watershed Plan—*Pathways to a Healthy Humber*—was written by Suzanne Barrett, edited by Dean Young and represents the combined effort of many participants. Appreciation and thanks are extended to Toronto and Region Conservation staff and consultants (listed in Appendix F) for their technical support and input, to government partners for their financial support and input, and to Humber Watershed Alliance members for their advice and input.
EXECUTIVE SUMMARY

The Humber River watershed is an extraordinary resource. It spans 903 square kilometres, from the headwaters on the Niagara Escarpment and Oak Ridges Moraine down through fertile clay plains to the marshes and river mouth on Lake Ontario. The watershed provides many benefits to the people who live in it. It is a source of drinking water drawn from wells or from Lake Ontario. Unpaved land absorbs water from rain and snowfall to replenish groundwater and streams and reduce the negative impacts of flooding and erosion. Healthy aquatic and terrestrial habitats support diverse communities of plants and animals. Agricultural lands provide local sources of food and green spaces provide recreation opportunities. A rich human heritage affords links to the past that enrich and inform our lives today. The natural beauty of the forests, meadows, farmlands, wetlands, rivers and creeks provides urban dwellers with solace, renewal and contact with nature.

However, this magnificent resource is under stress from human activities. The Humber Watershed Alliance, formed in 1994 to co-ordinate and promote activities to improve watershed health, gave the watershed an overall C grade in Listen to Your River: A Report Card on the Health of the Humber River Watershed, 2007. This grade was based on an average of the results for 26 indicators of watershed health that illustrate a wide range of conditions, from a very good rating for the protection of significant landforms to a failing grade for stormwater management. Conditions also vary considerably in different parts of the watershed, with generally higher grades in the upper, more rural parts of the watershed and lower grades in the highly urbanized lower portions. This review of watershed health emphasizes the need to continue working to protect what is valuable and restore what is degraded.

Issues identified in the report card include many harmful effects of urbanization on water balance, water quality, natural cover, aquatic and terrestrial communities, cultural heritage and air quality. These effects include increased surface runoff, more water pollution, greater annual flow volumes in rivers and streams, increased erosion and sedimentation, channel instability, smog, and losses of cultural heritage and biodiversity. All upland forest connections have been severed in the City of Toronto, City of Brampton and the southern portions of both the City of Vaughan and the Town of Caledon, and more natural vegetation is scheduled for removal, according to current urban development plans. Only 25 per cent of the urban area in the watershed has some level of stormwater management. The quality of fish habitat is deteriorating in many of the watershed’s streams.

Successes include the 1999 designation of the Humber as a Canadian Heritage River. This designation recognizes the Humber River’s contribution to the development of the country and its importance in the history of First Nations peoples and the early Euro-Canadian explorers and settlers of Upper Canada. Provincial initiatives, including the Niagara Escarpment Act, the Oak Ridges Moraine Conservation Act, the Greenbelt Act, the Places to Grow Act, the 2005 Ontario Provincial Policy Statement, the Ontario Heritage Act and the recently adopted Ontario Regulation 166/06 for conservation authorities, provide increased protection for landforms, environmental and cultural resources, and agricultural lands. In addition, many protection, stewardship and regeneration projects have been implemented. Over 400,000 trees and shrubs were planted and 8.8 hectares of new wetlands were created in the watershed between 2001 and
2006. The removal of in-stream barriers is allowing rainbow trout, brown trout and salmon to access spawning grounds in the Humber River. The recent creation of the Oak Ridges Corridor Park in Richmond Hill is protecting 428 hectares of land from development and retaining the last remaining natural linkage between the western and eastern parts of the Oak Ridges Moraine.

