

# Cold Creek Conservation Area Management Plan



Prepared by:  
The Cold Creek Conservation Area Management Plan Advisory Committee  
&  
Toronto and Region Conservation

December, 2002



[www.trca.on.ca](http://www.trca.on.ca)

# TABLE OF CONTENTS

Vision Statement and Values.....	iii
The Cold Creek Conservation Area Management Plan Advisory Committee .....	iv
Executive Summary.....	v
<b>Chapter 1: Introduction</b>	
1.1 Towards a Living City Region.....	1
1.2 The TRCA and Conservation Lands.....	2
1.3 Cold Creek Conservation Area.....	2
<b>Chapter 2: Developing the Management Plan</b>	
2.1 TRCA Direction .....	4
2.2 Purpose .....	4
2.3 Location, Site Description and Land Use.....	6
2.4 Process for Developing the Management Plan.....	7
2.5 The Advisory Committee.....	7
2.6 Public Consultation .....	8
2.7 Approval of the Management Plan .....	8
<b>Chapter 3: Background Studies</b>	
3.1 TRCA Planning Studies, Policies and Legislation.....	9
3.2 Municipal Land Use Planning.....	13
3.3 Provincial Plans and Other Studies .....	16
<b>Chapter 4: Resource Inventory and Analysis</b>	
4.1 Natural Heritage .....	18
4.1.1 Landform .....	18
4.1.2 Ground and Surface Water.....	19
4.1.3 Aquatic Habitats.....	23
4.1.4 Terrestrial Habitats.....	26
4.2 Human Heritage.....	41
4.2.1 Archaeological Resources .....	41
4.3 Past Recreation and Education Developments .....	43
4.3.1 Recreational Facilities.....	43
4.3.2 Conservation Education Programs.....	43
4.3.3 Attendance and Users .....	44
4.4 Infrastructure.....	44
<b>Chapter 5: Management Zones</b>	
5.1 Management Zone Definitions.....	47
5.2 Determining the Management Zones .....	47
5.3 Management Zone – Permitted Activities .....	51
5.4 Analysis of Land Use .....	52
5.5 Revenue Generation Opportunities .....	52
<b>Chapter 6: Management Recommendations</b>	
6.1 Resource Management Recommendations for Cold Creek Conservation Area.....	54
6.1.1 Natural Heritage .....	54
6.1.2 Human Heritage .....	58
6.1.3 Public Use .....	58
6.1.4 Infrastructure .....	59
6.2 Recommendations for “Supporting Areas” Surrounding Cold Creek Conservation Area.....	59
6.2.1 Surrounding Land Use.....	59
6.2.2 Groundwater and Source Protection .....	60

## Chapter 7: Future Management of Cold Creek Conservation Area

7.1	Implementation of the Management Plan.....	61
7.1.1	Agency and Municipal Stewardship.....	61
7.1.2	Community Stewardship .....	61
7.2	Safety and Security .....	62
7.3	Plan Review and Amendment.....	62
7.4	Future Integration with the Cold Creek Subwatershed Plan .....	62

## List of Appendices

Appendix 1	Benthic Invertebrate Survey Results.....	63
Appendix 2	List of Fauna Species .....	64
Appendix 3	Vegetation Community Scores.....	66
Appendix 4	List of Flora Species .....	67

## MAPS

Map 1	Cold Creek Conservation Area – Context Map .....	1
Map 2	Cold Creek Conservation Area – Site Map .....	5
Map 3A	Cold Creek Conservation Area – Valley and Stream Corridors .....	10
Map 3B	Cold Creek Conservation Area – Areas of Special Designation.....	15
Map 4	Cold Creek Subwatershed – Baseflow Data Collection and Surface Water Quality Monitoring Stations .....	21
Map 5	Cold Creek Subwatershed – Priority Source Contribution Areas .....	23
Map 6	Cold Creek Conservation Area – Aquatic Features .....	25
Map 7	Cold Creek Conservation Area – Terrestrial Habitats.....	29
Map 7A <sub>1</sub>	Known Flora Species of Concern .....	31
Map 7A <sub>2</sub>	Known Fauna Species of Concern .....	32
Map 7B	Terrestrial Habitat – Size, Shape and Matrix .....	35
Map 7C	Vegetation Communities and Forest Types .....	37
Map 8	Cold Creek Conservation Area Management Zones .....	48
Map 8A	Management Zone Targeted System Analysis Step 1.....	49
Map 8B	Management Zone Targeted System Analysis Step 2.....	50
Map 9	Cold Creek Conservation Area – Priority Thinning and Restoration .....	56

