Conservation Halton

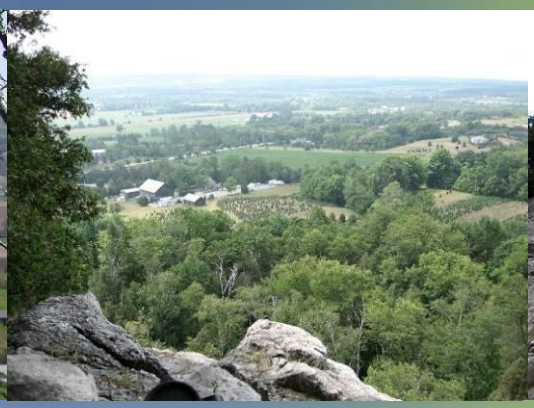
Parks Master Planning

Master Plan for Rattlesnake Point Conservation Area

Stage Three Report

OCTOBER I 2014






TCI Management Consultants
DILLON CONSULTING
EDA Collaborative Inc.

Approval Statement

We are pleased to approve the *Master Plan for Rattlesnake Point Conservation* Area as the official policy document for the management and development of this conservation area. The plan reflects Conservation Halton's intent to protect the natural environment of the Niagara Escarpment and the natural and cultural features of Rattlesnake Point Conservation Area and to maintain and develop high quality opportunities for outdoor education, recreation, discovery and enjoyment of the Niagara Escarpment by Ontario residents and visitors.

_____ _____

Ken Phillips Date
Chief Administrative Officer
Conservation Halton

_____ _____

John Vice Date
Chair, Board of Directors
Conservation Halton

I am pleased to deem this master plan in conformity with the general intent and purpose of the *Niagara Escarpment Plan (2005)* pursuant to S. 13-(1) of the *Niagara Escarpment Planning and Development Act*.

_____ _____

Deb Pella Keen Date
Director
Niagara Escarpment Commission

_____ _____

Ray Pichette Date
Director
Natural Heritage Lands and Protected Spaces Branch
Ontario Ministry of Natural Resources and Forestry

Preface

The *Master Plan for Rattlesnake Point Conservation Area* is the principal guiding policy document for the planning, development and resource management of the conservation area, which is owned and administered by Conservation Halton This master plan has been undertaken as recommended by the *Limestone Legacy* report prepared by Conservation Halton in 2007, which proposed a vision to create "a sustainable network of premier conservation parks for ecological health and to provide public greenspace for quality education and recreation." The visions, goals and objectives of that plan are attached to this report as Appendix III.

This master plan was developed in a phased three stage planning process that was designed to address growing regional recreational demands while also ensuring the long-term protection and sustainability of this natural escarpment park. The planning process was structured to satisfy the legislative requirements of the *Niagara Escarpment Plan (2005)* and the *Conservation Authorities Act* and has included extensive consultation with the public, stakeholders and related agencies.

Final approval of this plan is under the jurisdiction of the Ontario Ministry of Natural Resources and Forestry in accordance with the Niagara Escarpment Plan *(2005).* Upon approval of this document by the Board of Conservation Halton, submission will be made to the Ontario Ministry of Natural Resources and Forestry and Niagara Escarpment Commission for review, circulation and final approval by the Minister or designate of the Ontario Ministry of Natural Resources and Forestry. The Master Plan will be the prevailing policy document for the next ten years from the date of the Ontario Ministry of Natural Resources and Forestry approval.

The *Inventory and Analysis: Stage One Report* was released in March 2010. The *Concept Alternatives and Management Considerations: Stage Two Report* was released in August 2010 for circulation and response from the public and related agencies.

The *Master Plan for Rattlesnake Point Conservation Area* is the approved policy document for the management and development of the Rattlesnake Point Conservation Area. This document sets out park zoning and conservation area policies for resource management and conservation area operations as well as development policies to guide proposed conservation area development.

Executive Summary

Vision Statement

To become one of Conservation Halton's regionally significant Niagara Escarpment Parks protecting and sustaining the unique escarpment environments as well as providing excellence in high quality educational and outdoor passive recreational visitor experiences through the provision of enhanced facilities and amenities

Significant Attributes of Rattlesnake Point Conservation Area at Present

Rattlesnake Point Conservation Area possesses an impressive array of natural and cultural heritage features including:

- Ninety-seven habitat types at the Rattlesnake Point Complex Environmentally Sensitive Area (ESA), covering 295 hectares including interior forests, expansive valley wetlands and prominent escarpment cliff and rim features;
- A network of 15.5 kilometres of hiking trails, featuring forest trails, boardwalk, scenic canyon lookouts and trail connections to adjacent natural areas and the Bruce Trail;
- Part of the Niagara Escarpment UNESCO World Biosphere Reserve and identified as a Natural Environment Park under the Niagara Escarpment Parks and Open Space System;
- Identification as a Provincially Significant Life Science Area of Natural and Scientific Interest representing the Crawford Lake/Milton Outlier Valley Life Science ANSI and Lowville Re-entrant Valley Earth Science ANSI features;
- Provincially Significant Wetlands for the Nassagaweya Canyon Wetland
- Over 596 plant species (7 rare, 23 uncommon), 50 bird species (7 rare, 11 uncommon), 11 mammal species (1 rare), 18 fish species, 5 reptiles (2 rare), and 7 amphibians (1 uncommon) can be found in the conservation area and the immediate surrounding area;
- Protected habitat for 14 species at risk as well as 3 globally rare and 7 provincially rare habitat types, and 31 ancient Eastern White Cedars, the oldest of which is 600 years old;
- Individual and group attendance figures indicate over 72,563 visitors in 2013;
- Existing natural heritage features provide the equivalent of $1.4 million in ecosystem services annually;
- The best outdoor rock climbing face in the Greater Toronto Area;
- Panoramic scenic lookouts extending 50 kilometres or more; and,
- Overnight group camping facilities.

Existing Policy Framework

The *Master Plan for Rattlesnake Point Conservation Area* builds on and supports existing Conservation Halton and Provincial policy documents including the *Conservation Halton Strategic Plan*, *Halton Escarpment Parks – A Limestone Legacy* and the *Niagara Escarpment Plan (2005)*.

The *Conservation Halton Strategic Plan, towards a Healthy Watershed (2009-2013)* identifies a series of primary mandated programs that are an integral part of the *Master Plan for Rattlesnake Point Conservation* Area including environmental protection, water resources management, forest resources management, and lifelong education and recreation.

The *Limestone Legacy* document outlines a draft strategy to protect and enhance Halton's system of Escarpment conservation areas through a unique partnership between Halton Region and Conservation Halton.

Within the provincial *Niagara Escarpment Plan (2005)*, Rattlesnake Point Conservation Area is recognized as a key component of the Niagara Escarpment Parks and Open Space System and is designated as a Natural Environment Park that permits activities including high quality, low to moderate intensity recreation such as hiking, rock climbing and nature viewing to picnic sites and un-serviced group campsites.

Summary of Significant Issues and Challenges

Financial Constraints: Over the past 20 years, with changes in government and priorities, Conservation Halton's funding for park development and enhancement has almost disappeared. The result is that Conservation Halton has been primarily using conservation area revenues to offset operating expenses with limited funds for basic capital maintenance work, new facilities or tools to monitor environmental impact. Currently there is no real base-level capital-funding source. This limited funding has resulted in the deterioration of natural heritage features, facilities and amenities as well as the quality of the visitor experience. Limited funding threatens Conservation Halton's ability to continue to protect and maintain, let alone improve or enhance the conservation area

Rattlesnake Point Conservation Area, as with the other Conservation Halton parks, suffers due to the impacts of severely limited tax supported funding. Funding models in many other Conservation Authorities in Southern Ontario include regional, municipal and/or provincial tax levy support. Additionally, development charges, permit fees and other associated development fees are charged against Conservation Halton for park capital development projects. Other park agencies in the region are normally exempt from these fees and charges.

Growth in Visitation: Over the last five years, Conservation Halton parks have experienced a 9.4 per cent annual increase in visitation, while the regional population has grown at a rate of 4.5 per cent over the same period. This growth trend is projected to continue, if not accelerate over the next ten years. This growth represents regional resident's positive attitude towards participation and interest in healthy-lifestyle pursuits in conservation, but also represents a threat to the sensitive natural ecology of the site unless properly managed and serviced with the appropriate facilities.

Natural Heritage Protection: Rattlesnake Point Conservation Area's unique and diverse natural heritage features are generally well protected and secure but some deterioration was identified at certain heavily used locations along the trails and lookout areas. This plan highlights the need for stronger monitoring and protection measures, especially in light of the growing population and visitation projections.

Cultural Heritage Protection: There is one registered archaeological site of low cultural value within the Rattlesnake Point Conservation Area.

Visitor Experience: While the natural features of the Rattlesnake Point Conservation Area are spectacular and definitely place it among Ontario's premier natural park destinations for visitors, the present built amenities, facilities and infrastructure are somewhat lacking and subsequently counterproductive to the experience and messaging intended; this is due to chronic underfunding

Education and Programming: The educational programming at Rattlesnake Point Conservation Area is a limited component. Given its unique scenic viewing opportunities, rock climbing activities and related recreational trails, there is definite potential to enhance this aspect of the programming.

Recommended Policies

This master plan has been developed to support Rattlesnake Point Conservation Area as a significant regional destination for local visitors and tourists:

- Ensures protection and enhancement of the natural heritage and cultural spaces of the site;
- Promotes environmental values, excellence in education, healthy lifestyles and outdoor recreation;
- Prescribes a workable visitor impact management strategy(VIM) that addresses the expected increased visitation and any accompanying potential impacts;
- Specifies development requirements and standards that meet the appropriate level of design excellence in high quality educational, interpretive and recreational facilities, programs and amenities; and,
- Outlines a realistic financial management strategy that defines funding and revenue generation requirements, potential partnerships, management and operational costs and that aims at ensuring long-term viability.

Highlights of the Development Proposal

The proposed master plan identifies a range of new facilities to provide enhanced natural heritage protection, visitor experience, amenities, educational and interpretive opportunities and recreational conveniences. Financial and environmental sustainability are defining, and in some cases limiting factors in the proposed list of master plan recommendations. Some of the proposed development may be exempted from requiring a Niagara Escarpment Development Permit in accordance with section 5.41 of Ontario Regulation 828/90. The main elements of the master plan are summarized as follows:

- Improve trail systems, lookout points and rock climbing areas to ensure protection and enhancement of the natural heritage features.
- Remove five campsites in upper area, designating the entire upper area as day use.
- Expanded existing lower campsite area to include five new sites and a 10 car parking lot.
- Fence around wood storage area to create maintenance compound.
- A system of entrance, directional, interpretive and other signage that is consistently branded across all Conservation Halton conservation areas and standardized to meet accessibility, readability, risk management and marketing objectives.

- A well-designed system of small-scale roads and parking areas that promotes a positive sense of arrival as well as safety and security for visitors, tastefully designed to harmonize with the natural setting of the park.
- An automatic gated entrance
- An additional picnic shelter in the lower park area.
- Site technology upgrades relative to telephone and video surveillance (future).
- Renovate existing gatehouse
- Additional site furnishings such as bike racks, garbage receptacles, benches and picnic tables.
- Accessibility upgrades for all buildings and pathways to meet the Accessibility for Ontarians for Disabilities (AODA) built environment standards.
- Site service upgrades including potable water, electrical service and wastewater treatment utilizing sustainable technologies that demonstrate the environmental values associated with the site.
- Consider acquisition of additional lands for future expansion of the administrative facilities, recreational programming sites and natural heritage features and requirements.

Overall Capital Development Costs

Overall capital development cost for the build out of the proposed master plan for the Rattlesnake Point Conservation Area amounts to approximately **$6.1 million** over a ten-year period. A generalized breakdown of this amount is summarized below.

Signage and directional	$ 95,000
Roads and parking	$ 1, 656, 500
Picnic and site furnishings	$ 165,000
Site upgrades/infrastructure	$ 225,000
Trails	$ 344, 500
Restoration of natural features	$ 2,070,000
Visitors Impact Management Plan ($15,000 /yr.)	$ 150,000
Subtotal	$ 4, 706, 000
Soft costs, fees, contingency (30%)	$ 1, 411,800
Total	**$ 6, 117,800**

Overview of Financial Parameters

The key financial and related parameters of the development plan for Rattlesnake Point Conservation Area are as follows:

- The cost of the development plan for Rattlesnake Point Conservation Area over the 10-year development timeframe is approximately $6.1 million (measured in terms of 2010 dollars) and a stable base-level capital-funding source must be established to facilitate plan implementation.
- Attendance at the conservation area is expected to grow significantly to just over 111,000 by the year 2020.

- While more visitors will generate increased revenues, the analysis demonstrates that this by itself will not be sufficient to offset the higher costs of operation; however, despite increased operating costs, Rattlesnake Point Conservation Area can operate on a break even basis, or even generate a small surplus, through a variety of strategies.
- To provide the enhanced level of customer services and environmental protection called for in this master plan, and not incur an operating deficit, a pricing study must be undertaken to determine how to increase net revenues or identify means to subsidize operating costs.

Putting it in Context – Conservation Halton's Contributions to Society and the Environment

Conservation Halton creates significant direct economic benefit in the community. The operations of the Conservation Halton plus the expenditures of visitors, who come to the region to utilize the programs and services offered, create nearly $12 million of additional gross domestic product (GDP) in Halton Region alone. This is associated with 274 jobs in the Region, $8.4 million in wages and salaries and $5.7 million in additional taxes paid. If this were a single business or industry, it would be recognized as a significant component of the economic base of the Region. Beyond Halton Region itself, there are further economic benefits accruing across the Province of Ontario. Clearly, Conservation Halton is a significant presence providing economic benefit to the community.

Beyond these positive economic impacts, Conservation Halton provides a valuable service to the community in terms of 'ecosystem services' – the impact of the forest and wetlands maintained by the Conservation Halton in terms of filtering and cleaning water and air. Ecosystem valuation quantifies the cost of providing these services commercially as opposed to having conservation authority lands provide these benefits 'for free'. The estimated savings to society from these services provided by Conservation Halton's holdings are nearly $16 million annually.

Conservation Halton parks provide a growing population with access to abundant, natural green space for leisure and recreation. More specifically, these spaces offer opportunities for recreation that promotes healthy living through physical activity and exercise. By keeping costs low, Conservation Halton conservation areas strive to offer accessibility to all residents while supporting culturally and socioeconomically diverse communities. In addition to local residents, as significant regional destinations, the conservation areas also attract tourists to the area. Conservation Halton adds to the quality of life, which is an economic asset. The availability of Conservation Halton spaces, programs and services adds considerably to the perceived quality of life in Halton Region. This in turn can be extremely valuable in attracting the highly mobile 'creative class,' those individuals most likely to create businesses, invest in the community and bring new ideas and energies into the region. Thus, indirectly, Conservation Halton operations add to the attractiveness of the region overall as a place to live and work.

Financial Sustainability Strategy

The master planning process has made it abundantly clear that:

- While the prime focus of the Conservation Halton parks has been and will continue to be protection and enhancement of the natural heritage resources, it is also imperative that there be consideration for the social and economic components of the sustainability model;

- As growth in visitation inevitably increases, so too must the investment in infrastructure, amenities, related facilities and the visitor impact management that is required to protect and enhance the natural heritage features and thereby achieve and maintain the necessary balance between protection and usage;
- Protection of natural heritage resources requires key investments in:
    - Enhancements to existing facilities, infrastructure and amenities;
    - New facilities: educational, recreational and interpretive;
    - Protection and enhancement initiatives: visitor impact management, restoration, etc.

There should be an annual base level of financial support should be sourced through Halton Region (the Province of Ontario and / or Municipalities, etc.) as the main recipient(s) of the benefits provided by this conservation area. This should result from (and possibly be correlated with) the significant population growth occurring in the region, which by itself will place a heavier demand upon usage of Conservation Halton's areas and facilities. This will require a new and different business model to be developed for Conservation Halton, one that acknowledges the significant economic benefits conferred upon Halton Region by Conservation Halton, and that recognizes the pressures placed upon Conservation Halton by population growth.

Consequences of not providing adequate on-going capital funding may include the need to implement one or more of the following actions:

- Raise admission fees at specific conservation areas;
- Raise membership fees;
- Charge differentially at peak times;
- Limit visitation;
- Limit access to certain conservation areas;
- Cut back on some of the programs and services currently offered;
- Cutback the proposed capital development program or extend it beyond the projected 10-year timeframe with subsequent increases in cost.

It is likely that even with capital infusion, some combination of the above factors will be necessary. On-going monitoring of the progress of the master plan implementation should be addressed through adoption of an annual reporting procedure that identifies key projects and tasks including existing initiatives, new initiatives and assessment of overall progress relative to established targets. Conservation Halton creates valuable environmental, social and economic benefits, and provides significant value-added services to Halton Region. To enable Conservation Halton to continue to provide these benefits (and indeed, to increase the value of these benefits to the region), on-going investment in Conservation Halton's conservation area facilities and programs will be required.

Acknowledgements

The *Master Plan for Rattlesnake Point Conservation Area* is the product of collective input from Conservation Halton staff, local residents and key stakeholders. These dedicated individuals addressed important concerns and issues surrounding the development of the master plan.

Those who made an effort to participate in the public meetings and design charrettes will have a greater sense of community ownership and pride, because they helped to shape the master plan concept and recommendations for Rattlesnake Point Conservation Area. The ideas of local citizens combined with the management experience of Conservation Halton and the analytical and design expertise of the consultants has produced a master plan concept to guide the future development of this unique and beautiful natural area.

Consultants

EDA Collaborative Inc. completed this study between November 2008 and February 2011. This document summarizes the factors including environmental, social, economic and management policy considerations that were taken into account in order to create an appropriate master plan for Rattlesnake Point Conservation Area.
Dillon Consulting Limited provided the environmental analysis and programming with particular attention to resource management policies.

TCI Consulting Inc. provided the economic evaluation, market analysis, and preliminary capital and operating budgets for the master plan.

Conservation Halton Master Plan Review Committee

Neil Switzer – Manager of Projects and Services

Angela Nonkes – Parks Planner/Landscape Designer

Robert Edmondson – Director of Watershed Management Services (past)

Gene Matthews – Director, Conservation Lands

Marta Proctor – Director, Conservation Lands (past)

Lorrie O'Brien – Director, Conservation Lands (past)

Hassaan Basit – Director, Communications Services

Linda Scott – Manager of Crawford Lake and Mountsberg Conservation Areas

Dolf DeJong – Manager of Crawford Lake and Mountsberg Conservation Areas (past)

Julia Madden – Manager of Crawford Lake and Mountsberg Conservation Areas (past)

Craig Machan – Manager of Hilton Falls, Rattlesnake Point, Mount Nemo Conservation Areas

Ron Kindt – Manager of Hilton Falls, Rattlesnake Point, Mount Nemo Conservation Areas (past)

Brenda Axon – Manager, Watershed Planning Services

Niall Lobby – Manager, Risk & Land Holdings Services
John Bush – Manager, Watershed Lands and Resource Services (past)

Kim Barrett – Senior Terrestrial Ecologist

Nigel Finney – Natural Heritage Ecologist, Conservation Projects

Jarold Holland-Hibbert – GIS Specialist

Technical Advisory Committee

Anne Marie Laurence – Niagara Escarpement Commission

Susan Cooper – Ontario Ministry of Natural Resources and Forestry

Stephanie Jarvis – Town of Milton

Shelley Young – Region of Halton

Conservation Halton Ecology Field Staff

Nigel Finney

Brenda Van Ryswyk

Lesley McDonell

Andrea Dunn

Rachel Martens

Jennifer Roberts

Other Supportive Organizations, Agencies or Individuals

Conservation Halton Board of Directors

Conservation Halton Foundation

FEREN

Halton Environmental Network

Halton Multi-Cultural Council

Halton Region

Halton Region Health Department

Ontario Parks

Our Kids Network (Vanessa Box-Jones)

Province of Ontario South Peel Naturalists

Sustainable Trails Limited

Halton REGION

Funding for this project was provided by The Regional Municipality of Halton

Ontario

Assistance for this project was provided by The Ontario Ministry of Natural Resources and Forestry

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Section One: Introduction

1.1 Background

Master planning for Rattlesnake Point Conservation Area was undertaken to provide Conservation Halton with a sustainable management and development plan for the site to operate as a Natural Environment Park under the Niagara Escarpment Parks and Open Space System (NEPOSS). This planning process is important to the protection and management of the 295-hectare site which is located in the Town of Milton, in the Regional Municipality of Halton region, in Southwestern Ontario just to the west of the Greater Toronto Area.