The Humber watershed will experience further, major changes in land use over the next few decades. Approved official plans allow for an additional 8,845 hectares of new urban lands beyond 2002 land uses, increasing the amount of the watershed that is urbanized from 27 per cent to 36 per cent. Once these plans are implemented, there will probably be further development in some watershed municipalities up to the boundaries of the Greenbelt Plan and Oak Ridges Moraine Conservation Plan. A large amount of commercial development is projected to occur along the east branches of the West Humber (the City of Brampton and the Town of Caledon) and in the Rainbow Creek and Purpleville Creek subwatersheds (the City of Vaughan). The proposed expansion of the 400 series of provincial highways includes an anticipated extension to Highway 427 through the central part of the watershed. Trends in municipal servicing may result in a shift from groundwater supplies to lake-based water supplies, for example, in the Village of Kleinburg and the Village of King City.

The population size and diversity of the Humber watershed continues to expand. In 2001 (based on census data) there were approximately 670,000 people living in the watershed, an increase of 37 per cent from 1995. Much of this population growth, and associated urban development, has occurred within the City of Vaughan, the Town of Richmond Hill and the City of Brampton. The growing population and cultural diversity of the watershed may create demands for different types of nature-based recreation and cultural heritage interpretation activities as well as new approaches to community involvement in stewardship and education programs.

What is the role of the watershed plan? The watershed plan is intended to inform and guide municipalities, provincial and federal governments, Toronto and Region Conservation (TRCA), non-governmental organizations and private landowners as they update their policies and practices for environmental protection and stewardship.

This updated watershed plan is part of an adaptive management approach to address these challenges. Since the publication of Legacy: A Strategy for a Healthy Humber in 1997, much has been learned about the Humber watershed from monitoring, research and the experiences of watershed partners. This plan updates the watershed management strategies in Legacy in light of new information, a stronger scientific foundation and better understanding of the effects of human actions on the ecosystem. There is also a need to respond to a number of recent policy and planning initiatives, including the Oak Ridges Moraine Conservation Plan, Growth Plan for the Greater Golden Horseshoe, Clean Water Act, the City of Toronto’s Wet Weather Flow Management Master Plan, stormwater retrofit studies of other municipalities and TRCA’s vision for The Living City.

The guiding framework for this watershed plan is a set of principles and 30 objectives with specific targets for watershed conditions. They address:

- **Environment**: stream form, groundwater, surface water, air, aquatic system, terrestrial system
- **Society**: cultural heritage, nature-based recreation
- **Economy**: land use, resource use
Nine potential future scenarios were developed and examined in relation to existing conditions to provide an understanding of how the watershed might react to changes in land use and environmental management in the future. This process revealed that, if future development proceeds with current approaches to community design and stormwater management, it will not be possible to maintain current conditions, let alone improve them. Instead, there will be additional deterioration of environmental conditions and biodiversity, and damage to infrastructure and property. Further, the analysis showed that even if the most innovative, sustainable community measures are applied, this deterioration cannot be completely prevented throughout the watershed. The anticipated effects of climate change may exacerbate these concerns.

The path to a healthier, more resilient watershed that emerged from this analysis is based on a comprehensive and interdependent set of strategies that will protect and enhance valued resources, regenerate damaged systems and build more sustainable communities. This will help to increase the resilience of natural systems to human activities and climate change. It will also create healthier places for people and wildlife, and stronger support for economic activities.

The recommended management strategies fall into three broad categories:

1) **Protect and expand the terrestrial natural heritage system.** Figure 5.2 illustrates an expanded natural heritage system that provides multiple benefits, including biodiversity and habitats, water balance maintenance and restoration, opportunities for nature-based recreation, carbon sequestration, improved quality of life and greater resilience to urban growth and climate change. This system can be accomplished by protecting existing valued assets, securing additional lands, regenerating degraded areas and improving stewardship of public and private lands. The first priority is the land in the potential greenfield development areas outside the Niagara Escarpment and the Oak Ridges Moraine and Greenbelt. The second priority is the protected countryside areas of the Greenbelt and Oak Ridges Moraine Conservation Plans and the rural area of the Niagara Escarpment Plan. The third priority is in natural core and linkage areas of the Oak Ridges Moraine Conservation Plan and natural areas of the Niagara Escarpment Plan.