## FIGURES

Figure 1	Management Plan Development Process .....	6-7
Figure 2	Land Use Designations, Township of King Official Plan .....	14
Figure 3	Hydrogeology: Cold Creek North-South Cross Section.....	20
Figure 4	Historical Land Ownership .....	42
Figure 5	Visitors Origin by Municipality .....	44
Figure 6	Past and Existing Land Uses in Cold Creek Conservation Area .....	52
Figure 7	Proposed Land Uses.....	52
Figure 8	Past Revenue Generation (2001) .....	53

## TABLES

Table 1	Water Quality Data from Cold Creek.....	21
Table 2	Relative Pollutant Contributions – Cold Creek Subwatershed .....	22
Table 3	Results of Temperature Sampling.....	24
Table 4	Fish Species Captured Near Cold Creek Conservation Area.....	26
Table 5	Terrestrial Natural Heritage Approach .....	28
Table 6	Permitted Activities at Cold Creek Conservation Area.....	51
Table 7	Priority Thinning Areas .....	57



This Vision Statement was developed by the Cold Creek Conservation Area Management Plan Advisory Committee and is accompanied by six values which should guide our actions.

## VISION STATEMENT

The Cold Creek Conservation Area is an ecologically diverse and sustainable natural area. It is a model of sustainability that can be achieved by protecting and enhancing the area's natural environment while providing outdoor education, cultural and heritage experiences and recreation. Cold Creek Conservation Area is continually improved and managed through self-sustaining revenues and community-based stewardship.

## VALUES

To achieve the vision, we should:

- Ensure that this diverse ecosystem is continually protected, monitored and enhanced.
- Ensure that the lands are accessible to the public and provide a learning opportunity about the natural environment, cultural and heritage resources and sound environmental practices.
- Ensure that public uses do not negatively impact the natural environment.
- Encourage adjacent land use that results in maximum environmental benefits and contributes to the form, function and connectivity of the area.
- Ensure that the principles and goals of the Humber Watershed Management Strategy – *Legacy: A Strategy for a Healthy Humber* are supported in the Cold Creek Management Plan and activities and uses contribute to the watershed management mandate.





*Photography from TRCA Archives*

## **COLD CREEK CONSERVATION AREA MANAGEMENT PLAN ADVISORY COMMITTEE MEMBERS**

C. Angelotti .....	Resident
Linda Boak .....	Girl Guides
Donna Cain .....	Friends of Cold Creek
Marshel Cohen .....	Resident
Jacque Corneman .....	Resident
Gordon Craig .....	Resident
Judy Craig .....	Resident
Don Frigo .....	Ontario Bird and Dog Conservation Association
Dennis Ritche .....	The Labrador Retriever Club of Ontario
Ralph Glagau .....	Humberlea Church of God
Jerry Gorman .....	Humber Valley Heritage Trail Association
Ken Hofstetter .....	Boy Scouts
Vera Howlett .....	Friends of Cold Creek
Dennis James .....	Friends of Cold Creek
Judith James .....	Resident
Anne Kong .....	Resident
Luciano Martin .....	Action to Restore a Clean Humber
Dick O'Brien .....	Chair, The Toronto and Region Conservation Authority
Linda Pabst .....	Councillor, Township of King
Rod Powell .....	Boy Scouts
Vince Principato .....	Resident
Yamile Rijo .....	Friends of Cold Creek
Liz Sagermann .....	Resident
Brenda and Cliff Smith .....	Residents
Susan Swail .....	Humber Watershed Alliance
Paul and Sandra Venier .....	Residents
Bill Wilson .....	Humber Watershed Alliance
Eric Worsley .....	Oak Ridges Trail Association

# EXECUTIVE SUMMARY

The Cold Creek Conservation Area consists of 190 hectares within the Humber River watershed (a designated Canadian Heritage River). The Area is located on Concession Road 11, three kilometres north of the King Side Road midway between the communities of Bolton and Nobleton in King Township within the Regional Municipality of York. A portion of the property lies within the “Natural Linkage” policy area of the Oak Ridges Moraine. The Conservation Area is significant due to its unique natural features. Existing mixed conifer swamp forest contains black spruce which is rare in Southern Ontario and is home to a wide array of plant and animal species.