This report constitutes the third and final stage of the master planning process – the master plan. Previous stages included the *Inventory and Analysis, Stage One Report* (EDA Collaborative Inc.2010a), and *Concept Alternatives and Management Considerations, Stage Two Report* (EDA Collaborative Inc. 2010b). Further details of the planning process can be found in Section 1.7 below.

1.1.1 Existing Conservation Area

The Rattlesnake Point Conservation Area is located on the Milton Outlier of the Niagara Escarpment, and boasts important biophysical features including prominent cliffs, unique biological associations and natural springs that feed into Bronte Creek. Rattlesnake Point Conservation Area lands stretch north to south along the eastern side of the valley system known as Nassagaweya Canyon. Forested and talus slopes rise steeply to exposed spectacular cliff edge lookouts facing south over agricultural lands toward Mount Nemo Conservation Area and further south to Lake Ontario. Rattlesnake Point Conservation Area offers one of the best scenic viewing locations on the entire escarpment with landmark cliffs and excellent rock climbing areas.

The lands comprising Rattlesnake Point Conservation Area have been classified as Escarpment Natural Area and Escarpment Protection Area under the Niagara Escarpment Plan (2005). The area is also designated as a Regional Environmentally Sensitive Area (ESA) and a Provincially Significant Area of Natural and Scientific Interest (ANSI).

This distinctive conservation area is shown on the following location map (Figure 1-1). Rattlesnake Point Conservation Area is located entirely within the Town of Milton. It is bounded by Walkers Line to the west, Steeles Avenue to the north, Appleby Line to the east, with a small portion extending to Bell School Line. A parcel of land known as the MacDonald Tract is also part of the Rattlesnake Point Conservation Area.

The Bruce Trail passes through Rattlesnake Point Conservation Area and provides a pedestrian link west through Crawford Lake Conservation Area and the Crawford Tract II Resource Management Area and, then, continues south towards Burlington; the Bruce Trail also runs northeast to the Kelso Conservation Area. Conservation Halton works with the Iroquois Bruce Trail Club and volunteers to maintain these trails.

Figure 1-1: Location Map

1.1.1.1 Infrastructure

A number of facilities and amenities exist on Rattlesnake Point Conservation Area including:

- An entrance road to the conservation area is off Appleby Line.
- A gatehouse (approximately 240 square feet) constructed in 1976 of concrete block and brick with a centre pitched roof.
- Parking lots are distributed in various locations within the main day use area:
  - Upper parking lot: 40 vehicles
  - Lower parking lot: 50 vehicles
  - Lower parking lot 16 vehicles
  - Campsite #2 parking lot: 10 vehicles

- Campsite #10 parking lot: 10 vehicles

- All vault toilets on the site are open year-round to the public.
- A large, open day use area with a picnic shelter centrally in the site is used by visitors including picnicking, field games and related activities. Another, smaller day use area with picnic shelter is located close to the group camping area in the lower area.
- The comfort station was constructed in 1991-92 of concrete block. The building houses indoor washrooms, showers, and covered shelter for picnic tables.
- The stairway structure (built 1994) is constructed of steel treads, timber structure and handrails and concrete footings. The stairway provides year-round pedestrian access down the face of the escarpment to the foot of the cliff area.
- A small wood storage building (10' X 10') built of concrete block and timber provides storage for firewood.
- The site has water, sewage and electrical services.

1.1.1.2 Recreational Facilities

Rattlesnake Point Conservation Area currently offers hiking, family / group picnicking, group camping, nature study/photography, geocaching and recreational/instructional rock climbing.

This is the only Conservation Halton climbing area that allows instruction and large organized group climbing. In general, there are some excellent routes and it is the best area for beginner or novice climbers due to the ease of top rope access. There are three climbing areas: The East and West Wall cliffs with approximately 140 routes and Buffalo Crag with approximately 100 routes. Anchor bolts have been installed along the brow of the three climbing areas in order to eliminate top roping from the trees and to increase climber safety.

1.1.1.3 Staffing

Rattlesnake Point Conservation Area in conjunction with Hilton Falls and Mount Nemo Conservation Areas has a dedicated staff, totaling about seven full- and part-time staff that has been developed over a number of years.

1.1.1.4 Visitation

In 2013, over 72,563 people visited the Rattlesnake Point Conservation Area. Most visitors to Rattlesnake Point Conservation Area are hikers, nature enthusiasts or climbers. Groups, both school and Guides / Scouts, although low in numbers, do visit to picnic, hike and engage in curriculum / program related activities. As discussed in Section 5.2.1 below, visitation is expected to increase in coming years.

1.2 Site Characteristics

Rattlesnake Point Conservation Area consists of a dense and attractive mixed hardwood forest area, conifer and hardwood plantations, valleylands, and natural regenerated old fields and a rare cliff ecosystem. Thus, the conservation area includes examples to interpret the natural environment including ecosystem succession, the unique character of the escarpment itself and the general patterns of animal and plant habitats of the Niagara Escarpment.

The open rural landscape character associated with the Niagara Escarpment Planning Area, as well as the greenbelt corridor, is evident at the Rattlesnake Point Conservation Area. Contributing factors include anthropogenic rural features such as regenerating agricultural fields and hedgerows, and natural features such as forested slopes, stream valleys, and rock face and outcrops. Seasonal changes impact dramatically on the visual character of the site. This wide diversity of natural heritage features renders the lands very aesthetically valuable.

1.3 Site Ecology and Policy Context

Designated natural features in the Rattlesnake Point Conservation Area and surrounding area include regionally and provincially significant landforms, vegetation communities and other natural heritage features including:

- Crawford Lake–Rattlesnake Point Escarpment Woods Environmentally Sensitive Area (ESA)
- Crawford Lake/Milton Outlier Valley Provincially Significant Life Science and Earth Science Area of Natural and Scientific Interest (ANSI)
- Lowville Re-entrant Valley Earth Science ANSI
- Nassagaweya Canyon Provincially Significant Wetland (PSW)

The master plan must conform to numerous planning acts and policies, including but not limited to the *Planning Act*, *Provincial Policy Statement, Niagara Escarpment Plan (2005), Greenbelt Plan, Places to Grow Act*, *Conservation Authorities Act*, Halton Region's *Regional Official Plan* and the T*own of Milton Official Plan*. The implications of these policy statements are laid out in Section Two of the *Stage One Report* (EDA 2010a).

Recently Halton Region has adopted an amendment to their official plan. Instead of land use designations called Greenlands A and B, they have initiated a Regional Natural Heritage System.

> *The goal of the Regional Natural Heritage System is to increase the certainty that the biological diversity and ecological function within Halton will be preserved and enhanced for future generations. ROPA 38 (Adopted by Regional Council December 16, 2009, approval pending)*

All of the conservation area falls under this natural heritage system classification.

1.4 Land Use Context

1.4.1 Regional Context and Surrounding Land Use

The population base within Southern Ontario is significant and growing rapidly. The estimated current (2010) population within a half-hour drive radius is just over 2 million, while that within a one-hour radius is estimated to be nearly 7 million. At anticipated growth rates, the population within the one-hour radius will be approximately 8.5 million by the year 2021.

The provincial growth plan, the Places to Grow Plan sets population and employment targets that Halton Region must plan to achieve. Specifically, it needs to plan for a *total* of 780,000 people and 390,000 jobs by 2031. This requirement means that they need to plan for an additional 134,000 people and 54,000 jobs in the years 2021-2031. Clearly, there is a significant local and regional market upon which Conservation Halton's facilities and programs can draw on and will have to accommodate a significant and growing local and regional market.

Although the area is experiencing phenomenal population growth and will continue to do so for the foreseeable future, most of the surrounding area has a rural character. Moreover, the local municipalities as well as Halton Region are committed to "Smart Growth" principles of concentrating development and preserving open space.

1.4.2 Local Context

1.4.2.1 Land Use

The area directly abutting Rattlesnake Point Conservation Area lies entirely within the Niagara Escarpment Plan Area and, thus, all land uses must comply with the policies governing the assigned designations. The conservation area is comprised of Escarpment Natural Area and Escarpment Protection Area with some Escarpment Rural Area in the MacDonald Tract. Adjacent land uses include farmland and forestry plantations on the Milton Outlier, residential rural clusters along Derry Road, sand and gravel pits to the south-west, and the Crawford Lake Conservation Area to the west.

1.5 Study Purpose

Master planning for the Rattlesnake Point Conservation Area was being undertaken to ensure that Conservation Halton meets its obligations under the *Niagara Escarpment Plan* (2005) and aligns with Conservation Halton's *Strategic Plan* (2009). It is also in fulfillment of the mission of the *Limestone Legacy* report (2007). The purpose of this new master plan is to update and renew the 1983 *Master Plan* is to update and renew the principal guiding policy document for the planning, development and resource management of the Rattlesnake Point Conservation Area. This process is important to the protection and management of the 295-hectare site in which is part of a UNESCO World Biosphere Reserve.

The overall purpose of the master planning process was to protect and enhance the significant natural features and ecological functions of the conservation area while providing opportunities for the public to enjoy this spectacular area, appreciate its outstanding scenic beauty and participate in recreational opportunities. The purpose of the *Master Plan for Rattlesnake Point Conservation Area* is to develop a vision and role for the conservation area in relation to other facilities within the Conservation Halton watershed. The *Master Plan for Rattlesnake Point Conservation Area* will serve as the principal guiding document for the future planning, design, development and resource management of the conservation area in accordance with all relevant acts and regulations.

1.6 Study Goals and Objectives

The primary goal of the *Master Plan for Rattlesnake Point Conservation Area* is to create an optimum balance between environmental protection, resource management and public use. This goal was accomplished through a phased and integrative planning and consultation process. Objectives of the final master planning process included:

- Identify heritage system and conservation and restoration area components;
- Establish Priority Protection Areas for the protection of all significant natural and cultural features;
- Conduct inventory and market analysis of surrounding natural and recreational facilities;
- Establish details of the type and location of current and proposed uses;

- Recommend enhanced basic facilities and amenities to bring the areas up to premier standards appropriate to a regionally significant resource;
- Address physical and financial accessibility barriers to visitation;
- Develop appropriate park zoning, development guidelines and management policies;
- Recommend species at risk monitoring and habitat management program;
- Assess the feasibility of implementing a Visitor Impact Management System (VIM) program and recommend a suitable VIM plan;
- Conduct financial assessment and develop budget estimates for capital and operating costs; and
- Define carrying capacities for the conservation area's various uses;

1.7 Study Process

A master plan provides a long-range vision to guide development over a period of many years. The master planning process for this study involved three stages.

Stage one of the study provided the context and foundation for the master plan that was developed for the Rattlesnake Point Conservation Area. It summarized the site's existing environmental, social and economic features and factors, as well as the opportunities and constraints that influenced the development of this master plan. This required an extensive inventory and analysis process conducted in Stage One, the findings of which are documented in the *Inventory and Analysis: Stage One Report* (EDA 2010a).

The *Stage Two Report* consists of three development options including suggestions for programming, facilities and finances. These options were presented to interested members of the public and key stakeholders for review and discussion; and, based on these findings; a preliminary preferred concept was identified (EDA 2010).

The Ontario Ministry of Natural Resources and Forestry, Niagara Escarpment Parks and Open Space System Planning Manual (MNRF, 2012) advocates for a park zoning system and such a system has been used for this master plan. These zones and respective management policies are presented in Section 3 of this report.

Other park management policies, such as trail development and cultural heritage protection, are also found in Section 3. These policies have been developed in accordance with governing policy documents such as the *Ontario Heritage Act*, the Niagara Escarpment Plan *(2005)* and the *Conservation Authorities Act*.

During this third and final stage of the master planning process the preferred concept as determined in stage two has been further refined and a phased implementation plan has been developed for Rattlesnake Point Conservation Area. This final master plan includes a phased implementation and management plan for Rattlesnake Point Conservation Area. The completed plan will be submitted to the Board of Conservation Halton for approval and then to the Niagara Escarpment Commission and the Ontario Ministry of Natural Resources and Forestry for final approval.

1.7.1 Public Consultation

The Master plan process started with visioning sessions with staff and board members in January 2009. In early February 2009, targeted interviews were held with interested organizations[1] to gain insight into what they would like to see in the Master Plan for each park. On February 25, 2009 there was an initial open house for all residents, interested parties and organizations[1] to discuss proposed ideas for Hilton Falls, Rattlesnake Point and Mount Nemo. This open house was at Conservation Halton Administration Office and had 37 people attended, which included 27 different organization[1] representatives. More information regarding the visioning and workshop can be found in Stage I: Appendix II.

After Stage I: Inventory and Analysis was complete, the development of three proposed concepts for Rattlesnake Point were brought forward and discussed at an Open House on May 29th, 2010. The open house was advertised in the local papers, newsletters and on the Conservation Halton website, to which 9 public citizens attended the workshop which included 3 Metis. An extensive survey was distributed at the parks and online regarding the four conservation areas to which 170 people responded. Survey results and information on the May 29th, 2010 workshop can be found in Appendix IV.

The preferred concept, derived from the review process, which included survey results, detailed planning considerations, economical, environmental and social considerations is based on Concept "B" presented in the Stage II Report. Concept "B" builds on the basic work proposed under Concept "A", (consisting of an upgrade of existing facilities to the enhanced base level proposed by these master plans). Concept B proposes to remove the existing campsites from the upper area and to move them to the lower campground area, thus making the upper area designated for day use. Concept B further includes a visitor centre, additional picnic facilities, washrooms, a pavilion and signage. The Stage II document was posted on Conservation Halton's website and letters were distributed to neighbours within 120 meters of each park on September 1, 2010. Newspaper ads were placed in local papers and Halton Conservation posted a media blast in September 2010 announcing the time and place of the Master Plan Stage II Open House. On October 7th, 2010 the preferred concept "B" was presented at two open houses held in the afternoon and evening at the Administration Office. In total 37 people attended the open house, 15 Staff, 20 residents and two consultants. A variety of opinions and issues were presented by members of the public.

Some issues which arose from this meeting were; that the new trail in MacDonald Tract gives access to escarpment forest which may deteriorate the natural escarpment edge, and that some of the production fields should be left as meadows. Issues with the size and intent of the visitors' centre and all-seasons pavilion were also identified. These items were discussed and changes were made within the Stage III Master Plans; for example there will be no public trails linking to the Macdonald Tract, the visitors centre, all season pavilion and additional parking were also removed from the plan. However these items may be addressed again through a development permit with additional public consultation at a later date. The plan was further refined based on input from the Ontario Ministry of Natural Resources and Forestry, Halton Region, the Niagara Escarpment Commission, the Town of Milton and members of the public. Some of the concerns raised and Conservation Halton's response to them are detailed below.

[1] Organizations – Represents; Groups, interested parties and corporate bodies. Examples; Ontario Climbing Coalition, The Bruce Trail Conservancy, Tourism Burlington, and Dufferin Aggregates

1.8 Significant Issues

This master plan has been developed in response to significant consultation with staff, current park visitors and a technical advisory committee. This master plan has been developed to respond to several significant issues that have become apparent through the study process. These are summarized below.

1.8.1 Community Issues

1.8.1.1 Visitation Increase:

Conservation Halton expects to see visitation expand considerably at its conservation areas due to the expected population growth for Halton Region (anticipated to be 71% over the next 20 years) and recreation trends (see section 5.1 below and Section 6.6 in the *Stage One Report* (EDA 2010a)).

In general, Conservation Halton has received requests for more adult learning opportunities and improved multicultural, First Nations and handicapped accessibility to the facilities and interpretive programs.

At the open houses, held May 29th and October 10th, 2010, concerns were expressed regarding community impacts that may result from development and increased visitation. Conservation Halton customarily provides buffers, such as hedgerows, to screen views and buffer sound. Moreover, Conservation Halton strives to work in harmony with its neighbours and considers their concerns at all times. During and following the master planning process, invitations have been extended to neighbouring property owners, the general public and specific user groups to provide feedback to the proposed development options.

1.8.1.2 Impacts of the Natural Environment

There were concerns that the natural environment wasn't being given enough emphasis in these plans; however, it is important to recall that Conservation Halton's mandate also includes providing appropriate levels of public access and recreational opportunities while also being financially self-sustaining. Nevertheless, environmental protection has been of paramount importance throughout this master planning process. Many management policies are incorporated in this plan and all development is confined to the Development Zone, with only trails and other low-impact or strictly monitored activities being located in other zones (see Section Three for a thorough discussion of such policies).

Site Inventory works revealed that public trails are located in Priority 1 and 2 Protection Areas. The master plan calls for major upgrading of existing trails to minimize the potential for erosion and ponding. During this process, Conservation Halton will review the need to close or reroute trails away from sensitive areas.

1.8.1.3 Climbing Impact

The Niagara Escarpment Commission and the Ontario Ministry of Natural Resources and Forestry reviewed the *Stage Two Reports* (ibid) and expressed concern that negative impacts on the rare cliff face ecosystem should be minimized. In response, this master plan proposes many management actions including potentially decommissioning climbing routes in conflict with natural heritage features, implementing a long-term cliff monitoring program and increasing public education about the value and fragility of the natural environment. Conservation Halton is developing a Climbing Management Plan which will be available in fall 2014 as part of their effort to implement a comprehensive Visitor Impact

Management plan. Conservation Halton will work with the climbing community and education suppliers to develop an appropriate strategy for use of climbing facilities. In addition, interpretive signage about the rarity and sensitivity of the ancient cedars will be developed and posted.

1.8.1.4 Concerned Residents;

In 2011 a letter was sent to Conservation Halton from surrounding neighbours. The letter expressed concern about the changes proposed at Rattlesnake Point; some of the concerns were addressing the climbing increase and visitors centre. In 2012 the neighbours requested to voice their concerns at the NEC Meeting; Conservation Halton was present to answer any questions that the NEC board had during the hearing.

In April 2014 when Conservation Halton presented the Master Plan to the Niagara Escarpment Commission for Approval, the concerned neighbours were also in attendance and were given the opportunity to speak. The neighbours and NEC expressed concerns with the proposed Visitors Centre and All – Season Pavilion. The Niagara Escarpment recommended removing such facilities and as a result of this meeting. Conservation Halton has removed the proposed Visitors Centre and All-Season Pavilion from the Master Plan. However, Conservation Halton may at a later date apply for a development permit from the NEC for the all-season pavilion.