2) **Build sustainable communities.** More sustainable approaches to urban form, infrastructure, transportation and resource use are proposed in order to contribute to increased environmental integrity and quality of life. They should be applied to new communities, as well as to the intensification or redevelopment of existing ones. Some of the key features include reduced imperviousness, rainwater harvesting and other measures to maintain or restore predevelopment water balance, design features to facilitate sustainable choices (e.g., energy conservation, reduced vehicle use, support for local agricultural products) and protection and adaptive reuse of cultural heritage features. Erosion and sediment control practices must be improved to protect watercourses, especially in areas of intense urban growth. Development should be designed to proceed at a pace and extent that allows sufficient time to adopt, test and evaluate the effectiveness of new technologies and to make adjustments if the results do not meet the objectives and targets for the watershed.

3) **Recognize the distinctive heritage of the Humber through an enhanced regional open space system.** The Humber watershed has the basis for a significant, linked, regional open space system including inter-regional trails, conservation areas, major municipal parks, and cultural heritage features and landscapes. Greater collaboration is needed between public and private sector partners to improve links between nature-based recreation...
and cultural heritage destinations and experiences and to facilitate better planning and management of the system. This system should be further developed for its potential to provide experiences for a growing population, support for healthy communities, interpretation of natural and cultural heritage, links with local neighbourhoods and connections to surrounding watersheds and regions. The status of the Humber as a Canadian Heritage River is a remarkable designation that should be promoted. Completion of a contemporary trail along the historic Carrying Place portage route that follows a spectacular river valley system would help to highlight and connect people with the natural and cultural heritage assets of the watershed.

**A collaborative, integrated approach is required** to accomplish the management strategies. This begins with increased awareness to ensure that watershed residents, businesses, developers and agencies understand the importance of the watershed, its water cycle, natural systems and cultural heritage. The co-ordinated efforts of government agencies and community leaders must be applied to plans and policies, permits and regulations, enforcement, infrastructure operations and maintenance, stewardship and regeneration programs, and education and awareness initiatives.

**A healthy, sustainable Humber watershed is within reach,** although many challenges lie ahead. This plan shows that a “business-as-usual” approach to future development will result in continued losses of environmental quality, biodiversity and cultural heritage. There will be considerable costs to address the health, social and economic consequences of degraded environmental conditions, and damaged infrastructure and property. Instead, there are opportunities to create a better future, with healthy natural systems and a rich natural and cultural heritage, supporting a high quality of life for our communities. With the guidance offered in this plan, a concerted effort by all watershed partners can bring these opportunities to fruition.
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A view of the Humber River, a living legacy.
Photography by Jeff Hladun
1.0 INTRODUCTION

The Humber River watershed is a legacy, a priceless endowment to the people of the Greater Toronto area. The river starts 126 kilometres from Lake Ontario in the ancient rock of the Niagara Escarpment and the rolling hills of the Oak Ridges Moraine. Here, rainwater percolates through the rock, sands and gravels, and collects in wetlands and small streams to start its southward journey. Hundreds of creeks and streams intertwine and join to form larger tributaries that, in turn, become the river that flows into Lake Ontario.

The bounty of the Humber watershed is multi-faceted. It is geological, natural, historical, recreational and economic. The geological legacy is inherited from the Wisconsin glaciers of the last ice age. They sculpted hills and valleys, deposited the sand and gravel that formed the Oak Ridges Moraine and left the fertile soils that carpet the Peel Plain. The rich natural inheritance of the watershed includes the river system itself, Carolinian and Great Lakes-St. Lawrence forests, wetlands and marshes, rare kettle lakes, abundant groundwater, grasslands and meadows, and varied wildlife.