Historically, the property was used for outdoor education and recreation programs and included many facilities dedicated to the outdoor sports enthusiast. The Cold Creek Conservation Area was closed to formal public use in 1990 due to financial constraints, resulting from the decision to close the shooting range, and loss of associated revenues as well as other corporate financial pressures.

The Toronto and Region Conservation Authority (TRCA) initiated the preparation of a comprehensive management plan for the Cold Creek Conservation Area in January 2002. This Management Plan includes a description and evaluation of the property based on relevant plans and policies, landscape features and functions, environmental constraints and opportunities. This Management Plan updates our knowledge of landscape features, condition of infrastructure and identifies needs and opportunities in a time of changing financial conditions. The Plan provides a framework for the TRCA to determine priorities for future initiatives including the protection of natural features, habitat regeneration and public uses.

An Advisory Committee was established to undertake the Cold Creek Conservation Area management planning process. The Cold Creek Conservation Area Management Plan is the result of over eight months of work by this committee and TRCA staff. Members of the Advisory Committee reviewed background information and assisted with the development of management zones and resource management recommendations. Residents and stakeholders were also invited to express their concerns, hopes and suggestions for the Cold Creek Conservation Area at two public forums.

Members of the Advisory Committee prepared a vision for the Cold Creek Conservation Area to guide the long term management of the property.

“The Cold Creek Conservation Area is an ecologically diverse and sustainable natural area. It is a model of sustainability that can be achieved by protecting and

enhancing the area’s natural environment while providing outdoor education, cultural and heritage experiences and recreation. Cold Creek Conservation Area is continually improved and managed through self-sustaining revenues and community-based stewardship”.

The Management Zones proposed in this Management Plan present an “environment first” philosophy where the Conservation Area is managed as a natural system and prevention is emphasized over remediation. Cold Creek Conservation Area presents an excellent opportunity for the first-time implementation of the management zone strategy based on TRCA’s **Terrestrial Natural Heritage Approach** which emphasizes two principles:

- that rare species protection is not enough for ensuring regional health, and
- that protection of more than “significant sites” is needed to ensure regional health.

Instead of treating natural areas individually (e.g., Environmentally Significant Areas (ESAs), Areas of Natural and Scientific Interest (ANSI), and Classified Wetlands), the Terrestrial Natural Heritage Approach explicitly recognizes the indivisibility and interconnectedness of parts of the natural system. Therefore, the approach evaluates the form and function of the natural cover in the Cold Creek Conservation Area in the determination of the targeted natural system presented in this plan.

Given the current pressures of urbanization affecting the condition of natural cover throughout the TRCA’s jurisdiction, it is paramount to approach the management of any natural area in a way that addresses that particular site in the larger regional context. Hence, it is recommended that decisions at the site level be made in context of the larger natural heritage system of which the property is located.

The four management zones for the Cold Creek Conservation Area are Nature Reserve, Natural Environment, Restoration, and Public Use. They are defined as follows:

## **Nature Reserve:**

Existing natural cover supporting Species of Concern or Vegetation Communities of Concern, and interior habitat portions of the “targeted natural system” where the natural system is fully functioning at all levels. (The patch size and shape are providing maximum habitat interior and the surrounding matrix exerts completely natural, positive influences).

## Natural Environment:

Existing and targeted natural cover within the targeted natural system, which does not currently meet the criteria of the Nature Reserve Zone.

## Restoration:

**Primary Restoration:** Lands within the Nature Reserve Zone that have been designated for active restoration to achieve the full potential of the “targeted natural system”.