In May 2014 the neighbours contacted the Niagara Escarpment Commission to discuss the additional parking proposed within the Master Plan. The NEC addressed Conservation Halton and requested further clarification/ justification on the additional parking figures in the Master Plan. Conservation Halton reviewed the parking over the summer months and have concluded that at this time they will withdraw the additional parking from the master plan. However, Conservation Halton may add additional parking areas as needed and go through the necessary NEC development permit process for approval of parking lots.

1.8.2 Financial Constraints

Conservation Halton has been underfunded for more than a decade and has fallen behind in important infrastructure upkeep. Ongoing financial constraints are partially due to a lack of any supplemental regional / municipal or provincial tax levy support. Many other Conservation Authorities are supported by tax levies. Additional capital cost burdens include municipal development charge requirements when typically other public parks in Halton Region are exempt.

1.8.3 Environmental Protection

Conservation Halton has developed many resource management plans, such as their Forest Management Plan. This master plan suggests that Conservation Halton continue to develop and implement detailed management plans in areas such as invasive species control and monitoring species at risk, such that the natural heritage features and system at Rattlesnake Point Conservation Area are protected and enhanced to the greatest extent possible, using the most up-to-date knowledge and practices.

1.8.4 Provincial Policy

The Niagara Escarpment Plan (2005) limits development in escarpment lands. It states, in general, that all buildings, structures and facilities, including parking areas shall be designed and located to minimize the impact on the principal use, adjacent land use and the rural open landscape character. Development at the Rattlesnake Point Conservation Area will be designed with the intention of:

- Preserving the natural scenery;

- Maintaining the open landscape character;
- Maintaining the cultural heritage landscapes;
- Maintaining natural vegetation cover, slope, terrain and other natural features (e.g. Escarpment Brow and prominent slopes);
- Protecting the view of the Escarpment and the land in its vicinity;
- Protecting the natural environment; and
- Minimizing land use conflicts.

The Niagara Escarpment Parks and Open Space Systems Planning Manual (MNRF, 2012) advocates for a park zoning system; such a system has been used for this master plan. These zones and respective management guidelines are presented in this report.

Other park management policies, such as for trail development, Visitor Impact Management and cultural heritage protection, are also found in Section Three. These policies have been developed in accordance with governing policy documents such as the *Ontario Heritage Act*, the Niagara Escarpment Plan *(2005)* and the *Conservation Authorities Act*.

Section Two: Background Considerations

2.1 Environmental Importance of this Conservation Area

Within the context of the Conservation Halton watershed, Rattlesnake Point Conservation Area supports a core area of the natural environment that connects many significant life science and earth science features with official designations defining their use. Rattlesnake Point Conservation Area is included in an area designated as a UNESCO World Biosphere Reserve, and includes Provincially Significant Areas of Natural and Scientific Interest (ANSI), Environmentally Sensitive Areas (ESA), Provincially Significant Wetlands (PSW) and is classified as Regional Natural Heritage System(ROPA, final approval pending).

The conservation area includes many natural features, some of which include ancient Eastern White Cedar trees, forest interior, corridor linkage, provincially significant geologic formations, national and provincial species at risk, as well as nationally and provincially rare vegetation communities. The natural heritage features associated with the conservation area were provided in three main maps in the *Inventory and Analysis: Stage One Report* including Figure 3-5 Core Conservation Lands, Figure 3-7 Areas of Functional Ecological Importance and Figure 3-10 Significant Natural and Cultural Features (EDA 2010a). These maps combined, delineate the natural heritage system discussed in Section 3.2 of the *Stage One Report* (Ibid.). Figure 3-5 is being reproduced in this report as Figure 2-1.

2.2 Social Benefits of Natural Areas

2.2.1 Benefits of Healthy Lifestyles and Outdoor Recreation

Conservation Halton's contribution to the health and wellbeing of residents of Halton Region cannot be overemphasized. It is well known that investment in parks and recreation brings societal and economic benefits to a community. It ensures the health of citizens both by helping to create a cleaner environment and by providing outlets for physical activity and psychological restoration, thereby also reducing health care costs. The province and Halton Region are both investing considerable resources in public health initiatives such as; Active 2010, Active Halton and Walk this Way

Recently, the Province of Ontario proposed a Children's Activity Tax Credit to encourage parents to involve their children in pursuits that help them grow as knowledgeable, involved, healthy and productive individuals. Considerable attention has also been given to youth diversion programs that help kids at risk to find healthy and fulfilling alternatives to the lure of gangs, drugs and crime. More money spent on programming for at-risk youth reduces spending on incarceration. The province and Halton Region are both investing considerable resources in public health initiatives such as Active 2010, Active Halton and Walk this Way.

In addition to the benefits of outdoor recreation activities, Conservation Halton's conservation area programming helps to instill knowledge of, and respect for environmental protection and sustainability, which helps to ensure a healthy and productive open space for future generations.

2.2.2 Public Use and Appreciation of Parks and Open Space

Parks and public open space contribute to a vibrant and healthy community. According to a 2009 Parks and Recreation Ontario (PRO) report based on an extensive survey of people from across

Ontario, citizens consider parks and public open space to be highly valuable not only to themselves but to the community as a whole.

The report concludes that:

> *Parks provide many values for users and to the community as a whole. Parks provide a sense of place in the community, allowing for escape, contemplation, discovery, access to nature, interpretive education and recreation. They also provide shelter, wildlife habitat, relief from urban form, reduce] the "heat island effect" and improve] air quality, and serve as buffers between residential and industrial areas. Parks enhance aesthetic quality, increase property values and improve the image and livability of communities. Recreation, through physical, social and artistic expression, provides opportunities for individuals to improve their health and wellness, socialize and interact with others, learn new skills, have fun and find balance in their lives. In particular, physical activity and stress reduction are two health issues that researchers identify as benefits of local parks and recreation to public health.*

Key findings of this report include:

- Recreation is important in achieving "work-life balance."
- Ontarians seek recreation opportunities in their communities and rely on municipal and non-profit recreation and parks services.
- Recreation needs to be accessible to everyone.
- All Ontarians benefit from parks and recreation: The use of parks and recreation services is spread almost equally across the age continuum.
- Most people are willing to pay for public recreation and parks.
- Ontarians understand the wider benefits of parks and recreation.
- Public space is vital to community health.
- Participating in recreation is a key determinant of health status and quality of life.
- Local parks and recreation services have a vital impact on community and social development.

Conservation Halton's move to create a regional system of high-quality, publicly-accessible natural areas to satisfy these public needs and desires. As a public agency, Conservation Halton has struggled to keep entrance fees low in order to be financially accessible to all people. The importance of this public service will only increase in the coming years.

2.2.3 Benefits of Contact with Nature

The concept of biophilia was first introduced by Harvard biologist Edward O Wilson in 1984. The word biophilia literally means "love of life." Wilson chose it to label what he defined as humans' innate and evolutionarily based affinity for nature. In the last few years, studies have begun to show it has significant and measurable effects on people's state of mind.

Many such studies have been conducted to explore the benefits accrued from exposure to natural elements. Overwhelming evidence has been accumulated, which has been summarized in a literature review written by environmental sociologist Dr. Cicely Maller and her associates at the School of Health and Social Development, Deakin University in Melbourne (1998). Summarized below are the benefits related to parks.

It has widely been found that view of, and contact with, nature have significant health benefits. It has been proven to:

- Positively influence immunity and cardiovascular function
- Reduce stress
- Promote healing
- Improve cognitive function and self-esteem
- Alleviate anxiety and depression

In addition, it has been found that involvement in nature-based activities in one's own community can foster a sense of belonging or a sense of place and enhance social ties and relationships, thereby boosting satisfaction with one's neighbourhood. Parks and nature are an affordable, non-elitist, highly accessible means of improving community health that may help people reach their full potential; however, parks are a public resource yet to be fully utilized for individual and community health and wellbeing.

Conservation Halton's conservation areas undoubtedly confer many benefits to Halton Region and its citizens.

2.2.4 Local Values

As mentioned is Section One, Halton Region recently drafted *Amendment 38* for their *Official Plan*, which introduced the notion of a Regional Natural Heritage System (117(6)). One of the uses permitted in that system is "non-intensive recreation uses such as nature viewing and pedestrian trail activities." Moreover, the Region supports the provision of a diverse range of accessible cultural and recreational facilities and services as set out in the *Regional Official Plan* Section 161 and as part of their economic development policy, they express the intention to:

> *Promote Halton as a tourist and recreational destination for both its own residents and outside visitors based on the following themes:*
>
> *a) Scenic beauty,*
>
> *b) Extensive trails,*
>
> *c) A strong and diversified agricultural industry,*
>
> *d) Waterfront,*
>
> *e) Major outdoor and indoor recreational facilities,*
>
> *f) Halton's Heritage Features, museums and other cultural attractions, and*
>
> *g) Indigenous goods and products.*
>
> *Regional Official Plan (170 (16))*

As part of the development of these recreation and tourism opportunities, Halton Region provided funding for this master planning process. Conservation Halton's *Limestone Legacy Plan* expressed the desire to create a superior system of regional parks, which would further Halton Region's cultural and recreational, economic development and stewardship goals. Local municipalities as well as the Region are appreciate the natural beauty and recreation opportunities these lands afford them, as these natural areas enrich community life and guarantee unique experiences in a time of urban intensification.

2.3 Financial Benefits of Conservation Halton

The *Stage One Report* for the Rattlesnake Point Conservation Area contained an overview of the economic benefits that Conservation Halton's activities confer on its local community and Halton Region (EDA 2010a). Several ways Conservation Halton benefit the regional economy materially are:

- **Purchases of goods and services from the local area:** Conservation Halton is a large purchaser of goods and services from the region (including labour in the form of its employees). See section 5.2 for an estimate of the order of magnitude of these benefits.
- **Visitor attraction:** Conservation Halton conservation areas and facilities attract a large number of visitors from outside the community (as well as from outside the Greater Toronto Area who spend money in the region, which in turn helps support local businesses.
- **Investment attraction:** Conservation Halton facilities and services increase the overall quality of life in Halton Region, and thus its attractiveness as a location for people to live and work, and as an area within which businesses can invest.
- **Contribution to a healthy community:** Somewhat more difficult to quantify, this aspect nonetheless has a very real value. By contributing greenspace to the community, and providing opportunities for individuals and families to have recreational and outdoor experiences, Conservation Halton helps Halton Region overall to offer healthy-living choices and opportunities for residents and visitors alike.
- **Value of ecosystem services:** The wetlands and forest areas preserved by Conservation Halton add tangible value to the community because they in effect provide filtration and cleansing services for air and water. If commercial prices were paid for these cleansing services, the costs would run into the millions of dollars. Estimating the value of these services that otherwise might have to be provided commercially, provides another measure of value of Conservation Halton's services can be provided. See Section 2.3.3 for an estimate of the order of magnitude of these benefits.
- **Watershed protection:** The floodplain management activities of Conservation Halton protect communities within the watershed from on-going damage such as erosion and spring flooding, as well as potential destruction in the event of storms and severe weather events.
- **Increased land value:** The values of residential and estate properties located adjacent to or near conservation area properties can increase by virtue of this proximity.
- **Educational value:** Finally, the provision of educational programs and services to the local and regional community can have an economic impact. An educated populace will understand and respect the purpose, values and activities of conservation organizations and may be more likely to support their activities in future through tax support, donations and attendance at various events and programs.

Thus, a considerable range from business type and economic benefits are generated in the region as a result from the existence of Conservation Halton. Further details relating to this conservation area can be found in the *Stage One Report* for Rattlesnake Point Conservation Area (EDA 2010a).

Figure 2-1: Core Conservation Lands

CONSERVATION HALTON

Rattlesnake Point Conservation Area
Core Conservation Lands
Figure 2-1

Guelph Line
Conservation Road
Conservation Road
Appleby Line
Bell School Line
No. 14 Sideroad
Walkers Line

Legend

- Secondary Roads
- Stream
- Rattlesnake Point Conservation Area
- Crawford Resource Tract II Management Area
- Kelso Conservation Area
- Crawford Resource Management Area
- Waterbody
- Evaluated Wetlands (PSW)
- Crawford Lake/Milton Outlier Valley Provincially Significant Life Science Area of Natural and Scientific Interest (ANSI)
- Lowville Re-Entrant Valley Provincially Significant Earth Science Area of Natural and Scientific Interest (ANSI)
- Crawford Lake - Rattlesnake Point Escarpment Woods Environmentally Sensitive Area (ESA)

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2.3.1 Economic Impact of Conservation Halton Operations Overall

As mentioned, the *Stage One Report* for the Rattlesnake Point Conservation Area contained an overview of the economic benefits of Conservation Halton's activities (Ibid.). Using the provincial economic impact model (TREIM) the expenditures of both Conservation Halton and of visitors from outside the region, were modeled to determine the extent of these benefits. The *Stage One Report* contains all of the details in this regard. The table below presents the summary of the impact of Conservation Halton's expenditures (based upon Conservation Halton's 2010 budget). These estimates are of the economic impact of the entire authority's operations. At the level of analysis presented here, it is impossible to distill the results for any specific individual conservation area. (This is because so many of the operations of Conservation Halton cannot be singled out and allocated to one conservation area as opposed to another.)

Table 2-1: Total Impact of Conservation Halton Expenditures

Impact Variable	Impact in Halton Region	Impact in the Rest of Ontario	Total Ontario
GDP ($)	$11,977,770	$10,666,436	$22,644,206
Employment (jobs – FTJE*)	274	195	469
Labour Income ($)	$8,443,598	$7,581,634	$16,025,232
Federal Taxes ($)	$3,309,502	$2,637,956	$5,947,458
Provincial Taxes ($)	$2,350,365	$1,891,929	$4,242,294
Municipal Taxes ($)	$38,008	$105,356	$143,364
All Taxes ($)	$5,697,875	$4,635,241	$10,333,116

** Full-time job equivalents*

The operations of Conservation Halton represent a positive return-on-investment for the community. The $20.670 million dollar budget of Conservation Halton generates $22.644 million in associated economic impact, measured in terms of additional GDP in the province overall. In other words, every dollar of operating budget spent by Conservation Halton is associated with $1.10 of GDP in the province. The operations of Conservation Halton are associated with 469 jobs province-wide, which are associated with labour income of approximately $16 million. Finally, the operations of Conservation Halton are associated with over $10 million of tax revenue accruing to the three levels of government.

In addition, the tables above show, much of this economic impact occurs in and to Halton Region: nearly $12 million annually in terms of GDP. An even greater benefit to Halton Region is not accrued, perhaps, because the region is part of the highly interdependent Greater Toronto Area (GTA) economy, so necessarily there is some high degree of 'leakage' to areas outside the region itself. For example, 48 % of the employees of Conservation Halton live in the region, implying that a majority – 52%, live outside the region.

In summary, the activities of Conservation Halton confer significant economic benefit to both the Halton Region and the province.

2.3.2 Value of Ecosystem Services

A recent report by the Suzuki Foundation (2008) presented a procedure to measure the value of 'ecosystem services' provided by large tracts of open space, forest and wetland in Ontario's Greenbelt.

(As mentioned above, this is a measurement of value based on what it would otherwise cost to provide filtering and cleansing services.)

The value of ecosystem services provided by Conservation Halton's landholdings is just under $16 million per year, given Conservation Halton owns approximately 11,000 acres and the value of ecosystem services being on average $1,444 per acre on average (Ibid

An estimate of the total value of ecosystem services provide by Rattlesnake Point Conservation Area can be obtained by applying detailed information for the Suzuki report to specific types of land cover. The calculations are shown in Table 2-2.

Table 2-2: Rattlesnake Point Conservation Area – Value of Ecosystem Services

Land Cover Type	Value Per Hectare	No. of Hectares in Rattlesnake Point Conservation Area	Value of Corresponding Ecosystem Services
Wetland	$14,153	31	$438,743
Forest	$5,414	186	$1,007,004
Total Estimated Value of Ecosystem Services for Rattlesnake Point Conservation Area			*$1,445,747*

Value per hectare sourced from Suzuki Foundation 2008

To put out this information into context, assume that the value of ecosystem services is equivalent to an income stream. If the value referenced above (i.e. $4,421,010) represented the income from an investment, generating a 5% return on capital, the investment would have a capital value of approximately $88.420 million. (In other words, an investment of $88.420 million, at a 5% annual return, will generate income of $4,421,010.) This is one way of understanding the value of investment in the conservation area, which might be warranted.

Section Three: Visions, Goals, Objectives and Policies

3.1 Conservation Area Policies

3.1.1 Park Classification

Rattlesnake Point Conservation Area is a "Natural Environment" park under the classification system developed by the Niagara Escarpment Plan (NEP, 2005). This designation is described as follows:

> *These lands are characterized by the variety and combination of outstanding natural features, historical resources and outstanding landscape.*
>
> *Natural Environment areas provide opportunities for the protection of important natural and cultural features. Activities may range from back-country hiking in the interior of these areas to car-camping and day use activities in the more developed or accessible areas. (NEP, 2005.)*

Rationale: The conservation area includes many natural features: forest interior, corridor linkage, significant geological formations, national and provincial species at risk, globally and provincially rare vegetation communities, as well as cultural heritage resources.

Objectives for the conservation area: to protect and enhance important natural and cultural features; to provide access to the Niagara Escarpment; to provide high quality service and amenities; and to provide appropriate levels of recreational and educational programming.

3.1.2 Vision Statement

To become one of Conservation Halton's regionally significant Niagara Escarpment Parks protecting and sustaining the unique escarpment environments as well as providing excellence in high quality educational and outdoor passive recreational visitor experiences through enhanced facilities and amenities

3.1.3 Goals

Therefore, the goals of this master plan are:

- To protect and enhance the significant natural heritage features and ecological functions of the conservation area while providing opportunities for the public to enjoy this spectacular area appreciate its scenic beauty and cultural resources and provide recreational opportunities.
- To implement program and development opportunities which capitalize on the unique features of this area.

For Rattlesnake Point Conservation Area, the unique features to be built upon include the prominent escarpment cliff face that provide the best rock-climbing in southern Ontario, ancient cedars and camping opportunities. In addition, an overall upgraded level of service and amenities is proposed by this master plan. This enhanced base level will enable this conservation area to meet visitors' expectations for a first-rate regional park in terms of arrival and accessibility, services, facilities and amenities, and quality of programming and environmental services.

3.1.4 Objectives

1. To protect and enhance all significant environmental features.

2. To comply with the park zoning and management policies as set out in this master plan, in accordance with the Niagara Escarpment Plan (2005) and *Niagara Escarpment Parks and Open Space System Planning Manual* (MNRF, 2012), this will then guide all future development and management operations.

3. To continue the development and implementation of a Visitor Impact Management program for recreational use so that visitors do not exceed the carrying capacity of the natural resource base.

4. To provide year-round group and individual recreational opportunities and facilities within the constraints of the site's natural features and carrying capacity in accordance with Halton Region's 'Healthy Living / Healthy Communities" model and Conservation Halton corporate goals.

5. To minimize any adverse affects of the area's use or development on surrounding properties through appropriate management techniques.

6. To operate the conservation area in a financially sustainable and self-sufficient manner with surplus revenues directed to other Conservation Halton programs.

3.2 Enhanced Base Level of Services

The proposed base level of conservation area facilities and services is meant to help Conservation Halton develop a standard of excellence within their conservation area system. This enhanced base level of service includes a range of measures that was developed in consultation with Conservation Halton staff, stakeholders and the public.