These natural resources were the basis for the early aboriginal livelihood in the watershed, trade with European explorers, the Carrying Place Trail, and later for the growth of European farms and settlements. Throughout the watershed we find links to the past—sites that contain archaeological remains from First Nations peoples and early settlers, as well as heritage houses, farms, mills and other buildings that were constructed within the last 200 years.

As immigration to the Greater Toronto Area (GTA) continues, watershed communities are becoming increasingly multi-cultural, bringing together people from diverse backgrounds. Economic activities in the Humber watershed provide prosperity and a high standard of living to most of its inhabitants and include agriculture, industry, commerce, health care, cultural activities and sports. The watershed has an extensive system of linked greenspace that provides exceptional and varied recreational opportunities.

The Humber watershed is the largest watershed in the Toronto and Region Conservation (TRCA) jurisdiction, spanning 903 square kilometres (90,300 hectares). It includes portions of 10 local municipalities: the City of Vaughan, the Town of Richmond Hill, the Township of King and the Town of Aurora in the Regional Municipality of York; the Cities of Brampton and the City of Mississauga and the Town of Caledon in the Regional Municipality of Peel; the City of Toronto;
the Town of Mono in Dufferin County; and the Township of Adjala-Tosorontio in Simcoe County (Figure 1–1 and Figure 1–2).

A multi-stakeholder Humber Watershed Task Force was established in 1994 to develop an ecosystem-based strategy to achieve a sustainable, healthy watershed for the Humber River. In 1997 the Task Force published Legacy: A Strategy for a Healthy Humber and A Call to Action. These documents emphasize that, although the Humber watershed represents a wonderful natural inheritance, it should not be taken for granted. They provided 30 objectives for a healthy, liveable, sustainable and prosperous watershed and recommended actions to achieve them. These included measures to celebrate what is outstanding, protect what is healthy and regenerate what is degraded. Toronto Region Conservation established the Humber Watershed Alliance in 1997 with a mandate to oversee implementation of Legacy. In 2000 and 2007, the Alliance published report cards summarizing and evaluating watershed conditions. In 2003, a progress report was issued to highlight efforts to protect and restore the watershed by the Alliance and many other watershed partners.

Since 1997, the Alliance has recorded both successes and failures on the path to a sustainable, healthy future for the Humber watershed. One of the major successes was the 1999 designation of the Humber as a Canadian Heritage River, recognizing its contribution to the development of the country as well as its importance in the history of First Nations peoples, the early Euro-Canadian explorers and settlers of Upper Canada. This designation helps to conserve and protect the best examples of Canada’s river heritage, gives them national recognition and encourages the public to enjoy and appreciate rivers. Provincial initiatives including the Niagara Escarpment Act, the Oak Ridges Moraine Conservation Act, the Greenbelt Act, the Places to Grow Act, the 2005 Ontario Provincial Policy Statement, the Ontario Heritage Act and the recently adopted Ontario Regulation 166/06 for conservation authorities, all provide increased protection for landforms, environmental and cultural resources, and agricultural lands.

Figure 1–1: Municipal share of the Humber River watershed (% total area)
Figure 1-2: Study area

Humber River Watershed Study Area

LEGEND
- Primary Subwatershed Boundary*
- Municipal Boundary
- Road
- Pond & Lake
- Watershed
- Oak Ridges Moraine Conservation Plan Area
- Greenbelt Protected Countryside
- Niagara Escarpment Plan Area
- Genesis Land Use (2009)
  - Rural
  - Natural
  - Urban

*National Watershed Boundaries generated from the Humber River Hydrology Model drainage boundaries.
**Watersheds have been generalized for mapping purposes.
*Road, Greenbelt, NCR, and DMR boundary & quarters in Village for Ontario, 2007

Humber River Watershed Plan, 2008
Numerous protection, stewardship and regeneration projects have been undertaken. For example, over 400,000 trees and shrubs were planted and 8.8 hectares of new wetlands were created in the watershed between 2001 and 2006. The removal of in-stream barriers is allowing rainbow trout, brown trout and salmon to access spawning grounds in the Humber River. The recent creation of the Oak Ridges Corridor Park in Richmond Hill is protecting 428 hectares of land from development and retaining the last remaining natural linkage between the western and eastern parts of the Oak Ridges Moraine. The length of completed trails in the watershed has increased by 28 kilometres between 2000 and 2006.