**Secondary Restoration:** Lands within the Natural Environment Zone that have been designated for passive restoration (ecological succession) to achieve the full potential of the “targeted natural system”.

## Public Use:

Areas with existing or potential recreational and educational uses, facilities, or services.

In comparison to past and existing land uses, the land uses proposed within the Cold Creek Conservation Area Management Plan will result in the amount of natural lands increasing by approximately 10%. This will be achieved by implementing the recommendations related to the Restoration Zones (Primary 16 hectares and Secondary 26 hectares). The forest interior will almost double in size (existing 35 hectares to proposed 66 hectares). In terms of the entire property, the interior forest component will increase by 16% (existing 19% to proposed 35%). Eighteen hectares or 9% of the property have been dedicated to public use as compared to 40 hectares or 21% in the past. This is in keeping with the vision of protecting and enhancing the significant ecosystem in Cold Creek Conservation Area.

The current economic climate is one of continuing fiscal restraint in the public sector. The future public use, operation of facilities, and access to lands at Cold Creek must respond to these conditions. Reduced financial support by traditional funding sources for public use of Conservation Authority lands means new revenue generating initiatives and partnerships that will need to be created in order to achieve the vision of a self-sustaining Cold Creek Conservation Area.

Proposals for public use alternatives in designated zones will be invited. Each proposed use will be thoroughly reviewed to ensure it complies with the vision and is in accordance with the recommendations of the Management Plan.

It is anticipated that Cold Creek Conservation Area will become a model of sustainability that will be achieved by protecting and enhancing the area’s natural environment while providing environmental, recreational and outdoor educational benefits to the community through self-sustaining revenues and community stewardship. Hence, it is imperative that the management of the property be

based on sound environmental management principles, collaboration with partner municipalities, interest groups and the local community.

The Management Plan provides guidance to local, regional and provincial governments, and the TRCA in making land use decisions in such a manner that it ensures the long-term health and integrity of the natural system is maintained.

This plan also provides direction on appropriate recreation or other public uses and community stewardship. Establishment of a Community Stewardship Committee is recommended to assist with the implementation of this Management Plan. This committee could assist in the review of proposed public uses and related activities for the property. Another important role of the Community Stewardship Committee will be to assist the Authority in planning and implementing site maintenance and environmental protection and restoration activities.

The Cold Creek Management Plan will undergo a review every five years. If major revisions are necessary to reflect changing environmental, social, or economic conditions, they will only be done after consultation with affected groups and individuals. Revisions will be in keeping with the original stated vision and objective of the Plan to protect the natural, recreational and educational values of the property.

Finally, to help ensure that planning of future development within the Cold Creek Subwatershed proceeds in an environmentally sound manner, and to ensure the long-term sustainability of the significant natural features of the property are protected and enhanced, the Cold Creek Management Plan recommendations will be integrated into the process for developing a Cold Creek Subwatershed plan in the future.



*Equisetum scirpoides* – dwarf scouring rush (L3 species)  
Photography by Natalie Iwanycki

# CHAPTER 1 INTRODUCTION

## 1.1 TOWARDS A LIVING CITY REGION

Through their mission and mandate to address a Living City Region, Toronto and Region Conservation (TRCA) is committed to community partnerships with all sectors of society, to encourage environmental stewardship and build on innovative thinking about environmental health, social responsibility and sustainable economies.