The proposed base level of service would be instituted at all Conservation Halton conservation areas and would include:

- Clear corporate branding
    - Consistent visual standards for all signage, facilities and buildings that establish each conservation area as part of the Conservation Halton portfolio.
- Arrival and accessibility
    - Consistent directional and identification signage including directional and orientation;
    - A fee collection system including a gated structure ;
    - Organized, sustainably-designed parking lots and visitor amenities upon arrival;
    - A public day use area;
    - A minimum level of universal accessibility with all specifically identified areas that meet Facility Accessibility Design Standards (FADS) and *Accessibility for Ontarians with Disabilities Act* (AODA) built environment standards;
    - Controlled access to the natural heritage system.
- Services
    - Staff presence (augmented with volunteers) to collect fees, offer information, directions and some level of interpretation;
    - Visitor safety and security measures that include a modified entry control system.
- Facilities / amenities
    - Facilities should reinforce Conservation Halton's corporate identity program;

  - Clean, sanitary and accessible washrooms;
  - Consistently designed interpretive signage;
  - A trail system that meets Conservation Halton standards and is constructed to protect the natural heritage system and provides amenities that may include benches, signage, mapping, identifier markers and trail etiquette rules;
  - Day use facilities that may include benches, rest areas, picnic areas with potable water (if possible) and shelter;
  - Basic products for purchase (e.g. water, snacks, etc.).
- Quality assurance
  - A consistent and sustainable approach that demonstrates Conservation Halton's values and corporate mission;
  - High-quality management of the natural heritage system species at risk and other features;
  - A Visitor Impact Management (VIM) programs that includes positive reinforcement and education, monitoring of impacts and staff education and training;
  - High-quality sustainability standards in the design and construction of all buildings, features, facilities, site and landscape development such as Leadership through Energy and Environmental Design (LEED) and the American Society of Landscape Architects (ASLA) Sustainable Sites Initiative (SITES) – these are described in more detail in Section 2.3 of the *Stage One Report* (EDA 2010a).;
  - A consistently high level of maintenance and operations.
- Consistent interpretive themes
  - Conservation authority and watershed;
  - Niagara Escarpment;
  - Sustainable park use / Visitor Impact Management;
  - Cultural heritage.

3.3 Priority Protection Areas

The boundaries of the priority protection areas have been determined through a comprehensive process of inventory and analysis based on the practices of integrated landscape planning and natural heritage system strategies. The Priority Protection Areas were developed by means of prioritizing and ranking all the features identified as natural heritage features together with the core conservation areas, ESAs and ANSIs. The priority areas were then used as the basis for defining the boundaries of the park zoning system. Under the *Niagara Escarpment Plan*, (2005) zoning is stipulated as essential to the orderly planning, development and effective management of protected natural areas.

See Table 4-1 in Appendix I for a summary of the criteria evaluated and the rationale for the priority protection provided for each criterion. In many cases, multiple criteria overlap and it is the most restrictive of these that determined the priority level for any particular area.

3.3.1 Priority Level 1

Priority Level 1 purpose is to provide for the long-term protection of all Rattlesnake Point Conservation Area natural features deemed to be particularly sensitive. Elements which fall into this category are; provincially significant wetlands; sensitive deep forest interior (≥200 m); coldwater and potential coolwater thermal stream classifications (30 m buffer) ; rare vegetation communities (G1 – G3 & S1 – S3); species at risk; globally and provincially rare species; seeps; bat hibernacula; municipal well head protection area(100m radius); ancient eastern white cedars; EMAN plots; forest bird monitoring stations (0-30 m buffer); and escarpment face slope (45-80%).

3.3.2. Priority Level 2

Priority Level 2 purpose is to protect natural areas with high-quality attributes that contribute essential habitat or add essential components to the natural heritage system. Elements which are included in this section are: provincially significant wetland (30 m buffer); potential coolwater and warmwater thermal stream classification (30 m buffer); Halton Region rare species; non-provincially significant wetlands (>2 ha, and 30 m buffer); non-provincially significant wetlands(<2 ha and 15 m buffer); municipal well head protection area (100 m to 2 year time of travel); floodplain hazard; stable top of bank hazard component (15 m buffer); meander belt hazard component; EMAN plot, forest bird and fish monitoring station buffer (31-100 m); and talus and other slopes (8-25% & 25-45%).

3.3.3 Priority Level 3

Priority Level 3 has a similar purpose to the above priority level but with a focus on protecting features that are typically more resilient. Elements which fall into this category are: seeps (30 m buffer); floodplain (15 m buffer); veteran trees; Environmentally Sensitive Areas (ESA); Area of Natural and Scientific Interest (Life Science); escarpment natural area; interior forest (≥100 - 200 m); municipal well head protection area (2 year to 5 year time travel); watercourse (15 m buffer); and cultural heritage features.

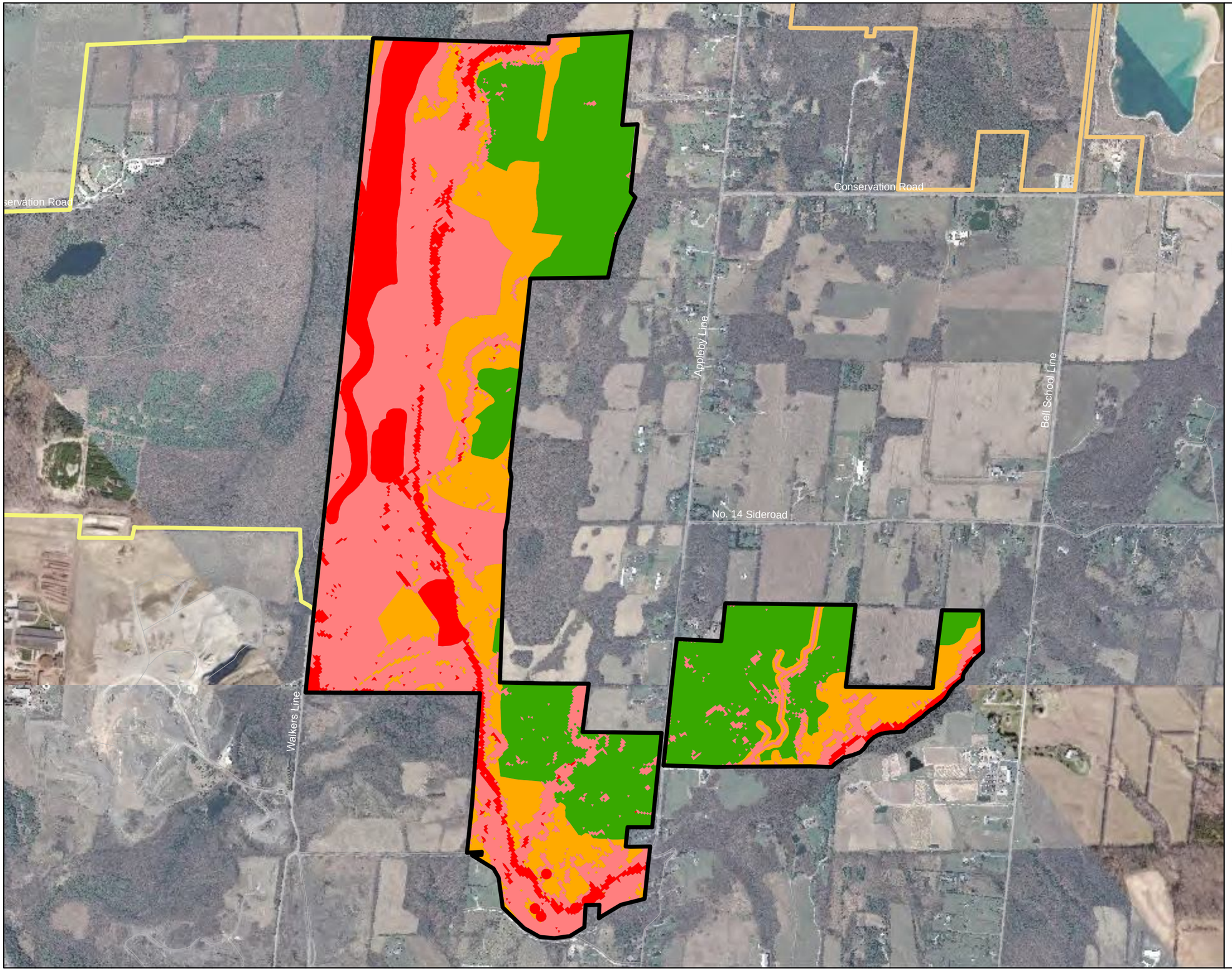
3.3. 4 Priority Level 4

Priority Level 4's purpose is to recognize and protect areas that already provide a level of protection to some of the more sensitive natural features and their functions in the conservation area. Elements which fall under this category are: Areas of Natural and Scientific Interest (Earth Science); provincially significant wetland buffer (31-120 m); escarpment protection area; fringe forest (<100 m); plantations; hedgerows; regenerating habitat; municipal well head protection area - 25 year time of travel; non-provincially significant wetlands (>2 ha, 31-120 m buffer); non-provincially significant wetlands (<2 ha, 16-30 m buffer); and lookouts.

3.3.5 Priority Level 5

Priority Level 5's purpose is to provide protection for all remaining natural features that supports the ecological function for a greater variety of species and connections within the larger landscape matrix. Elements which fall under this category are; escarpment rural area; agricultural fields and cultural meadows; existing facilities; and utility easements.

Figure 3-1: Priority Protection Areas



CONSERVATION HALTON

Rattlesnake Point Conservation Area
Priority Protection Areas
Figure 3-1

Legend

- Secondary Roads
- River/Stream
- Rattlesnake Point Conservation Area
- Crawford Lake Conservation Area
- Kelso Conservation Area
- Waterbody

Priority Levels

- 1
- 2
- 3
- 4
- 5 (N/A)

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3.4 Park Operations Policies

Conservation area activities are subject to the Conservation Authorities Act (R.R.O. 1990, Regulation 116) and Ontario Regulation 365/88. In addition to these, the following general policies shall be adopted:

Trail use and any other recreational or educational activity permitted in the conservation area will be allowed to take place as long as:

- The capacity of proposed facilities is not exceeded;
- No significant environmental degradation of the natural resource base occurs; and
- The Visitor Impact Management (VIM) program is implemented to monitor impacts and provide management with a means to curtail recreational overuse and provide corrective measures.

Event activity areas will generally be restricted to the Development Zone of the conservation area with the exception of specialized activities that may require utilization of the trail system. Permitted events will only include those that are deemed compatible with the general nature and capacity of the conservation area without negatively affecting conservation area resources or users. Permits or bookings shall be negotiated and approved by customer service staff under the supervision of the conservation area manager.

Bookings for educational programs will be organized, delivered and invoiced by customer service staff. The staging or hosting of special, historic or tourism events shall typically be organized and operated by Conservation Halton staff as an integral component of natural and cultural education services. Additional special events will also be permitted by private groups or individuals at various locations subject to negotiation and issuance of a special-use permit by Conservation Halton. Additional special events permits shall be negotiated on a case-by-case basis.

3.4.1 Accessibility Policy

As a public agency, Conservation Halton has an obligation to make its resources and services available to all members of the public. Therefore, Conservation Halton shall to the greatest extent possible, remove financial barriers to enjoyment of its conservation areas.

In addition, Conservation Halton will ensure that its infrastructure is consistent with *Accessibility for Ontarians with Disabilities Act* (AODA) built environment standards where possible.

3.4.2 Facility Sustainability Policy

As an agency entrusted with vast tracts of ecologically important lands, Conservation Halton shall provide, to the greatest extent possible, facilities and services that protect and enhance the natural heritage system. This entails building facilities, to the highest standard and siting them in non-sensitive areas. Moreover, all development should conform, to the greatest extent possible, to guidelines offered in the Leadership in Energy and Environmental Design (LEED) Green Building Rating System and the Sustainable Sites Initiative (SITES) Guidelines and Performance Benchmarks (2009). Such guidelines include best practices for managing onsite rainwater, the use of native vegetation in landscaping, high energy and water efficiency in building design, the use of alternative, 'green' sources of energy and reuse or recycling of existing materials. All development shall be kept to a minimum, conform to good site-planning standards and shall not conflict with the general landscape character. For trail sustainability guidelines see Trail Development, Use and Management in Section 3.4.4.

3.4.3 Niagara Escarpment Parks and Open Space System Management Zones

The *Master Plan for Rattlesnake Point Conservation Area* employs the zoning system of the Niagara Escarpment Parks and Open Space System (NEPOSS). This system consists of the following six standard park zones: Nature Reserve Zone, Natural Zone, Access Zone, Historical Zone, Development Zone and Resources Management Zone. The Special Protection Area has been used to better recognize and protect high quality or fragile resource areas within the Nature Reserve Zone.

Figure 3-2 illustrates the park management zones assigned to different portions of the conservation area. This section of the report sets out the management policies and permitted uses for each of these zones.

Park zones are intended to fulfill the following functions:

- Identify and provide recognition of the natural and cultural features and attributes of the conservation area;
- Delineate areas on the basis of their differing requirements for management;
- Ensure park users get the most out of the conservation area within environmental protection constraints.

This conservation area has no land designated as an Access Zone or Historical Zone.

3.4.3.1. Nature Reserve Zone

Purpose:
The Nature Reserve Zones include significant natural features or areas that require careful management to ensure the long-term protection of their natural values (NEP, Section 3.1.5, 2005). The aim is to protect natural features that are sensitive to passive recreation or related infrastructure. The Nature Reserve Zone shall preserve and protect lands that serve important ecological functions with emphasis on their long-term protection and management. Some examples of features in this zone are; Escarpment's features (brow, slope, toe, face,) ANSI's, interior forest and endangered or threatened habitats. This zone is comprised of approximately 173 hectares or 59% of the total area at Rattlesnake Point.

Permitted Uses:

Generally this zone should preclude activities except those deemed appropriate for environmental stewardship purposes. Limited visitor's usage may be considered where it has been established that there will be minimal negative impacts for the proposed uses. Activities will be restricted to passive and low intensity recreation including hiking, environmental scientific research, wildlife and forest management practices that contribute to the sustainability and/or enhancement of the natural system. Current uses within this area (i.e. rock climbing, hiking and scenic lookouts) will be maintained so long as environmental impacts on the natural features are minimal to none. Development is generally restricted to trails, signage, temporary research facilities and conservation practices. Public access to these areas should be managed carefully through the Visitors Impact Management Program.

Special Protection Area:

The purpose of the Special Protection area is to provide a higher level of protection to unique or endangered natural features than normally provided within the policies of the Nature Reserve Zone. The Special Protection boundaries are located within the Nature Reserve Zone, and further identify core areas that warrant special management strategies. Areas assigned to this are mainly areas of

steep slope, wetlands, sensitive vegetation communities, interior forest and areas where rare species and/or globally rare vegetation types are known to occur; this area is encompasses approximately 49 hectares of the Nature Reserve Zone.

Permitted uses will be restricted to environmentally appropriate scientific research, interpretation and limited forest management services such as hazard tree removal and invasive species management. General public access will be restricted; however, current environmentally appropriate uses (i.e. trails, and climbing) within this area will be maintained if they are shown to cause no further encroachment or negative effects on the natural heritage feature. Certain activities and infrastructure may be decommissioned and/or rerouted on a case-by-case basis.

3.4.3.2 Natural Zone

Purpose:
To protect natural areas and high-quality attributes that contributes to essential habitat and essential components to the natural heritage system. This zone is to serve as a buffer between the Nature Reserve Zone and the Development Zones. The areas assigned to this designation at Rattlesnake Point are mainly former agricultural fields, open green space and areas undergoing natural regeneration. This zone is comprised of approximately 12 hectares or 4% of the total area.

Permitted Uses:

Natural zones include aesthetic landscapes in which a minimum of development is permitted to support low- to moderate-intensity recreational activities (NEP, 2005). Recreational uses should be restricted to defined areas and the public should be educated about the impacts of off-trail use. Some activities which will be permitted in this zone are; hiking, nature viewing, interpretive facilities, and day uses activities. Development should be restricted to the minimum necessary to support low to moderate recreational activities. The types of development permitted in this zone are trails, interpretive facilities, signage and restoration works.

3.4.3.3 Resource Management Zone

Purpose:
Resource Management zones are defined as;

- Certain public lands that are managed primarily to provide resource related benefits, such as; harvesting forests products, demonstration plots, and wildlife habitat.
- Re-established previously disturbed sites, such as old agricultural fields, to natural vegetation
- Land which has traditionally been managed under long-term forms of tenure or agreements. (E.g. Forest Management Agreements or agricultural leases.)

At Rattlesnake Point the Resource Management Zones are previously disturbed sites undergoing natural regeneration (old agricultural fields) or are have long term resource agreements, (managed forest tax incentive program). This zone is comprised of approximately 98 hectares or 33% of the total area. Resource Management Zones should not be established in Nature Reserve Parks or in life science ANSI's with the exceptions noted in Policy 3.1.5 of the NEP (2005).

Permitted Uses:
Intensive resource management activities such as; forestry, natural area restoration, agriculture and low to medium recreational activities, (trails, service roads and interpretive facilities,) will be allowed in

this zone. Resource Management Zones permit the continuation or implementation of historical and traditional activities such as sustainable forestry and agriculture that may not be permitted in other parts of the system. Resource Management Zones shall be actively managed under a prescribed forestry management plan or restoration plan as prepared by Conservation Halton staff.

3.4.3.4 Development Zones

Purpose:
To provide protection for all remaining natural features that support the ecological function for a greater variety of species and connection within the larger landscape matrix. This zone provides the main access to the park, open space, facilities and services to support recreational activities (NEP, 2005). This zone accommodates existing infrastructure which facilitates visitor use of the conservation area. At Rattlesnake Point, this designation has been assigned to the current day use area and includes the picnic areas, open spaces, camping areas, and parking areas. This zone is comprised of approximately 11.7 hectares or 4% of the total area.