Examples of failures include urban development that has severed all upland forest connections in the cities of Toronto and Brampton and the southern portions of both the City of Vaughan and the Town of Caledon. More natural vegetation may be removed according to current urban development plans. Only 25 per cent of the urban area in the watershed has some level of stormwater management. The quality of fish habitat is deteriorating in many of the watershed’s rivers and streams. Public awareness of watershed issues has declined, with only 32 per cent of respondents to a recent opinion poll being aware that water from storm drains goes untreated into the Humber River (Pollara, 2006). Clearly, there is still much work to be done to achieve the vision of a healthy, sustainable and prosperous watershed.

1.1 WHY DO WE NEED THIS UPDATED WATERSHED PLAN?

If you live, work or play in the Humber watershed, you depend on its health. The Humber watershed is a source of your drinking water, whether you rely on wells or water from Lake Ontario. Unpaved land absorbs water from rain and snowfall to replenish groundwater and streams and reduce the negative impacts of flooding and erosion. Healthy aquatic and terrestrial habitats support diverse communities of plants and animals. Agricultural lands provide local sources of food and public greenspace provides recreation opportunities. A rich cultural heritage affords links to the past that enrich and inform our lives today. The natural beauty of forests, meadows, farmlands, wetlands, rivers and creeks provides urban dwellers with solace, renewal and contact with nature.

During the past 10 years, much has been learned about the Humber watershed from monitoring, research and the experiences of watershed partners. It is now time to update the watershed management strategies in light of new information, a stronger scientific foundation and better understanding of the effects of human actions on the ecosystem.

Specifically, the watershed plan is intended to inform and guide municipalities, provincial and federal governments, TRCA, non-governmental organizations and private landowners as they update their policies and practices for environmental protection and stewardship.

For example, the Oak Ridges Moraine Conservation Plan (OMMAH, 2002) requires municipalities to incorporate the objectives and requirements of watershed plans into their official plans. The Clean Water Act, 2006 calls for watershed-based planning to protect sources of drinking water. Information in this watershed plan will be used as input to source protection plans and supporting reports. The watershed plan will also help to guide municipalities as they undertake their growth planning exercises in response to the provincial Growth Plan for the Greater Golden Horseshoe (OMPIR, 2006), which targets additional population growth beyond the current levels of the official plans.
In 1987, the Toronto Region was included in a list of 42 areas of concern around the Great Lakes. The Toronto and Region Remedial Action Plan (RAP) *Clean Waters, Clear Choices* (1994) recommended a watershed-based approach to de-listing impaired beneficial uses of the City of Toronto waterfront and watersheds. This *Humber River Watershed Plan* provides strategic recommendations regarding high-priority remedial actions, such as priority areas for improvement of stormwater management controls and habitat restoration.

Watershed municipalities and other stakeholders have identified a number of issues and opportunities that they would like to see addressed by the watershed plan. The City of Toronto’s *Wet Weather Flow Management Master Plan* (XCG, 2003) identified a specific need to undertake restoration to mitigate impacts of development in upstream municipalities and to complement actions being taken in the City of Toronto. Many of the municipalities upstream of the City of Toronto have prepared stormwater retrofit studies that help to address this need and are beginning to implement them. New information and analysis about the impacts of development and potential future scenarios will help to provide a context to guide these activities. Stakeholders also want to identify specific stewardship and regeneration priorities in the context of TRCA’s *Toronto and Region Terrestrial Natural Heritage System Strategy* (TRCA, 2007b). Other concerns include the sustainability of agriculture in this urbanizing region, inadequate erosion and sediment control practices during construction, and the need for effective ways to deal with operations and maintenance issues such as municipal open space lands, winter road maintenance and stormwater facilities.