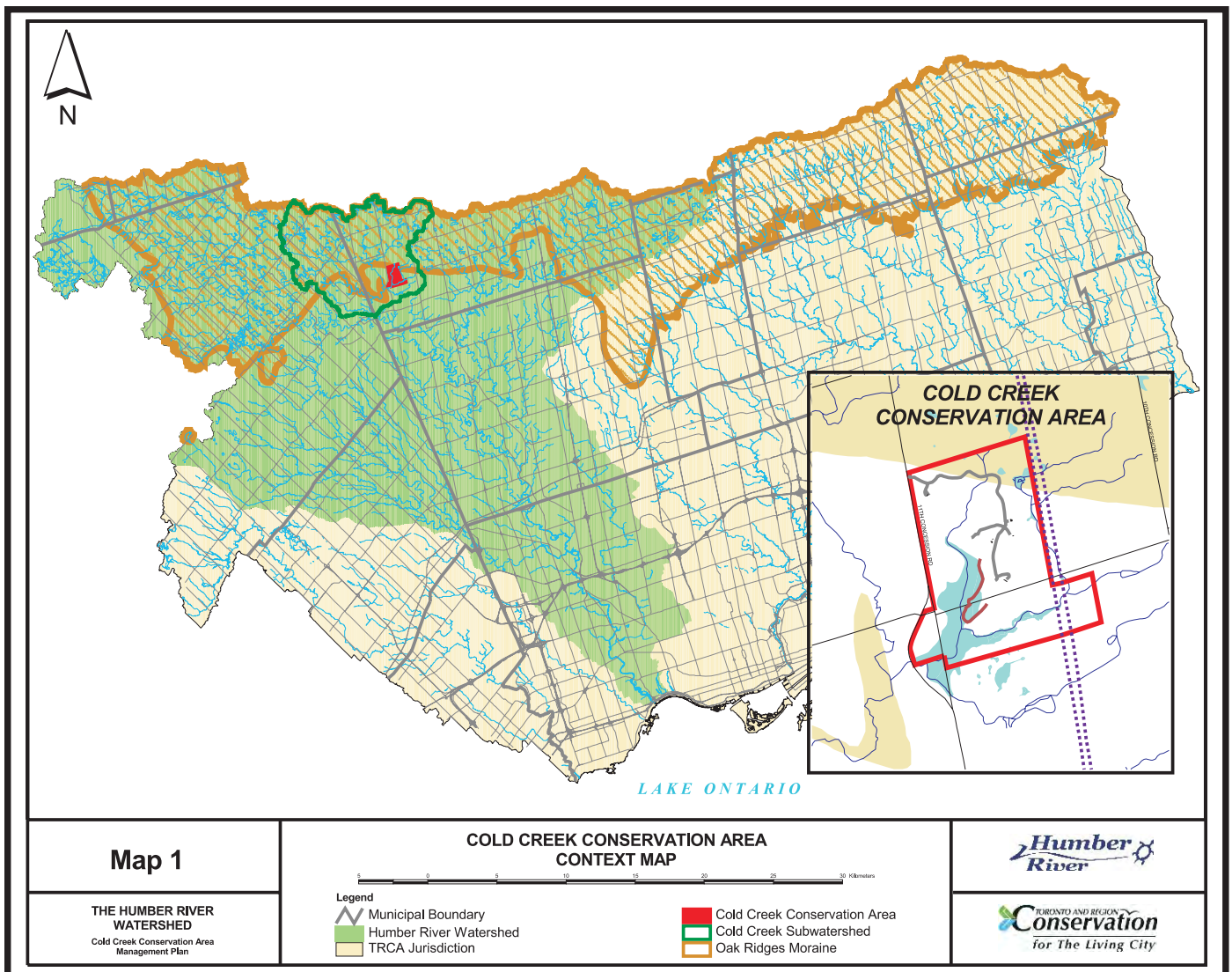
TRCA's vision of a Living City Region has three objectives:

1. **Healthy Rivers and Shorelines** – safe, clean, vibrant rivers and shorelines within nine watersheds of the region.

2. **Regional Biodiversity and Greenspace** – a rich variety of animals and plants that thrive in a network of greenspace.
3. **Sustainable Living through Education** – People engaging in environmentally friendly practices.

The Cold Creek Management Plan strives to achieve the TRCA Living City Program's objective through the application of practical initiatives such as the Terrestrial Natural Heritage Approach and providing direction to guide actions for the long-term sustainability of the property.

TRCA's **Terrestrial Natural Heritage Approach** that has been applied to this Management Plan recognizes the implications of rapid conversion of natural and







*Sarracenia purpurea*- pitcher plant (L1 species)  
Photography by Jeremy Ind

agriculture cover into urban expansion areas in the Greater Toronto Area. This approach is based on two principles:

- that rare species protection is not enough for ensuring regional health, and
- that the protection of more than “significant sites” is needed to ensure regional health.