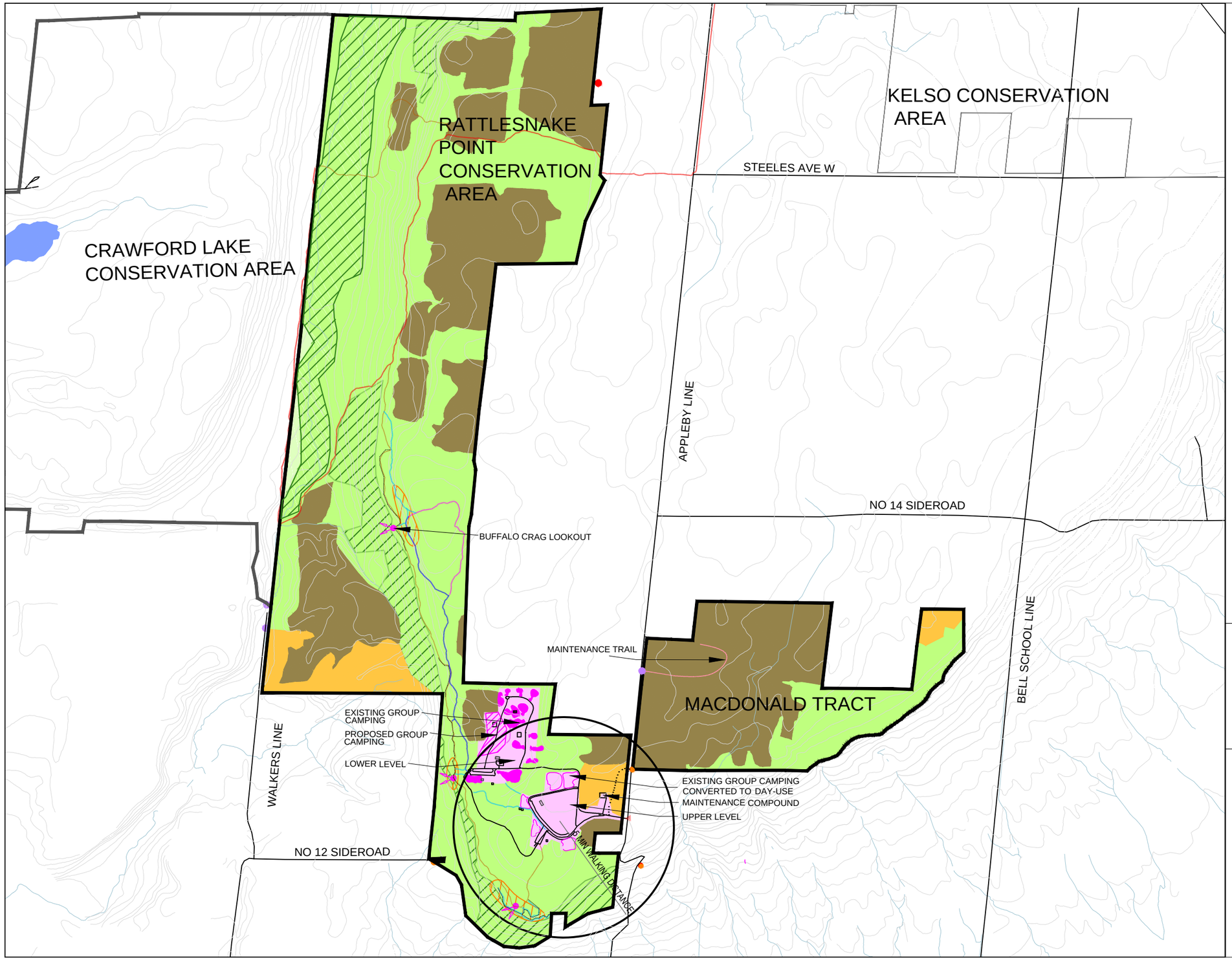
Permitted Uses:
The Development zone is usually orientated to the provision of recreational opportunities that are suited to the natural character of the park. This zone accommodates the facilities, infrastructure and staging areas necessary to support recreation and the conservation associated activities. The development zone consist of the public access to the park including; roads, gatehouse, kiosk and parking lots. The picnic area, wood storage area, are all supporting facilities to the park and are to be included in the Development Zone. All development shall be kept to a minimum, conform to good site-planning standards and shall not conflict with the general landscape character. The development of the facilities must have a minimal negative effect on natural, cultural and heritage features and must be undertaken in a way to minimize the environmental impact.

3.4.4 Trail Development, Uses and Management

Trail construction and management policies:

- Trails will be located and designed to avoid, wherever possible, steep slopes, wetlands, erosion-prone soils and ecologically-sensitive areas such as species at risk habitat and rare vegetation communities.
- Recreational uses should not exceed the carrying capacity of a site or area.
- Where an existing trail is in a location that causes environmental deterioration, relocation to a less critical location is encouraged.
- Trail design, construction and management should ensure the safety of trail users.
- Trails will be located and designed in consultation with appropriate Watershed Management Division staff.
- Trails design shall be appropriate to location, zoning and uses (i.e., trail width and surface treatment).
- Trails will be located and designed so as not to adversely affect adjoining private landowners.
- Where necessary, management plans should allow for temporary trail closure.
- Where needed, closure of trails shall be actively restored using native vegetation.
- Permitted trail uses will be indicated on signage in the conservation area. Where necessary, management plans should allow for temporary trail closure.

Figure 3-2: Master Plan with Park Zones



CONSERVATION HALTON

Rattlesnake Point Conservation Area

Figure 3-2

Master Plan with Park Zones

Legend

- Conservation Area Boundary
- Other Conservation Area
- Road
- Contour 5m intervals
- Watercourse

Conservation Halton Trail

- Single Track
- Medium Service Nature Trail
- High Capacity Trail

Bruce Trail Conservancy

- Main Bruce Trail
- Side Bruce Trail
- Nature Reserve Zone
- Special Protection
- Natural Zone
- Resource Management Zone
- Development Zone

Symbols

- Proposed Trail
- New Signage
- Proposed Road
- Existing Campsite
- Proposed Camping Area
- Existing Campsite converted
- Existing Structure
- Proposed Structure
- Cliff Management and Climbing
- Service Access
- Priority Trail Management
- Public Access
- Formal Lookouts

0 250 500 750 metres

W N S E

SCALE: 1:14,000

3.4.4.1 Trail Classification Objectives and Carrying Capacity

Conservation Halton has adopted a three-level trail-classification system that describes the type of visitor experience that is desired as well as some of the physical properties of each class of trail. This classification system will assist in determining trail development, use and management practices. Each of these trail categories has been assigned a carrying capacity. Social Carrying capacity is a theoretical model for estimating the number of people who can travel on a trail at any one moment in time and experience a qualitative natural experience without feeling overcrowded. This is separate to the physical or biological carrying capacity of the trail which varies under weather and seasonal conditions and which will be managed under our Visitor Impact Management System as described in the following section. See Section 4.3.1 and Appendix I for further discussion of the conservation area's social carrying capacity.

Table 3-2: Trail Classification System

Trail Type	Width	Social Carrying Capacity per 1500 m	Existing Length	Surface	Experience
Single-Track	No more than 1.2 m wide	5 groups of 2 people	4532 metres	soil, vegetation or bedrock	A sense of being immersed in a natural landscape
Medium Service Nature Trail	No more than 2 m wide	10 groups of 2 people	5451 metres	natural, though modified, surface featuring indigenous materials such as wood chips	Some resource modifications are evident, but they harmonize with the natural environment. Few recreation facilities are provided, and those that exist are minimal and rustic.
High Capacity / Service Access Trail	No more than 3 m wide	20 groups of 2 people	4810 metres	natural surface of packed limestone chips may be designed for universal accessibility	These are intended to be high use trail corridors that access prime conservation area features and that provide emergency access as required. Resources are modified for essential visitor and park operation needs, but they are changed in a way that harmonizes with the natural environment.

Single-Track Trail Management Considerations: Use of these trails may be discouraged by not advertising any interpretive or viewing opportunities on them. They may also be closed in wet seasons given the natural surface. On very busy days, access may be controlled by trail stewards posted at trailheads.

Medium Service Nature Trail, Management Considerations: Small service vehicles (gator, golf cart or quad) can be used on these trails. (No public vehicles on trails)

High Capacity/ Service Access Trail Management Considerations: Authorized service vehicles and emergency vehicular can access route along these trails. (No public vehicles on trails)

3.5 Visitor Impact Management

Conservation Halton will develop and implement a thorough Visitor Impact Management Program as detailed in section 4.3. This will necessitate designating one additional staff person to coordinate Visitor Impact Management activities at Mount Nemo, Rattlesnake Point, Hilton Falls and Crawford Lake Conservation Areas. This program will be implemented by staff and may involve a public committee for oversight and the encouragement of park visitors to act as monitors. This is an adaptive management process, meaning that monitoring and applying management actions will be followed with a reassessment of impacts and management actions. Sub documents such as the Cliff Monitoring Program and Cliff Management Plan will be created to additional guide the Visitors Impact Management Plan for permitted activities in those areas.

3.6 Cultural Heritage Management

It is an objective of Conservation Halton to avoid wherever possible the disruption or disturbance of known archaeological sites or areas of archaeological potential within any of its properties.

Table 3-3 outlines the general types of land uses that may be expected in the context of lands managed for recreational purposes that may have negative effects on cultural heritage resources, unless preceded by impact assessments completed to the standards identified in the Ontario Ministry of Culture, Sports and Tourism 2009 final draft of the Standards and Guidelines for Consultant Archaeologists.

Table 3-3: Typical Land Use Activities that may Impact Archaeological Resources

General Activity	Specific Activities	Impacts
Road Construction	Cutting, filling, borrow pits, bridge and culvert construction, ditching, etc.	Loss or degradation of resource base in absence of prior assessment and mitigation
Tourism	Interpretive centre and ancillary facility (e.g., servicing, comfort stations, scenic lookouts, etc.) development/construction	Loss or degradation of resource base in absence of prior assessment and mitigation
Outdoor Recreation	Access point parking facility development, trail system development and maintenance, camp/picnic site development and maintenance	Loss or degradation of resource base in absence of prior assessment and mitigation

One archaeological site has been registered within the Rattlesnake Point Conservation Area. The **Wrecking site (AiGx-77)** was registered by William Finlayson in 1975 based on the discovery of single pre-contact artifact of unknown date (see Figure 5-7 in the *Stage One Report* (EDA 2010a).

Table 3-4: Heritage Value Evaluations for Registered Sites

Site Name	Site Period and Type	Status	Heritage Value
Wrecking (AiGx-77)	Undetermined Isolated Find	Unknown	Low: No further assessment required

Conservation Halton shall avoid, wherever possible, the disruption or disturbance of known archaeological sites or areas of archaeological potential within any of its properties.

3.6.1 Niagara Escarpment Commission Policies on Historical Artifacts

The Niagara Escarpment Plan (2005) policies also suggest that:

> "Where new development involves a heritage feature it should express the feature in some way. This may include one or more of the following:
>
> a) Preservation and display of fragments of the former buildings' features and landscaping;
>
> b) Marking the traces of former locations, shapes and circulation lines;
>
> c) Displaying graphic verbal descriptions of the former use; or
>
> d) Reflection of the former architecture and use in the new development."

3.7 Natural Resource Management

The purpose of the natural resource management section of the master plan is to identify key recommendations for management of the conservation area. This section and its recommendations should guide the protection of the natural heritage system for the long term, using an adaptive management approach that may involve both active and passive management. In some cases, resource management recommendations will require the collection of additional information or the development of guidance material prior to their full implementation.

3.7.1 Land and Water Management

The landform and landscape character of Rattlesnake Point Conservation Area together with the natural hydrological regime shall be protected to the highest level while still providing compatible opportunities for recreation. Conservation area operations and development shall comply with the following:

- Any works proposed in areas regulated by Conservation Halton under Ontario Regulation 162/06 will be reviewed by appropriate Watershed Management Division staff. An internal review process shall be followed that will result in the issuance of a clearance letter from the Watershed Management Division once it has been demonstrated that the proposed works meet all Conservation Halton regulatory requirements. No works shall take place until the clearance letter is received to ensure all works follow the appropriate protocols.
- Any works proposed within fish habitat shall be reviewed by appropriate Watershed Management Division staff in accordance with Conservation Halton's Level II Agreement with the Department of Fisheries and Oceans.
- Any grading shall be restricted to approved components of the master plan.
- No soil or fill material shall be imported onto this site unless in conjunction with an approved component of the master plan and accompanied with certificate of fill quality from a certified laboratory.
- Surface and groundwater shall be protected from any pollution or contaminants.
- Waste consisting of natural materials shall be reused or composted within the park where feasible and appropriate. Otherwise, all solid waste shall be removed from the park for recycling or disposal.

- Source Water Protection: Conservation authorities are responsible for conducting technical studies that shall be used to develop source water protection plans for their watershed. Source Water Protection Committees have been formed to undertake the technical studies for Source Water Protection Areas, including potential development constraints upon wellhead protection areas, which in most of the cases cover the boundaries of more than one conservation authority area. The Halton-Hamilton Source Water Protection Committee has completed a Source Protection Area Assessment Report, which shall be used to prepare the Drinking Water Source Protection Plan. This Source Protection Plan shall be applied to specific wellhead protection areas that include portions of the Rattlesnake Point Conservation Area (see Figure 3-10 Significant Natural and Cultural Features in *Stage One Report* (EDA 2010a).

3.7.2 Vegetation Management

The proper protection and management of vegetation communities is essential to the health and well-being of Rattlesnake Point Conservation Area and the larger Conservation Halton watershed natural heritage system. Efforts shall be taken to conserve and, where possible, restore viable populations of indigenous plant species, with a focus on protecting species at risk and their habitats within the conservation area.

3.7.2.1 Forest Management and Sustainability Policy

Management of Conservation Halton forest resources requires a cohesive strategy that prioritizes forest health, regeneration and conservation of the ecology of forest communities over timber production. A cornerstone to achieving this is the establishment of a new *forest management plan* to implement sustainable forest management practices that are adaptive and rely on the most current forest information and silvicultural techniques. The forest ecosystem should be viewed as green infrastructure in all management decisions. Forest sustainability should incorporate the following principles:

- Large, healthy, diverse and productive forests and their associated ecological processes and biological diversity should be protected and restored;
- Long-term health and vigour of forests should be provided for by using forest practices that, within the limits of silvicultural requirements, emulate natural disturbances and landscape patterns while minimizing adverse effects on plant life, animal life, water, soil, air and social and economic values, including recreational and heritage values;
- Assess and prioritize forest unit protection needs, identify an appropriate management regime for areas with different sensitivities (e.g. provincially rare vegetation communities) and management requirements (e.g. passive management, active management, etc.);
- Incorporate global warming information into management plans including documenting the role Conservation Halton forests play as sinks for greenhouse gasses;
- Assess and manage invasive species, forest pests and disease;
- Promote species at risk recovery and conservation;
- Assess appropriate forest fire management;
- The White-tailed Deer (*Odocoileus virginianus*) carrying capacity of conservation areas should be evaluated to determine the optimal size of deer population that may be sustained. This evaluation should assess browse impact on forest habitats and possible influence on the regeneration of

young trees. This study should include all forest habitats in the study area, especially areas considered sensitive; and

- Improve and monitor habitat and biodiversity within managed forest landscapes in a manner that is consistent with the long-term protection of the conservation area's forest community.

Every forest operations prescription shall include descriptions of the following:

- Current structure and condition of the forest in the area to which the prescription applies;
- Forest renewal and maintenance activities to promote forest health, regeneration and biodiversity;
- The expected results and future structure and condition of the forest; and
- Standards or guidelines used in developing the prescription.

All prescription activities must be in compliance with good forestry practices as described in Halton Region Tree Conservation By-Law (Regional Municipality of Halton 2005), the Ontario Ministry of Natural Resources and Forestry, *A Silvicultural Guide to Managing Southern Ontario Forests* (MNRF 2000) and the Niagara Escarpment Plan (2005). The forest management plan should demonstrate leadership in forest management by applying international standards for sustainable forestry practices as embodied by one of the three independent forest certification systems in Canada (e.g. Canadian Standards Association's Sustainable Forest Management Standard, the Forest Stewardship Council Standard and the Sustainable Forestry Initiative). This management system should also complement the restoration plans for the conservation area and where appropriate, refine the management of forest restoration areas in a manner that allows the development of mature forest communities found in the adjacent natural areas.

3.7.2.2 Forest Succession and Plantations

Several plantation areas occur in the Rattlesnake Point Conservation Area, which have a variety of attributes. The management of these, as well as natural forest areas, should be guided by an updated forest management plan.

3.7.2.3 Dead and Hazardous Trees

Existing Conservation Halton protocols for the management of dead and hazardous trees will be implemented in Rattlesnake Point Conservation Area. Safety will be the largest factor in decisions for hazardous tree removal; however, the importance of dead tree material and downed woody debris to provide wildlife habitat must be considered. Dead tree falls and tip-ups may also be left in place to serve as important sites for mosses and fungi, germination areas for species requiring rotting wood as a rooting medium, and moist shelters for mammals and herptiles.

Rattlesnake Point Conservation Area has several records of butternut trees that are considered *Endangered* under the provincial *Endangered Species Act*. If for safety reasons the removal of this species becomes necessary, the removal must conform to applicable laws, associated health assessments and permitting requirements (Ontario Regulation 242/08). Prior to removal, even dead Butternuts require MNRF's prior approval of a Butternut Health Assessment conducted by a certified evaluator. Conservation Halton has several such evaluators on staff.

3.7.2.4 Plant and Seed Collection

Where existing vegetation may be lost due to development of trails, access roads, parking lots, etc., plants may be transplanted for naturalization and restoration purposes within the conservation area.

Seed may be collected for use in propagation and planting for restoration and naturalization purposes within the conservation area. Harvesting efforts should be spread throughout the conservation area and not concentrated on any one area. The amount of seed collected will be based on the species, as determined in consultation with Conservation Halton forestry and ecology staff. Propagation areas will generally be discouraged, due to the natural state of the conservation area and the fact that other areas may be more appropriate for this use.

3.7.2.5 Invasive Species

Invasive species removal should be an integral part of maintaining high quality ecological assemblages within Rattlesnake Point Conservation Area. The complete eradication of invasive species is not always realistic and therefore prioritization of effort is necessary. Introduced species should be evaluated for invasive tendencies based on appropriate federal, provincial or municipal guidance material. For example, invasive plants and their invasive tendencies are summarized in Priority Invasive Plants in Southern Ontario (Appendix 3 in *Havinga et al.* 2000). Monitoring and research should be directed to prioritize the threat posed by invasive species and the feasibility of effective control. Based on this threat analysis a species-specific management protocol should be established for those species that pose the greatest threat and/or have a high success rate relation to effort expended. Biological control appears to have limited application because there are few pests or diseases found in North America that have any significant impact on controlling invasive species.

Plant Species

Priority invasive plant species identified within Rattlesnake Point Conservation Area include Common Periwinkle (*Vinca minor*), Garlic Mustard (*Alliaria petiolata)* and Wood bluegrass (*Poa nemoralis*). Additional invasive plant species occur but have not been mapped. A full list of exotic plant species can be found in Table 3-6, Appendix I of the *Stage One Report* (EDA 2010a).

Forest Pest Species

Forest pest species of concern, that should be monitored as part of the overall management of Rattlesnake Point Conservation Area include:

- Gypsy Moth (*Lymantria dispar*);
- Asian Long-horned Beetle (*Anoplophora glabripennis*);
- Emerald Ash Borer (*Agrilus planipennis*);
- Two-lined Chestnut Borer (*Arrilus bilineatus*);
- Fall Cankerworm (*Alsophila pometaria*); and
- European Wood Wasp (*Sirex noctilia*).

3.7.2.6 Forest Diseases

Forest diseases that should be recognized and monitored in the conservation area include Butternut Canker, the decline indices of Oak, Ash, Maple, Red Pine and Beech bark disease.

3.7.2.7 Herbicides, Pesticides and Suppressants

Biological controls will be employed wherever possible. Manual and mechanical methods of invasive species control are the preferred management option, where possible.

Chemical herbicides, pesticides and suppressants will not be used for any vegetative management purposes except for the eradication of non-native species, establishment of native plantings where other methods with less residual impacts are not feasible, or for the control of noxious plants in publicly accessible areas. Areas left devoid of vegetation after invasive species removal should be planted with hardy native species in an effort to prevent re-establishment and to improve the floristic quality of the site.

3.7.2.8 Vegetation – Cutting, Injury, Destruction and Removal

Under Ontario Regulation 365/88 it is a prohibited activity for the public to cut, remove, injure or destroy a plant, tree, shrub, flower or other growing thing in a conservation area of Conservation Halton.

3.7.2.9 Ancient Eastern White Cedars

An adaptive management plan, which protects, monitors health and possibly contributes to research initiatives, should be developed for Ancient Eastern White Cedars. Educational programming (e.g. signage), which highlights the impressive age and life cycle of ancient cedars should be explored further. The ability to access each individual should be documented, those that have the potential to be accessed should be more closely monitored and, where necessary, methods developed that reduce accessibility within the immediate vicinity.

3.7.2.10 Bat Hibernacula

An adaptive management plan, which protects bats and their habitats, monitors health and possibly contributes to research initiatives, should be developed.