Finally, this plan contributes to TRCA’s vision for The Living City which states:

> The quality of life on Earth is being determined in the rapidly expanding city regions. Our vision is for a new kind of community, The Living City, where human settlement can flourish forever as part of nature’s beauty and diversity. The objectives of The Living City are:

- Healthy rivers and shorelines
- Regional biodiversity
- Sustainable communities
- Business excellence

### 1.2 HOW WAS THE PLAN PREPARED?

This plan was prepared by TRCA staff and consultants, with advice from the Humber Watershed Alliance, which has representation from all levels of government agencies, private businesses, not-for-profit organizations and the public, and is co-ordinated by TRCA.

This plan updates *Legacy: A Strategy For A Healthy Humber* (MTRCA, 1997) by building on existing information and addressing identified data gaps, particularly with respect to the groundwater system, water budget, water use and terrestrial natural heritage system. The 2007 Humber watershed report card, *Listen to Your River* (TRCA, 2007a), contributed an up-to-date synthesis of current conditions and progress toward meeting targets and initiatives that are underway. The plan has a strong technical foundation, based on several years of monitoring environmental conditions combined with a leading edge approach to modelling of potential future conditions. A series of management summits was held to convene experts who could help
identify best practices and recommendations to achieve watershed objectives. Meetings were held with agencies, other watershed partners and the public to review issues and seek feedback on the plan’s recommendations.

Approaches to watershed planning have evolved during the 10 years since Legacy was published. It is now possible to take a more integrated approach that focuses on interdependencies among watershed systems and evaluates proposed actions based on their ability to achieve multiple and synergistic benefits.

Figure 1–3 illustrates how the watershed planning process is part of a continuous cycle of adaptive watershed management, whereby a plan is prepared and implemented, progress is monitored and the plan is updated. The Humber watershed has benefited from one complete cycle of watershed planning and this plan represents the beginning of a second cycle. This demonstrates how the plan is a living document that will continue to be revised in the future to reflect changing realities.

**Figure 1–3: Watershed planning process**

1.3 WHAT’S IN THIS PLAN?

Chapter 2 presents the guiding principles and objectives for the Humber watershed that form the framework for the plan’s strategies and targets. A review of current conditions in the Humber watershed in Chapter 3 provides a summary of updated information on geology and landform, water, aquatic and terrestrial communities, and human heritage and current activities. Key management issues are identified to guide the development of the plan’s recommendations. In Chapter 4, possible futures under different land use and environmental management scenarios are considered. Chapter 5 contains management strategies and recommends actions to implement them. The conclusions of this plan outline the overall direction that watershed partners should pursue over the coming decade. The appendices include a table summarizing objectives, indicators and targets for watershed health, a list of reference materials, a glossary of terms and a summary of the scenarios examined.
1.4 LOOKING TO THE FUTURE

The 2007 Humber watershed report card prepared with the help of the Humber Watershed Alliance gave the watershed an overall grade of C, or fair, based on an average of the results for 26 indicators of watershed health. However, there are a wide range of conditions from a very good rating for the protection of significant landforms to a failing grade for stormwater management. Conditions also vary considerably in different parts of the watershed, with generally higher grades in the upper, more rural, parts of the watershed and lower grades in the highly-urbanized lower portions. This review of watershed health emphasized the need to continue working to protect what is valuable and restore what is degraded.

Against the backdrop of current conditions and issues, some significant changes are on the horizon that will affect future conditions. For example, a large amount of commercial development is projected to occur along the east branches of the West Humber (the City of Brampton and the Town of Caledon) and in the Rainbow Creek and Purpleville Creek subwatersheds (the City of Vaughan). The proposed expansion of the 400 series of provincial highways includes an anticipated extension to Highway 427 through the central part of the Humber watershed. Trends in municipal servicing may result in a shift from groundwater supplies to lake-based water supplies, for example, in the Village of Kleinburg and the Village of King City.