Instead of treating natural areas individually (e.g., Environmentally Significant Areas (ESAs), Areas of Natural and Scientific Interest (ANSI), and Classified Wetlands), the **Terrestrial Natural Heritage Approach** explicitly recognizes the indivisibility and interconnectedness of parts of the natural system. Therefore, the approach evaluates the form and function of the natural cover in the Cold Creek Conservation Area in the determination of the targeted natural system presented in this plan. Furthermore, the approach is based on the relationship the Cold Creek Conservation Area has with the Cold Creek Subwatershed and the Humber Watershed. It recommends that decisions at the site level be made in context of the larger natural heritage system of which the property is located.

## 1.2 THE TRCA AND CONSERVATION LANDS

The goal of TRCA in managing conservation lands is:

*“To ensure the environmental stewardship of Authority lands and to continue to bring into ownership additional conservation and hazard lands essential for achieving a healthy regional environment and sustainable communities” (Business Plan of the TRCA 2002-2006)*

Currently, Authority lands are managed under the following categories:

- Management Agreements
- Special Agreements and Rentals
- Conservation Parks
- Field Centres
- Conservation Easements
- Resource Management Tracts and other Authority Lands

The objectives that the TRCA will aim to achieve when planning for resource management and public uses at Cold Creek are to:

1. Provide environmental protection and regeneration of the natural heritage system.
2. Provide the community with opportunities to use and enjoy the greenspace system.
3. Use and manage the land and its resources in an environmentally responsible way.
4. Foster awareness, understanding and commitment to environmental stewardship.
5. Develop and implement programs and partnerships that protect and enhance the form, features and functions of the Oak Ridges Moraine (ORM), i.e., groundwater, natural heritage, land securement, headwater protection and policy framework.
6. Increase revenue from program and service fees and compatible uses.
7. Work effectively with member municipalities, the provincial and federal governments and the Conservation Foundation and other stakeholders to manage the property.

## 1.3 COLD CREEK CONSERVATION AREA

The Cold Creek Conservation Area (CCCA) consists of 190 hectares<sup>1</sup> within the Humber River watershed (a

1. By legal summary, the property is 182 hectares. The area has been slightly over-estimated in this plan due to the methodology used for field survey.



*Aerial view of Cold Creek Conservation Area.*

*Photography by Rosemary Hasner*

designated Canadian Heritage River). The Area is located on Concession Road 11, three kilometres north of the King Side Road midway between the communities of Bolton and Nobleton in King Township within the Regional Municipality of York.

Cold Creek is a headwater tributary of the Humber River that flows from the Oak Ridges Moraine into the main Humber River south-west of the Conservation Area. The property is part of the larger Cold Creek subwatershed. The majority of the Cold Creek subwatershed is located on the Oak Ridges Moraine and serves a vital groundwater recharge function. The Conservation Area is significant due to its unique natural features. Existing mixed conifer swamp forest contains black spruce which is rare in Southern Ontario.

Historically, the property was used for outdoor education programs and included many facilities dedicated to the outdoor sports enthusiast. It was closed to the general public in 1992. At the time of preparing this Management Plan in 2002, a portion of the property was leased to the Humberlea Church of God and was used for passive outdoor recreational activities.

Cold Creek Conservation Area is a small ecosystem which is part of several larger significant natural systems such as the Cold Creek Subwatershed, The Oak Ridges Moraine, and the Humber River watershed. Watershed components are all inter-related and interdependent. Consequently, the health of upstream components directly determines the health and functions of areas downstream. Watershed health is achieved when all watershed components are managed together in an integrated and complementary fashion in cooperation with residents and stakeholders.

The Cold Creek Management Plan will contribute to the on-going implementation of the Humber Watershed Management Strategy – *Legacy: A Strategy for a Healthy Humber*. This Management Plan also looks beyond the Cold Creek Conservation Area property into subwatershed level management issues and opportunities such as maximizing natural cover, increasing landscape connectivity, protecting hydrological recharge areas and ground and surface water quality. This is important in supporting a healthy and sustainable regional ecosystem.

This Management Plan is intended to guide collective decision-making respecting future growth and resource management in the headwater areas of the Humber River within the Township of King.