3.7.3 Fisheries Management

Aquatic and fisheries resources associated with the conservation area are highly significant and should be protected. The appropriate separation of facilities from riparian areas is important for the protection of this resource. Retaining high quality riparian areas will maintain water temperatures and food supply; and filter nutrients, contaminants and sediments entering the water. The establishment or repair of any infrastructure within or adjacent the watercourses/lake shall be in accordance with the federal *Fisheries Act* with said works timed to occur within an approved instream construction window. Riparian and littoral zones adjacent to lookouts should be monitored regularly for disturbance.

Fisheries management practices at Rattlesnake Point Conservation Area will predominantly deal with habitat protection. Under Section 35 of the *Fisheries Act,* no harmful alteration, disruption or destruction of fish habitat (HADD) is permitted unless authorized by the Department of Fisheries and Oceans Canada (DFO). Any in-water works should first be screened by Conservation Halton staff to determine if the proposed works has a likelihood of causing a HADD. In addition, timing of these works should be confirmed with the Ontario Ministry of Natural Resources and Forestry (MNRF).

3.7.4 Wildlife Management

Wildlife management practices at Rattlesnake Point Conservation Area will predominantly deal with habitat protection and to a lesser extent habitat improvements/restoration. Under Ontario Regulation 365/88 it is a prohibited activity for the public to kill, trap, pursue or disturb a wild bird, reptile or animal in a Conservation Halton conservation area. See *Stage One* and *Stage Two Reports* for more detail, (EDA. 2010a, b).

3.7.5 Species at Risk Monitoring Strategy

Seven species at risk were documented as occurring within the Rattlesnake Point Conservation Area. They include Butternut, Monarch, Peregrine Falcon, Hooded Warbler, Canada Warbler, West Virginia White and Woodland Vole.

The habitat of *Threatened* and *Endangered* species receive varying degrees of protection under the *Endangered Species Act* as well as the *Species at Risk Act*. Where possible, recovery actions will be implemented in the conservation area in a manner that is consistent with recovery strategies or management plans that have been developed for the particular species. The appropriate management and monitoring of these species should be encouraged through the development of specific management plans. In some cases, it may be beneficial to consider their management as an assemblage. Where possible, recovery actions will be implemented in the conservation area in a manner that is consistent with recovery strategies. The monitoring strategy for each species at risk, with exception to the Timber Rattlesnake, is discussed below. The Timber Rattlesnake is not discussed as it is considered extirpated.

Recovery projects, as they arise, are not included in the 10-year monitoring budget.

As part of management considerations, Conservation Halton should continue to educate visitors on species at risk and how people can contribute to their protection.

3.7.5.1 Butternut

Butternut is shade-intolerant and conservation area managers can promote natural regeneration by planting Butternut seed, sourced from local retainable trees, or small trees as part of the proposed forest restoration. Controlling competition can also increase survivorship of established seedlings. Monitoring of this species should be directed at identifying additional Butternut trees in the conservation area and monitoring the health, regeneration and survivorship of the species following the guidelines set forth by the Forest Gene Conservation Association in the *Butternut Health Assessment in Ontario* manual.

It is estimated that five days of work every third year will be required to carry out this monitoring task (the costs are calculated based on $440 per person day; therefore, over the 10-year period this items will cost $6,600.)

3.7.5.2 Monarch

No specific monitoring for this species is recommended.

3.7.5.3 Peregrine Falcon

Peregrine Falcons were last recorded in the conservation area in 1963, likely on the cliff communities. Monitoring for this species' presence during the breeding season can occur opportunistically, when Conservation Halton ecology staff members are at Rattlesnake Point Conservation Area for other tasks. As part of the recovery strategy, suitability of a re-introduction program for this species should be explored. Captive breeding and reintroduction of the *anatum* subspecies of the Peregrine Falcon has been very successful.

3.7.5.4 Hooded Warbler

Public agencies are encouraged to manage properties as mature-growth stands which is one of the rarest ecosystems in this region. Various conservation authorities have designated "no-cut" zones in Hamilton, Niagara and Long-Point. Guidelines are being revisited for Managing Southern Ontario Forests to determine how well breeding habitat is being maintained or created. The recovery strategy is currently in preparation for the Hooded Warbler and the Acadian Flycatcher which shares similar habitat (Page and Cadman 1994).

Breeding bird surveys within appropriate habitat is recommended for monitoring this species over time. Although the Forest Bird Monitoring Program (FBMP) will help monitor this species, specific effort may be required in other areas where territories are known to have been established year after year. Where possible, and in an unobtrusive manner (e.g. observation from a distance), the number of breeding territories and the success of nests (e.g. fledge young) should be monitored.

It is estimated that one day of work per year will be required to carry out this monitoring task (the costs are calculated based on $440 per person day; therefore, over the 10-year period this items will cost $4,400.)

3.7.5.5 Canada Warbler

Should be monitored in a manner similar to that prescribed for the Hooded Warbler. Habitat associations should be mapped and managed for the recovery of the species.

(Monitoring for this species will be in conjunction with that for Hooded Warbler above; therefore, no further costs will be accrued.)

3.7.5.6 West Virginia White

Areas of Toothwort (*Dentaria diphylla; Dentaria X maxima*) known to occur in Rattlesnake Point Conservation Area should be monitored during the spring season to assess the occurrence and general abundance of this species from year to year. Food plants should be protected from recreational activities.

It is estimated that one day of work per year will be required to carry out this monitoring task (the costs are calculated based on $440 per person day; therefore, over the 10-year period this items will cost $4,400.)

3.7.5.7 Woodland Vole

A small mammal inventory should be considered. This inventory would allow some investigation of possible population levels in the conservation area as well as serve to inventory other more commonly occurring mammals. Both aboveground (e.g. Sherman/Longworth live traps) and belowground (e.g. pitfalls, or livetraps placed in runways) traps must be used in order to get an accurate representation of Woodland Vole numbers or even presence. A partnership with the Ontario Ministry of Natural Resource and Forestry and/or a university may be the most appropriate way of undertaking a detailed assessment of the Woodland Vole population.

It is estimated that 10 days of work per year will be required to carry out this monitoring task (the costs are calculated based on $440 per person day; therefore, over the 10-year period this items will cost $44,000.)

3.7.6 Globally and Provincially Rare Species

Globally and provincially rare species (G1-G3, S1–S3) observed in or immediately adjacent to Rattlesnake Point Conservation Area are identified in Table 3-5. These species should be investigated further to establish appropriate protection/management protocols.

Table 3-5: Globally and Provincially Rare Species

Scientific Name	Common Name	Halton Region Status	GRANK	SRANK	Source
Plants					
Aureolaria flava	Yellow False Foxglove	Rare	G5	S3	Varga 1994
Euonymus atropurpurea	Burning Bush	Rare	G5	S3	CH 2008
Mammals					
Pipistrellus subflavus	Eastern Pipistrelle	Data Deficient-likely rare	G5	S3?	NHIC 2004
Lepidotperans					
Satyrium caryaevorum	Hickory Hairstreak	*Not Ranked*	G4	S3	Halton NAI
Odonates					
Aeshna verticalis	Green-striped Darner	Rare	G5	S3	Halton NAI

**Additional species at risk may be located within the conservation area. Please contact Conservation Halton ecology staff for comprehensive information.*

3.7.7 Globally and Provincially Rare Vegetation Communities

Two Ecological Land Classification communities in the conservation area are considered *Very Rare* (G2) *to Uncommon* (G3) globally, and Rare (S3). These are identified in Table 3-6. Additional nine vegetation communities are documented in the conservation area as considered Critically Imperiled (S1), Imperiled (S2) or Rare (S3) provincially. A summary of these communities is provided below in Table 3-7.

Table 3-6: Globally and Provincially Rare Vegetation Communities

ELC Unit	Name	GRank	SRank	Number / Area
CLT1-1	White Cedar Treed Carbonate Cliff Type	G2Q	S3	1 polygons 0.4 hectares
TAT1-4	Fresh - Moist Sugar Maple Carbonate Treed Talus Type	G3G5	S3	8 polygons 1.5 hectares

Table 3-7: Provincially Rare Vegetation Communities

ELC Unit	Name	GRank	SRank	Number / Area
CCA1	Carbonate Cave Ecosite	G?	S1	4 locations
CLO1-2	Bulblet Fern - Herb Robert Carbonate Open Cliff Type	G5	S3	1 polygons 0.01 hectares
CLO1-3	Canada Bluegrass Carbonate Open Cliff Type	G5	S3	1 polygon 0.07 hectares

FOD7-4	Fresh - Moist Black Walnut Lowland Deciduous Forest Type	G4?	S2S3	1 polygon 0.7 hectares
TAO1-1	Dry - Fresh Carbonate Open Talus Type	G?	S2	4 polygons 0.2 hectares
TAO1-2	Fresh - Moist Carbonate Open Talus Type	G?	S2	2 polygons 0.3 hectares
TAS1-1	Round-leaved Dogwood Carbonate Shrub Talus Type	G?	S2S3	3 polygons 0.03 hectares
TAS1-2	Mountain Maple Carbonate Shrub Talus Type	G?	S3	2 polygons 0.4 hectares
TAT1-5	Fresh - Moist Basswood - White Ash Carbonate Treed Talus Type	GNR	SNR *Likely S2?*	5 polygons 7.4 hectares

These vegetation communities should be protected and maintained. If necessary, a vegetation management plan should be prepared to investigate appropriate protocols for each community. Specific management protocols should be developed for the White Cedar Treed Carbonate Cliff Type as well as Carbonate Cave Ecosite to minimize visitor impacts on those communities.

3.7.8 Ecological Monitoring and Assessment Network

The Ecological Monitoring and Assessment Network (EMAN) was a program established in Canada involving several organizations and individuals. The network was coordinated from 1994 to 2000 and is no longer operational at a national scale. Environment Canada continues to endorse the standard monitoring protocols resulting from this program for the purpose of analyzing ecological information. Organizations use these protocols to build locally based monitoring program. Plots are set up to monitor, detect and report on changes in ecosystems in Canada, with the objectives of identifying how ecosystems respond to stresses, providing defensible rationale for pollution control and resource management policies, evaluating the effectiveness of resource management policies and identifying environmental issues at the earliest stages (EC, 2007). An EMAN forest plot was set up in Rattlesnake Point Conservation Area in 2007 with monitoring activities having commenced in 2008. Monitoring work includes tree health (5 days, yearly), ground flora (2 days, yearly), breeding birds (0.5 days, yearly), shrub monitoring (2 days, yearly), downed woody debris (2 days, yearly), salamander monitoring (7 days, yearly), and tree heights (8 days, every 5 years).. These costs are incurred by tax-supported means as part of the watershed Long-Term Environmental Monitoring Program.

3.7.9 Research

Appropriate research activities will be encouraged and will conform to the conditions stipulated in any Permit to Conduct Research issued by the Watershed Management Division, Ecology Department. Prior written permission will be required and reports upon completion of the study will be shared with Conservation Halton.

Section Four: Elements of the Master Plan

4.1 Introduction

In a premier system of publicly-accessible natural areas, every area should meet a high standard of amenities and service. For Conservation Halton's conservation areas, this will become the proposed base level of service described in Section 3.2. While each of the conservation areas should add something unique to the overall system, many of the conservation areas will provide similar services and amenities such as hiking trails in order to meet the anticipated large increase in demand for passive recreational activities. For Rattlesnake Point Conservation Area, the unique features to be built upon included the prominent escarpment cliff face, lookouts, ancient cedars and trail links to Crawford Lake Conservation Area.

The concept plans presented in the *Stage Two Report* offered distinctly different approaches for Rattlesnake Point Conservation Area, ranging from offering an upgraded base level of services to becoming a regional destination (EDA 2010b). All of the concept plans were based on an "environment first" approach where the natural heritage features are protected and / or restored to the maximum extent possible. The differences are in the degree of intervention and investment necessary to accommodate educational, interpretive and programmatic elements.

The first option, Concept A, placed an emphasis on conserving and protecting the natural environment while offering some opportunities for recreation and education; the second, Concept B, defined a balanced approach between environmental preservation and public enjoyment; the third, Concept C, sought to promote the site to regional destination status while still protecting the environment to the maximum extent possible and offering a strong educational and recreational component.

Through the consultation process, the community, Conservation Halton staff and the technical committee chose Concept B as the preferred approach to development of the area. Concept B proposes to:

- Maintain the basic role: good lookouts and views, trails, day use, camping facilities
- Explore interpretive storylines: escarpment, recreational use of the cliff face
- Provide basic / standards amenities and services but to a much higher standard than at present
- Enhance / promote trail links to Crawford Lake Conservation Area
- Improve parking lots as required, to support current visitation
- Control trail routes (with fencing, boardwalks, etc.)
- Provide special interpretive opportunities to experience key features:
    - The edge of the escarpment: interpret views, ancient cedars, caves
- Provide enhanced day use facilities: parking upgrades, picnicking, open spaces, additional washrooms, etc.
- Campground expansion (convert 5 existing upper camp sites to day-use; create five new sites in the lower area)
- Investigate additional land acquisition.

4.2 Physical Components

As part of the corporate branding work being undertaken by Conservation Halton, park furnishings and architectural features, including picnic shelter, should be custom designed such that all Conservation Halton conservation areas exhibit a 'signature design.' Design guidelines should specify the use of natural stone and timber, and the colour scheme and logos to be used for all features. All park facilities and furnishings should be designed to be in harmony with the natural environment, but should also be vandal resistant.

The proposed range of facilities is intended to provide appropriate accessibility, development, programming and educational opportunities in the Rattlesnake Point Conservation Area, consistent with the site constraints and opportunities.

The master plan identifies the need for some basic facilities in the Development Zone that include directional signage, a picnic shelter, heated washrooms, various site furnishings, a main trailhead, and smaller trailheads as needed. Figure 4-2 shows examples of some facilities.

4.2.1 Facilities and Amenities

The facilities and features of the master plan include the following approximate specifications:

4.2.1.1 Expanded Camping Facilities (year 7 or 8)

- Remove 5 campsites in upper area, designating the entire upper area as day use.
- Expanded existing lower campsite area to include an additional three large sites and one smaller campsite to replace the five sites removed from the upper area.
- Camping in lower area expanded by 9,300m²(un-serviced)
    - 10 car parking lot - 250 square metres
    - Access road 230lm x 4lm - 920 sq. metres
    - bioswales - 300 linear metres
    - Shade tree planting – minimum 8 trees

4.2.1.2 Accessibility Upgrades (buildings and pathways)

Rest rooms, parking lots, buildings, pathways and ramps should be carefully designed to ensure access, wherever possible. At least 900 mm of level, cleared space should be provided to the side of benches for wheelchairs. Plenty of space should be provided at scenic overlooks for persons to watch and listen. Safety rails must be carefully located to ensure that the sight line of persons in wheelchairs is not blocked.

4.2.1.3 Signage

Signage Program Hierarchy

Trail signage is an important element that enhances the trail experience and provides guidance to the user. As with all the facilities and features at this conservation area, signage should be designed to reflect the natural character of the area. Signs provide four major functions - information, direction, interpretation and regulations, are described below.

Informational

Informational signage provides detailed information about the use and identity of the trail and adjacent features. This is usually conveyed using maps as components of the signboard. This type of signage also indicates trail conditions, such as steep slopes and trail amenities such as safety features, washrooms and look out areas.

Directional

Directional signage should be used to indicate the trail route, including changes in direction and / or straight portions of the trail, at determined intervals. This type of signage can also be used off trail, in open space indicating the route to nearby trail access points, at trail intersections or any point where a decision must be made by the user. At these points, information as to trail length, average duration and destinations or points of interest are important to note to allow users to make decisions as to the route to follow.

Interpretive

Interpretive signage provides information regarding natural, geological, cultural and historical features along the trails. These signs should be site specific and located at major interpretive nodes or at particularly exceptional viewpoints, with a surfaced viewing area between trail edge and sign. The information included on these signs should be concise, easy to understand for all age groups, and should ultimately improve user awareness and promote enjoyment of the trail and immediate area. Interpretive signs should be spaced out to enable the trail user to absorb the ideas and information provided. The educational / interpretive signage program at this conservation area is an important component of the VIM plan. Visitors will be educated about the importance and fragility of natural features; this type of education has proven effective in improving compliance with trail use guidelines.

The master plan has proposed an initial 20 interpretive signs (other than those located at trailheads); however, should it be decided in the future that more interpretive nodes or benches will be beneficial, the addition of such amenities is not proscribed by this plan. At the same time, it should be noted that Conservation Halton intends to increase the amount of digital interpretive material made available to its visitors. This would include downloadable audio tours available in several languages.

Regulatory

Regulatory signage provides trail users with the rules and regulations regarding trail use. This includes one-way and do not enter signs, among others.

<u>Elements</u>

All signage should be designed to suit the character of the natural surroundings and must relate to approved park activities, interpretive and recreational programs or special events within the park. Third party signs, commercial billboards or signs for businesses are not permitted. NEPOSS and the World Biosphere Reserve logos and information will be represented on trailhead signage and other places deemed appropriate

Entrance: main entrance sign and Conservation Halton parks directional and cross-marketing signage.

- Interpretive signage
    - Interpretive programs at conservation areas are meant to educate visitors about the unique natural heritage features. Programs are to show the respective natural areas

and the importance of preserving those including guidelines for low impact recreational activities.

- Minimum of twenty interpretive signs: lookouts, restoration areas, ancient cedars, general history and the natural heritage of the conservation area.
- Language outreach upgrade.

4.2.1.4 Roads and Parking

Road and parking lot upgrades include testing the base to sure it is able to hold up under traffic. Where it is found to be weak, it can be excavated and rebuilt with appropriate layers of compacted gravel. In all areas, grading will be carried out to ensure a smooth surface with appropriate slopes for drainage. Bioswales are vegetated ditches that surround parking lot and roadway such that any pollutants will be filtered out near the source before rainwater or snowmelt disperses in the natural environment.

- Automated gate with payment
- Improved existing road network
  - stone chip surface - 11,400 square metres
  - bioswales – 3800 linear metres

Upper Area

- Improved, sustainable 40-car parking area (existing, upper day use area)
  - stone chip surface – 1010 square meters
  - bioswale – 100 linear meters
  - retaining wall – 75 linear meters
- Improved, sustainable 10-car parking area (existing, upper area, campsite # 2) natural stone chip surface - 250 square metres
  - bioswales - 30 linear metres and shade tree planting – minimum 4 trees

Lower Area

- Improved, sustainable 50-car parking area (existing, lower level area)
  - stone chip surface - 1250 square metres
  - bioswales - 100 linear metres
  - shade tree planting - 15 trees (80 mm caliper)
- Improved, sustainable 16-car parking area (existing, lower level area, comfort station) natural stone chip surface - 500 square metres
  - bioswales - 60 linear metres and shade tree planting – minimum 4 trees
- Improved, sustainable 10-car parking area (existing, lower level area, campsite # 10) natural stone chip surface - 250 square metres
  - bioswales - 30 linear metres and shade tree planting – minimum 4 trees
- New, sustainable 10-car parking area (lower area, new campsite area) natural stone chip surface - 250 square metres
  - bioswales - 30 linear metres and shade tree planting – minimum 4 trees

Large native species trees (80 mm caliper) will be planted near the main parking lots to shade parked vehicles on hot, sunny days.