The population size and diversity of the Humber watershed continues to expand. In 2001 (based on census data), there were approximately 670,000 people living in the watershed, an increase of 37 per cent from 1995. Much of this population growth, and associated urban development, has occurred within the City of Vaughan, the Town of Richmond Hill and the City of Brampton. The growing population and cultural diversity of the watershed may create demand for different types of nature-based recreation or cultural heritage interpretation activities and new approaches to community involvement in stewardship and outreach/education programs.

This plan addresses some key questions. What is the current state of health of the watershed? Will watershed health deteriorate as new development continues? Will it be possible to maintain existing conditions? Can watershed health be improved? And, if so, what are the priority actions that need to be taken?
2.0 GUIDING FRAMEWORK

THE HUMBER CHALLENGE
Our challenge is to protect and enhance the Humber River watershed as a vital and healthy ecosystem where we live, work and play in harmony with the natural environment.

To help meet this challenge, the Humber Watershed Task Force developed a set of guiding principles and 30 objectives. They were first published in Legacy: A Strategy for a Healthy Humber (MTRCA, 1997), and some minor re-ordering and updates were undertaken for this plan, to reflect current approaches to management strategies.

2.1 PRINCIPLES

In order to achieve a healthy and sustainable watershed, it is necessary to

- Increase awareness of the watershed’s resources
- Protect the Humber River watershed as a continuing source of clean water
- Celebrate, regenerate and preserve our natural, historical and cultural heritage
- Increase community stewardship and take individual responsibility for the health of the Humber River
- Establish linkages and promote partnerships among communities
- Build a strong watershed economy based on ecological health
- Promote the watershed as a destination of choice for recreation and tourism

2.2 OBJECTIVES

The objectives of this plan are grouped under three headings: Environment, Society and Economy. Associated with each objective are indicators and targets for watershed conditions (see Appendix A).
Environment

Stream form
1. Protect the form and function of the Humber River and its tributaries

Groundwater
2. Protect groundwater recharge and discharge
3. Prevent groundwater contamination

Surface water
4. Protect and restore the natural variability of annual and seasonal stream flow
5. Maintain and restore natural levels of baseflow
6. Eliminate or minimize risks to human life and property due to flooding
7. Protect and restore surface water quality, with respect to toxic contaminants and other pollutants (such as sediment, nutrients, bacteria and road salt)
8. Manage stormwater to protect people and the health of streams and rivers

Air
9. Reduce air pollution to levels that protect human health, natural ecosystems and crops, and do not exacerbate global climate change

Aquatic system
10. Protect, restore and enhance the health and diversity of native aquatic habitats, communities and species
11. Provide for sustainable fishing opportunities and the safe consumption of fish

Terrestrial system
12. Protect, restore and enhance natural cover to improve connectivity, quality, biodiversity and ecological function
13. Minimize negative influences from surrounding land uses on terrestrial natural heritage system quality and function
Society

Cultural heritage
14. Identify, document, protect and conserve cultural and heritage resources
15. Celebrate the diverse cultural and heritage resources of the Humber watershed
16. Identify and promote the economic value of cultural and heritage resources

Nature-based recreation
17. Incorporate greenspace in all urban and rural developments and create an accessible and connected greenspace system that is compatible with ecological and cultural integrity
18. Develop a system of inter-regional trails and local and regional nature-based recreation, education and tourism destinations within the greenspace system

Economy

Land use
19. Protect the form and function of landforms such as the Niagara Escarpment, Oak Ridges Moraine and South Slope
20. Balance economic development with protection of the environment and society
21. Improve sustainability in urban form at community and building site scales
22. Protect and enhance the integrity and economic viability of agricultural areas

Resource use
23. Practice sustainable resource use by individuals, households, businesses, institutions and governments
24. Use ground and surface water at sustainable rates