- Optional Entrance Re-alignment
  - The re-aligned entrance route into the park is proposed to begin at the junction of the former #12 Side Road and Appleby Line. The entrance road would than head southwards passing the existing wood compound and tie into existing laneway at entrance to gatehouse.
  - The entrance re-alignment is required to alleviate traffic congestion on Appleby Line. The new entrance would allow for a longer traffic queue up to the gatehouse, reduce congestion on Appleby line and provide better entrance sightlines along Appleby line.
  - Re-aligning the road originated through public consultation meetings regarding residents request to reduce traffic congestion. This concept was not presented in the public consultations and subsequently will be subject to NEC and public review under the development permit application process.
- Optional Additional Parking-
  - Size and location of additional parking areas to be determined at a later date. As visitation numbers increase the need for additional parking will become apparent.
  - Additional Parking was presented to the NEC during approval of the master plan, however, issues with justification for parking became apparent and now additional parking will now be addressed via NEC development permit application process at a later date.

4.2.1.5 Picnic Facilities

- One additional picnic shelter 100 square metres will be built and located in the lower level at campsite #12. The picnic shelter will be available to rent for day use or overnight use.
  - 100 sq. metre open air picnic shelter
  - Site furnishing such as picnic tables and trash receptacles; no additional services
- 20 additional picnic tables
- Site furnishings such as bike racks, garbage receptacles and benches

All site furnishings should be purchased at the same time in styles compatible with each other and with the natural scenery.

4.2.1.6 Other Infrastructure Development

- Gatehouse Renovations : Interior redesign and staff washroom upgrades
- Fenced Maintenance Compound: Upgrade the path to wood storage and fence 250m² around existing wood shed, to create a maintenance compound.
  - The maintenance compound will ensure no trespassing and can be used to store equipment, firewood and provide secure and safe outdoor workspace.
  - Site Servicing Upgrades : Septic, Electrical and Potable Water
  - Site Technology Upgrades: Telephone and Video Surveillance

The Two following items are not part of the current Master Plan but may be addressed at a later date and will be subject to a Development Permit and Public consultation:

- Optional Visitors Centre: This proposed small scale visitors centre at Rattlesnake Point Conservation Area is to provide space for washroom facilities, administrative office for staff, store offering sundries needed for campers', educational space for use by school groups, recreational groups and/or naturalist clubs, and an open space area to be used as an orientation/information area, exhibit space or a lunchroom.
- Optional All Season Pavilion: The pavilion is to have retractable walls for summer use, fully accessible and to have heated year-round public washrooms

4.2.1.7 Trail System

As the population base in the region ages, participation in pleasure walking in natural environmental settings (hiking) is expected to be one of the fastest growing segments of outdoor recreation over the next 20 years. Therefore, Conservation Halton can expect its trail systems to be in high demand.

Proper trail construction is one of the most important factors in accommodating visitors without environmental degradation.

Therefore, a key component of this master plan is to upgrade the trail systems so that damage to adjacent features will be minimized. The preferred use at Rattlesnake Point is hiking; therefore all trails will be built and managed for hiking activities. (Skiing and Snowshoeing permitted in winter but not maintained for such activities) Drainage issues will be addressed and trails delineated with logs or other natural materials. Select areas will be provided with elevated boardwalks. Such measures have been proven to keep the majority of visitors from straying off the designated trail. Seasonal or temporary trail closures will also be implemented as needed for added protection during sensitive periods of a species' life cycle, for regeneration of vegetation or to prevent erosion.

Single-track trails (narrow, substrate trails) are generally in less accessible areas and used mainly by dedicated hikers such as Bruce Trail members; these people are well versed in the 'Leave No Trace' approach to experiencing nature. The majority of visitor traffic would be encouraged to travel along major (medium or high capacity) trails rather than the single-track trails through strategic use of interpretive programming, mapping, and establishing and advertising places of interest. Additionally, as part of the trail upgrading proposed under the master plans, Conservation Halton will be assessing the risk to natural resources posed by trails being in the Nature Reserve Zone. Trail delineation, including the use of boardwalks, as well as rerouting some trails will be possible management responses. The action to be taken on the Bruce Trails in these areas will be discussed with representatives of the Bruce Trail Conservancy.

Currently, all Conservation Halton trail maps (pamphlets and signage) have trail regulations or trail etiquette guidelines printed on them. In addition, new interpretive signage will stress the value of the natural heritage features of the areas and encourage people to pursue recreational activities in low-impact ways. Increased trail use does not necessarily lead to increased degradation, insofar as the social stigma of being seen disobeying trail use guidelines will discourage people from misbehaving. Volunteer stewards may be utilized to patrol the trails on very busy days.

Figure 4-1: Master Plan Detail

CONSERVATION HALTON

Rattlesnake Point Conservation Area
Figure 4-1
Master Plan Detail

Maintenance Trail

New Picnic Shelter

New 10-Car Camping Parking Area

Improve 10 Car Parking Area

New Group Camping Location

New Camping Access Road

Existing Comfort Station

Improved 16 Car Parking Area

Nassagaweya Formal Lookout

Improved 50 Car Parking Area

Existing Picnic Shelter

Existing Vault Toilet

Upper Campsite Converted to Day Use

Existing 10 Car Parking

Fenced Maintenance Compound

Optional Entrance Re-alignment

Existing Gatehouse

Existing Picnic Shelter

Existing 40 Car Parking Lot

Existing Vault Toilets

Nelson Formal Lookout

Pinnacle Formal Lookout

Trafalgar Formal Lookout

Legend

- Conservation Area Boundary
- Other Conservation Area
- Road
- Contour 5m intervals
- Watercourse

Conservation Halton Trail
- Single Track
- Medium Service
- High Capacity

Bruce Trail Conservancy
- Main Bruce Trail
- Side Bruce Trail

- New Signage
- Cliff Management and Climbing
- New Campsites
- Existing Campsites
- Existing Campsites Converted to Day Use
- Existing Structure
- Proposed Structure
- Public Access
- Service Access
- Formal Lookout

W N S E

0 50 100 metres

SCALE 1:4,000

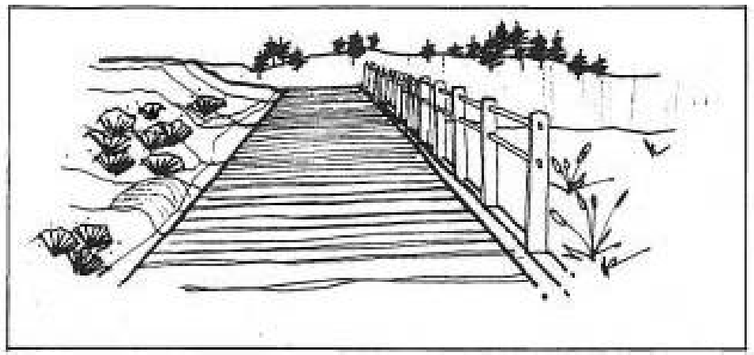
Figure 4-2: Amenities

CONSERVATION HALTON

Parks Master Planning

Amenities

FIGURE 4-2



Board walk Conceptual Sketch

Interpretive Node

Bench

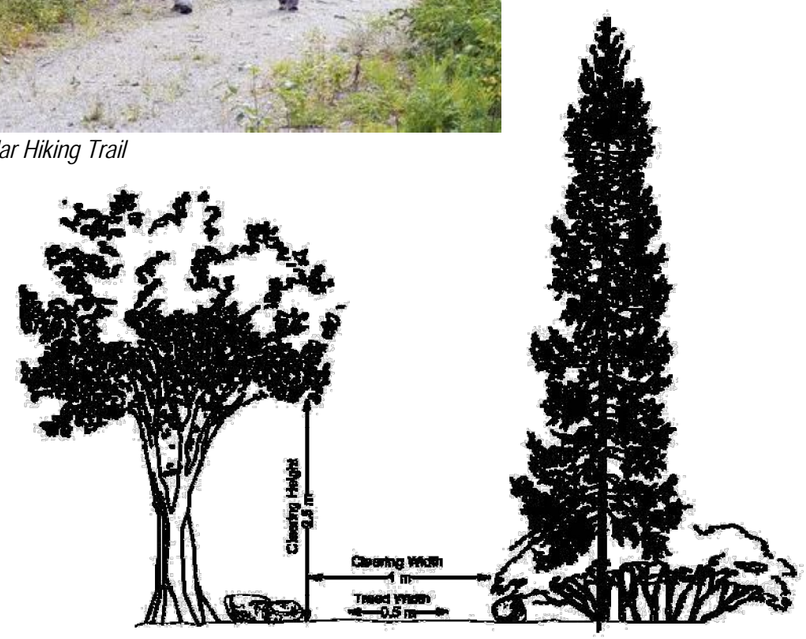
Boardwalks through Sensitive Areas

Surface for Overflow Parking

Granular Hiking Trail

Bridge

Picnic Shelter



Trail Construction

temporary trail closures will also be implemented as needed for added protection during sensitive periods of a species' life cycle, for regeneration of vegetation or to prevent erosion.

Single-track trails (narrow, substrate trails) are generally in less accessible areas and used mainly by dedicated hikers such as Bruce Trail members; these people are well versed in the 'Leave No Trace' approach to experiencing nature. The majority of visitor traffic would be encouraged to travel along major (medium or high capacity) trails rather than the single-track trails through strategic use of interpretive programming, mapping, and establishing and advertising places of interest. Additionally, as part of the trail upgrading proposed under the master plans, Conservation Halton will be assessing the risk to natural resources posed by trails being in the Nature Reserve Zone. Trail delineation, including the use of boardwalks, as well as rerouting some trails will be possible management responses. The action to be taken on the Bruce Trails in these areas will be discussed with representatives of the Bruce Trail Conservancy.

Currently, all Conservation Halton trail maps (pamphlets and signage) have trail regulations or trail etiquette guidelines printed on them. In addition, new interpretive signage will stress the value of the natural heritage features of the areas and encourage people to pursue recreational activities in low-impact ways. Increased trail use does not necessarily lead to increased degradation, insofar as the social stigma of being seen disobeying trail use guidelines will discourage people from misbehaving. Volunteer stewards may be utilized to patrol the trails on very busy days.

Where trails cross intermittent swales, streams or wetland areas, boardwalks, bridges or culverts are proposed. Boardwalks, bridges, and other water control measures will be constructed in such a way as to minimize impact on the natural features and in accordance to Conservation Halton regulatory requirements. Boardwalks should have a minimum width of 1.5 metres and be constructed of non-pressure treated timber materials. The exact location and length of bridges and boardwalks will be determined during the implementation phase based onsite conditions.

Trail Accessibility Upgrades

Hiking trails often can be made accessible to persons with physical disabilities. The types and needs of disabled persons should be recognized before designing such a trail. Conservation Halton staff will work closely with potential future users and local groups representing persons with disabilities when designing or upgrading trails.

For wheelchairs, crushed stone that has been rolled and compacted may be used. Visually handicapped persons can use natural trail treads with guide ropes or definite edges such as logs or other natural materials. Although accessible trails usually are located on level terrain with grades rarely exceeding 5 percent, acceptable grades will vary depending on the abilities and expectations of trail users. Regular rest stops should be provided on steep slopes.

Development Elements

- 2 trailheads
- Decommission unauthorized trails * (i.e. block entrances; assumed 10 for costing purposes)
- Directional signage, as described above.
- Upgrade existing trail system to avoid ponding and braiding - 1000 linear metres*
- Trail definition or boardwalks along sensitive trail areas - 1000 linear metres (x 2 sides)*

** The Figures provided throughout the master plan descriptions are rough estimates. Actual lengths/numbers will need to be determined through detailed site analysis during the implementation phase.*

Bruce Trail Optimum Route

The Bruce Trail Conservancy has identified a route in the northwest corner of this conservation area, skirting the plantation areas, through which they would like to build the Main Bruce Trail; however, they have not been able to obtain permission from adjacent private landowners to access their lands. Therefore, there is no plan at present to build this trail.

4.2.1.8 Trailheads

Trailheads will include a trail information sign at the entrance that should inform users about the length and difficulty of the trail and the locations of rest stops, cut-offs and potential hazards. To accommodate certain physical disabilities, the sign should be mounted within easy reach of the trail at a height of 750-1000 mm and use raised or routed letters.

Further policies on trails are presented in Section 6.2.3. Figure 4-2: Amenities shows examples of appropriate trail construction.

4.2.1.9 Lookouts

Many vistas are available from Rattlesnake Point Conservation Area; however, the popularity of these views has led to excessive off-trail activity. One element of the master plan is to add additional features to the five existing formal lookouts like signage and benches. This is to encourage people to use these spaces rather than using or creating informal lookout points People will be discouraged from using informal lookout points through the posting of signage indicating how far it is to the next formal lookout point and by blocking entrances to trails with logs or native plantings.

4.2.2 MacDonald Tract

A small access route has been designated in the MacDonald Tract; the purpose of it is to be a staging area for service crews. There will also be a service access trail in the plantation area; it will be approximately 400 metres in length. Further development may occur after this plan is superseded.

4.3 Visitor Impact Management Program

Visitor Impact Management (VIM) program is a multiple step monitoring process developed for site managers to protect and enhance the natural resources and infrastructure components of a property. These processes usually involve substantial public participation, which may empower local residents, reduce conflicts between interest groups, expose multiple perspectives related to natural resources management and improve the quality of decisions. Public participation also increases visitor compliance with management strategies.

One element of the VIM Plan will be to track visitation rates and monitor for impacts on the resources. Social carrying capacity levels have been determined for the various recreational activities allowed in the Rattlesnake Point Conservation Area.

It should be noted, however, that the term social carrying capacity no longer refers to an absolute number or formula-based decision. Rather, it refers to the desired visitor experience and resource conditions that are to be sustained (limits of acceptable change). Therefore, by managing to stay

within desired resource and social conditions, the area is being managed within the "carrying capacity." Emphasis is on protection and enhancement of the natural environment and the visitor experience as opposed to accommodation of unlimited numbers of visitors. This is not a finite or absolute science – there are social values and judgments that enter into the equation; management actions also influence the ability of the facilities to accommodate visitors. Furthermore, adopting a carrying capacity approach is not a one-off exercise, but requires a continuing commitment to monitoring and decision-making.

This approach to carrying capacity is based on identifying daily capacity of facilities rather than annual numbers. Visitor Impact Management programs are required to ensure that impacts to the site is minimal. See Appendix I for further discussion of carrying capacity.

4.3.1 Provisional Carrying Capacity Levels

Until enough data has been gathered to reassess these numbers, the following provisional carrying capacity levels will be assumed for Rattlesnake Point Conservation Area. At this time, theoretical carrying capacity for environmental considerations and conditions is subject to further data collection and implementation of the VIM program.

Given the available lengths of the three types of trail described in Section 3.4.4, the total peak capacity for the trails at Rattlesnake Point Conservation Area is 460 people per day. See Appendix I for a more detailed discussion of the calculations summarized here. These carrying capacity levels have been calculated assuming the following conditions have or are being met:

- Trails have been rationalized – avoid sensitive areas;
- Visitor Impact Management program is in place (includes trail closure when necessitated by adverse weather conditions);
- Trails have all been upgraded during the first three years of the plan period– correctly constructed to avoid ponding, creation of social trails, etc.
- Impacts will be monitored and if unacceptable, remedial measures are taken.

It must be emphasized that at this point the defined levels are theoretical and must be validated by on-site monitoring. Moreover, carrying capacity numbers are based on the carrying capacity under ideal conditions and these numbers will periodically fluctuate downwards as required under the VIM program and weather conditions to ensure that the natural resource base remains ecologically sustainable. Subsequently, carrying capacity cannot simply be extrapolated into sustainable attendance numbers without the application of a modifying or "utilization" factor, which considers weather, market demand and so on.

Given a comfortable density of hikers, which varies by trail classification, it was determined that the trails can accommodate 460 hikers on a peak day (see Appendix I for details of assumption and calculations used to derive this figure). These numbers were determined by Conservation Halton staff and the consulting team, and through extensive background research.

With the addition of some picnic tables and one picnic shelter, it is expected that the area can accommodate 350 picnickers on a peak day based on social constraints.

There are 240 climbing routes in the area, each can accommodate 2 climbers; however, normal levels of attendance are closer to 240. Some of these routes are likely to be decommissioned, because of damage to the vegetation in the immediate vicinity. At this time the routes which will be

decommissioned are unknown until an assessment on the climbing area is completed. The climbing at Rattlesnake point will not expand. The Climbing will be monitored through the climbing management plan. At climbing locations, signage will be posted about rules and regulations of climbing; this information will include ecological awareness on the cliffs. Climbing schools and lessons will address the awareness of outdoor climbing.

Under this master plan, it is proposed that Conservation Halton exert more control on climbing activities at Rattlesnake Point Conservation Area, most notably strict control on climbing routes to avoid sensitive communities. The authority will work with local climbing groups such as the Alpine Club and Ontario Access Coalition to ensure sustainable climbing at the conservation area.

Camping capacity on a peak day is 600 people given proposed facilities.

This approach to carrying capacity is based on identifying daily capacity of facilities rather than annual numbers. The Visitor Impact Management is required to ensure that the impacts to the site are minimal.

4.3.2 Visitor Impact Management Model

The Visitor Impact Management program created for Rattlesnake Point Conservation Area is modeled on the *Master Plan* for *Kelso Conservation Area* Visitor Impact Management plan. The nine steps described in the Kelso model are a suitable starting point for all Conservation Halton holdings and should be expanded to include monitoring, reporting and implementation steps that actively involve volunteers, conservation area visitors and Conservation Halton staff (shown in Table 4-1). By revisiting the nine-step VIM model and introducing volunteerism through project initiatives in the monitoring and implementation steps the lack of money and staff that restricted the adoption of the VIM process are lessened this report recommends that one person be hired to coordinate visitor impact management activities for the Mount Nemo, Rattlesnake Point and Hilton Falls Conservation Areas. A VIM matrix, Table 4-1, has been established to reflect specific management needs at particular phases in the process. Table 4-2 (in Appendix I) outlines the indicators to be monitored for each activity permitted in the Rattlesnake Point Conservation Area as well as identifies potential management actions to ensure sustainability of the activity.

4.3.3 Implementation

In the *Stage Two Report* (2010b), it was demonstrated how students and volunteerism have played an important and often key role in many parks in addressing specific issues related to the sustainable development and management of natural resources and visitor experience. By revisiting the nine-step VIM model and introducing volunteerism through project initiatives in the monitoring and implementation steps, the lack of money and staff that restrict the implementation of the VIM process are lessened. Visitor Impact Management programs are not without costs, however. It is estimated that one additional employee and associated transportation costs will be required to administer the program at Mount Nemo, Rattlesnake Point and Hilton Falls Conservation Areas (see Section 5.3.4).

Table 4-1: Visitor Impact Management Model

VIM Step	VIM Action	Description of VIM Action	Examples

1	Baseline Review	Stage One - Inventory and Analysis, which details the existing conditions of Rattlesnake Point Conservation Area. To be continuously reviewed as indicated by Step 9 - Continuous Improvement Committee.	Species at risk, rare species, veteran trees, invasive species, hydrology, vegetation communities.
2	Goals and Objectives	List of area objectives. Statement of Conservation Halton mandate.	Preservation, restoration, limited recreation.
3	Impact Indicators	List of specific physical indicators of impact and measures to be used during step 5 Monitoring.	Unauthorized access, trail closure success, restoration success, off-trail use, erosion of trails, visitor garbage, sensitive species success / survival rate, rare vegetation success / survival rate, invasive species.
4	Limits of Acceptable Change	Establish limits of acceptable change in addition to visitor threshold number / individual amenity capacity number.	Restoration efforts: Effect on existing communities, inspection / maintenance visits, visitor occurrence, trail use, refuse.
5	Monitor	Field conditions monitored by volunteers and Conservation Halton staff, supervised and led by Conservation Halton staff.	Monthly inspection or annual review.
6	Analysis	Analysis of field reports and surveys.	Inspection survey analysis.
7	Mitigation	Determine impact mitigation strategies using Conservation Halton matrix.	Trail closures, signage, surface trails, boardwalks.
8	Implementation	Implementation done by CH staff, assisted by volunteers.	Limited access for medium projects i.e. trail repair.
9	Continuous Improvement	Continuous review of goals and objectives by Working Committee. Recommendations to Step 1 to update process	Conservation Halton staff and community representation.

The management plan must have an information technology (IT) component that informs the management team. Software models are available to provide more rapid analysis and evaluation, often in hours rather than days. Conservation Halton has recently upgraded to a new Point of Purchase (POP) software system providing information in real time and can now inform staff of capacity thresholds in all properties simultaneously. This will allow staff to direct visitors to properties that are receiving less traffic. Even social network sites and communication tools should be used to provide information and connect with volunteers.

Finally, the management plan will create a Continuous Improvement Working Committee of Conservation Halton staff (operations, information technology, public relations and science) and consideration should be given to a rotation of select leadership from active environmental advocacy and naturalist groups, the Bruce Trail Conservancy, Trout Unlimited, assistance organizations such as Halton Multi-Cultural Council and local outdoor, hiking or recreation clubs. The committee would be tasked with setting specific goals and objectives that are aligned with the Conservation Halton mandate and other planning objectives including this master plan.

A VIM matrix, Table 4-2 in Appendix II, outlines the indicators to be monitored for each activity permitted at Rattlesnake Point Conservation Area as well as identifies potential management actions to improve sustainability of the activity. A budget of $60,000 will be provided to cover the products and implementation of these actions recommended through the VIM monitoring program. The budget will be divided between four parks; Mount Nemo, Hilton Falls, Rattlesnake Point and Crawford Lake in accordance to need.

4.4 Environmental Management and Restoration Plan

4.4.1 Rationale

Rattlesnake Point Conservation Area covers approximately 295 hectares, of which the majority is forested and the area contains a good portion of interior forest area. This conservation area contains areas of existing restoration in various stages of succession as well as two smaller areas of proposed restoration (Figure 4-2 in the Inventory and Analysis: *Stage One Report* (EDA 2010a). Existing restoration areas correspond to plantation areas, which over time will develop into a more diverse forest community. Natural regeneration areas have been left for vegetation communities to develop naturally through succession. These former agricultural areas are already showing signs of primary succession. Proposed restoration areas are locations of interest for active restoration to aid the development of more mature or a specific type of vegetation community. These areas correspond to one area along the eastern boundary and one just northwest of the main entrance and day use area.

As resources are available, additional restoration activities may include, improving habitat in key areas for targeted species, improving interior forest areas, advancing the natural succession of plantation forests and curtailing the spread of invasive species. In some cases, specific recommendations have been made regarding the need for additional planning in order to appropriately target resources and assign costs (e.g. invasive species, forest management plan, etc.).

4.4.2 Estimate of Management and Restoration Costs

A cost structure for undertaking restoration of proposed restoration areas is provided below. Costs provided below are preliminary estimates. The total cost for the measures described below is estimated to be $897,300. An additional $15,400 over 10 years for the Species at Risk Monitoring Program set out in Section 3.7.5 is not included in this 10-year monitoring budget.

4.2.2.1 Invasive Species Management

Ccosts for undertaking invasive species removal should be based on the threat analysis and specific management needs identified. To provide the master plan with a preliminary cost, the following has been assumed: threat analysis, invasive species removals every year for the first five years, invasive species removal every second year for the next five years. Total estimated cost for invasive species management over 10 years is $19,800.

4.4.2.2 Forest Nucleation Cell Planting

For the two proposed restoration areas within Rattlesnake Point Conservation Area, Forest Nucleation Cell planting plan is proposed to extend the forest community. Both areas are relatively small. The smallest area is approximately 0.5 ha and the largest is approximately 2 ha.

It is intended that reforestation of these areas would serve to increase the overall size of tableland forests, improve their shape (reduce the forest edge to interior ratio). These areas would likely naturally regenerate towards a forest community over time if left undisturbed. Restoration efforts would speed up this process and help increase functionality, species and age diversity within the entire forest community.

The restoration plan will involve a limited amount of excavation and re-grading, where necessary, to improve soil composition and prepare a 10-square-metre cell planting zone for a diverse native species mix of trees and shrubs. Detailed design at the implementation stage will determine the specific native species mix, calculate planting densities and establish design criteria.

Important design considerations will include the use of no fewer than 4-6 native early pioneer species placed in random, natural layouts of hierarchal sizes. Natural plant associations that reflect the succession forest design intent will be established

4.4.2.3 Plantation Patch Planting

A few plantation areas exist in Rattlesnake Point Conservation Area with a variety of attributes and proposed management criteria. The total area of plantation in the conservation area is approximately 87 hectares. The management of these, as well as natural forest areas, should be guided by an updated forest management plan. This would contribute to the health of the overall forested area and help promote increased biodiversity in the plantation areas while maintaining the health of natural forest that experiences higher visitor traffic.

As resources are available, it would be beneficial to plant shade tolerant native tree species and appropriate ground layer plants within plantation areas to speed the transition to a mixed forest canopy that is capable of supporting greater diversity.

The restoration plan will consist of cutting a couple canopy trees, to allow light penetration, preparation of planting areas, including ripping of soil structure, application of mycorrhiza and fertilizers. Plantings will consist of shade tolerant hardwood species with appropriate herbaceous plants typical of the more diverse forest environments surrounding the plantation

4.4.3 Trailhead Closures

There are areas where unauthorized access to the conservation area is occurring; the adjacent landscape in the immediate area needs to be rehabilitated to discourage entry. It will also be necessary, to close existing unsanctioned trails in the conservation area. Trail closures form an important mitigation measure for protecting the natural features of the conservation area, which should reduce unauthorized access and access to pre-existing trails prior to the implementation of the master plan. Trail closures are to be completed during the first ten years of the plan; the cost for this work is included under the trails costing.

The restoration plan will consist of a limited amount of equipment use to source and install large fallen logs, boulders and gated structures. The trail closures will allow restoration of interior portions of the trail to progress naturally. Detailed design at the implementation stage will determine the specific design details. Trailhead closures, gate installations, fencing and vegetation planting will be executed by qualified Conservation Halton operations staff

4.5 Potential Land Acquisition

Conservation Halton has a land securement program which identifies land across its watershed which would be of interest to the Authority should they become available. Lands identified within the Niagara Escarpment Plan *(2005)* are included as priorities, as are lands adjacent to Authority existing land holdings. Acquisition would also focus on lands that serve as natural corridors or provide linkage between core areas notably along the Niagara Escarpment, Limestone creek tributary and connection to adjacent conservation areas. Partnership purchase with the Bruce Trail Conservancy and the Trail Optimum Route are properties that would contribute to the objectives of NEPOSS by securing a permanent route for the Bruce Trail on public lands and are included as priorities. Partnerships also raise priority level for securement. Conservation Halton works closely with the Region of Halton (and others) in the Regions Greenland Securement policy and identifies priority lands in this program as well. When possible in a willing seller – willing buyer scenario, Conservation Halton will seek funding in partnerships to secure additional lands based on these priorities. However, Conservation Halton does not have identified budgets for acquisition, nor does the Province provide support for this at this time. Currently, in the absence of funding, Conservation Halton is not actively pursuing property purchase, but can and does work with owners in securing lands such as through the Ecological Gifts Program where opportunity to do so presents itself. Land Acquisition was included within the Master Plan to help provide strategic context in line with the Securement program for future land acquisition should funding or the opportunity to acquire new priority property becomes available.

Section Five: Financial Implications

This section presents the financial analysis of the Master Plan for Rattlesnake Point Conservation Area.

All dollar figures quoted are in terms of 2010 dollars. There are two fundamental economic assumptions on which this plan is based:

- **Modest economic growth provincially and nationally:** The first assumption underlying this overall analysis is that there will be slow to moderate economic growth over the 10-year development plan of the site. The recent financial uncertainty - since 2008 - will likely have stabilized, but expectations for overall economic growth are modest when compared to the 1990 – 2008 period. Therefore, companies and institutions will be very conscious of receiving value for money in any transaction. For this development plan, expectations are that partnerships will need to clearly demonstrate a 'win/win' aspect with clear benefits articulated.
- **Significant local population growth:** A second key assumption, fully documented in the *Stage One Report* for Rattlesnake Point Conservation Area (EDA 2010a), is that there will be quite high population growth in Halton Region relative to that anticipated for the province overall[1]. By itself, this would mean significant additional attendance at the conservation area. As well, though, Conservation Halton intends to adopt a more aggressive and pro-active marketing stance, and this too will lead to increased attendance numbers.

The attendance and revenue figures projected in this report take both these assumptions into account.

All dollar figures quoted are in terms of 2010 dollars.

5.1 Capital Costs of Site Development

5.1.1 Allocation of Costs Over the Development Period

The capital cost of the overall development plan for the *Master Plan for Rattlesnake Point Conservation Area* over a 10-year period is just over $6.1 million. Assumptions relating to the pace of this development in terms of the specific projects that are anticipated over this period are shown in Table 5-1 in Appendix II.

Conservation Halton will endeavour to complete the proposed works at the Rattlesnake Point Conservation Area in a phased and orderly manner as funds permit. Certain variances may occur due to funding availability or changed circumstances. It is recommended that all the upgrades necessary to bring Rattlesnake Point Conservation Area up to the enhanced base level of services and amenities (see Section 3.2 above for further details) called for by this master plan be done in the first three years of the 10-year development program. In the mid-term phase of the project, the larger infrastructure items should be constructed or installed. The final phase will incorporate items that are not a high priority. Table 5-2 in Appendix II shows the specific amount of capital expenditure expected in each year.

It should be noted that in the *Stage One Report* for Rattlesnake Point Conservation Area (Ibid), some $244,560 in deferred capital maintenance had been indicated (major projects noted that had been

[1] Note that over the 2001 – 2006 Census period, Halton Region grew at a rate almost 3 times that of the province overall (17.1% compared to 6.6%). This higher growth rate is projected to continue over the planning period.

deferred related to gatehouse expansion, comfort stations, and road and parking lot resurfacing)[2]. All of these deferred projects have been captured in the site development plan presented here.

5.1.2 Labour Component of Development Costs

This capital cost budget implies a significant labour component. The development cost outlined here assumes that all activity is contracted out. Assuming that half the development costs are for labour and that the average construction worker income plus benefits is approximately $50,000 per year, a development cost of $6.1 million for Rattlesnake Point would imply about 85 person-years of labour being involved in the construction and development activities outlined here in the plan for Rattlesnake Point Conservation Area. The development cost outlined here assumes that all activity is contracted out; however, Conservation Halton could lower the effective out of pocket cost of site improvement by using in-house resources to a greater degree in development activities.

5.2 Attendance and Revenue Forecast

5.2.1 Attendance Forecast

Currently, the average annual attendance at Rattlesnake Point Conservation Area is estimated to be 59,000 (over the 2005 to 2009 period).

The attendance projections developed for this conservation areas are based upon recognition of four contributing factors. These are:

- Population growth;
- Marketing;
- Shorter vacations closer to home;
- Major developments

Each of these factors is further discussed below:

5.2.1.1 Population Growth

The population growth projections (as obtained from local planning departments) assume significant annual growth in most of the municipalities comprising the immediate market area that Conservation Halton serves, and from which most visitors come. Growth in these source markets will naturally result in an increase in attendance. Specific growth projections from these immediate source markets are shown in Table 5-3

Table 5-3: Anticipated Population Growth Rates in Key Source Markets

Municipality	Anticipated Annual Population Growth Rate (to 2021)[3]
Burlington	4.53%
Oakville	2.28%
Milton	6.19%

[2] The Stage One Report had identified $281,850 in capital maintenance items that were required, $37,290 of which had already been spent, leaving $244,560 of deferred capital maintenance.

[3] Obtained from municipal Official Plans.

Halton Hills	1.48%
Mississauga	3.89%
Hamilton	0.71%
Other GTA	1.17%

For each conservation area, a weighted population growth rate was calculated (based upon the estimated proportion of total attendance from each individual municipal source market – see the *Stage One Reports* for each conservation area, 2010a). In each case, this varied between 4 and 5 percent annual growth, showing the large influence that Milton and Burlington, in particular, have upon the attendance base.

5.2.1.2 More Aggressive Marketing

Conservation Halton intends to adopt a more aggressive and proactive approach to promoting its facilities to local, regional and potential tourism markets, through increased signage (e.g. Tourism-Oriented Directional Signage), social media marketing, more packaging, etc. This more proactive approach can be expected to result in greater levels of attendance than population growth alone would deliver. A conservative increment of 2% over what would otherwise be the attendance has been assumed to account for this factor.

5.2.1.3 Closer to Home and Shorter Vacations (so-called 'Staycations')

A major recent impact on tourism has been the 'financial meltdown' of 2008 and stagnant to slow economic growth since then (which is foreseen to continue over the coming decade). This has caused Canadians to tend to spend leisure and vacation time on shorter trips that are closer to home, and that are thus less costly. (As well, this has been exacerbated by tightened United States border restrictions that make it more difficult for Americans to come to Canada [especially those lacking passports – i.e. most Americans] and more difficult and problematic for Canadians to visit the United States). The result, somewhat paradoxically, has been an increase in the propensity of GTA residents to visit GTA-based attractions[4]. A conservative increment of 1% over what would otherwise be the attendance (i.e. from population growth alone) has been assumed to account for this factor.

5.2.1.4 Major Developments at Each Conservation Area:

Within the development plans for certain conservation areas, there are major facilities being proposed that can be expected to have some influence upon overall attendance. For Rattlesnake Point Conservation Area, additional utilization is expected from school groups as well as the public. It is anticipated that this will increase utilization by 5%.

It should be noted that this forecast is based upon an estimate of what the utilization of facilities and services at this conservation area **could be**, assuming that Conservation Halton were to respond to and accept this level of market demand. In other words, the market will deliver the level of attendance as estimated here. The subsequent revenue and cost estimates presented in this section are based

[4] As an example of this, the total number of visitors to Conservation Halton facilities increased from approximately 568,000 in 2007 (all conservation areas plus Glen Eden) to 748,000 in 2009. This represents an annual growth factor of about 9.6% per year over this period. The 'population growth factor' described above of between 4 and 5 percent would account for only about half of this growth rate. The remainder would be a combination of increased marketing (of which there had been some) and the 'staycation' factor as described here. Clearly, this factor can be significant.

upon this estimate of attendance. However, should Conservation Halton feel that allowing this level of utilization might damage the environmental integrity of the conservation area; they could limit attendance through a variety of strategies (higher pricing; closing the park at certain periods; limiting attendance on peak days; etc.). As will be seen, there are a variety of monitoring activities built into the operating program for the park and thus if the need for limiting utilization in this way is determined in future, Conservation Halton will certainly do so. At this point, however, it is felt that the level of attendance projected here is within the capacity of the park to accommodate (assuming of course that the remedial and protection measures assumed in this development plan are put in place).

Table 5-4 in Appendix II shows the attendance growth projection for Rattlesnake Point Conservation Area.

5.2.2 Revenue Projection

At present, the revenue per visitor realized at Rattlesnake Point Conservation Area is:

Table 5-5: Rattlesnake Point Conservation Area Budgeted Revenue Projection

Total Budgeted Revenues, 2010	$269,189
Average Annual Visitation (based on 2005 – 2009)	59,000
Average Revenue per Visitor	$4.56

Note that this shows average **direct** revenue from visitors to Rattlesnake Point. Revenues that accrue to the conservation authority as a result of annual membership passes (and that are thus not directly attributable to Rattlesnake Point) are not included here (although of course the visitors coming to the park using these passes are reflected in the utilization figures shown above). This is, therefore, a low (conservative) estimate of the total revenue generation potential of the park.

Most of this revenue (76%) comes from the entry fees, some from camping (16%) with only a small proportion coming from food sales and rock climbing fees.

Going forward, the proposed revenue strategy for Rattlesnake Point Conservation Area is:

- To increase per person gate fees to $5 on average (reflecting the higher demand for the facility, as well as the higher value provided to users)

Thus, revenue generation estimates for Rattlesnake Point Conservation Area will be in the order of $7 per visitor for the initial period of development of the conservation area. In the latter part of the development period (years 7 through 10) this average revenue per visitor will increase slowly by 50 cents per year through a combination of increased admission prices, greater sponsorship, and a greater profit margin on goods sold[5].

Table 5-6 in Appendix II shows the attendance and revenue generation estimates for the Rattlesnake Point Conservation Area under these assumptions.

[5] This level of revenue generation per visitor is quite realistic: Black Creek Pioneer Village in the Toronto Region Conservation Authority generated revenue of over $20 per visitor in 2009.

5.3 Operating Costs of Site Development

The operating and maintenance costs associated with the operation of the site are estimated as follows:

- The current operating budget for the conservation area is assumed to continue;
- Salary costs for added staff for maintenance, security, visitor impact management, and interpretation;
- Additional maintenance costs associated with the new capital development;
- The incremental costs of an enhanced standard of care for trails and forest management;
- An estimate of species management and monitoring costs for the park over its 10-year planning period; and
- An increased marketing budget.

Each of these costs is discussed separately.

5.3.1 Continuation of Operating Budget of Conservation Area

Table 5-7 (in Appendix II) presents the current (2010) operating budget for Rattlesnake Point Conservation Area (showing expenditures and revenues). As shown, current expenditures are approximately $208,000, most of which is wages, salaries and benefits. It is assumed that over the 10-year period these costs will continue.

5.3.2 Additional Staff

Use of the facilities will increase due to overall population growth in the Halton Region, and in the neighbouring jurisdictions. This would be true even if no additional facilities or services were developed at the site. Additional services and facilities, though, will require additional staff be brought on board over time. These additional staff will be employed directly at the conservation area, in primarily maintenance, visitor management and interpretive activities.

The current staff utilization at Rattlesnake Point Conservation Area is approximately 2.60 staff (measured in terms of full-time job equivalents - FTJE). Using the same methodology as employed in the *Stage Two Report* to estimate the various staffing implications of the various development scenarios (EDA 2010b), it is possible to estimate the additional staff complement under the new attendance forecast scenario as follows:

Table 5-8: Rattlesnake Point Conservation Area Staffing Projections

Current Estimated Staff Complement (FTJE)	2.60
Percentage Growth in Visitors to 2021[6]	89%
Growth in number of FTJEs to 2021	2.31
Total number of FTJEs at Rattlesnake Point Conservation Area 2021	4.91

The current average wage and salary per position at Conservation Halton is $76,000[7]. Multiplying this by the estimated growth in the number of FTJEs to respond to increased demand (i.e. the 2.31

[6] I.e. from the 2005 – 2009 average of 59,000 visitors annually to the anticipated level of nearly 112,000 visitors in Year 10.
[7] Communication from Marnie Piggot, Conservation Halton, February 8, 2011.

positions referred to above) yields an estimate of the total additional wages and salaries required. (Again, bear in mind that all of the projections and estimates developed here are done in terms of 2010 dollars.)

Table 5-9 (in Appendix II) shows the staffing and cost projections associated with the development plan for the site.

5.3.3 Additional Capital Maintenance Costs Associated with Development Scenario

An additional expenditure category for the conservation area is the maintenance costs associated with the new development on the site. On average, the annual maintenance and replacement costs associated with the physical infrastructure developed are estimated to be approximately about 2 to 5% of the original capital development costs. This percentage would cover a wide range of specific cost elements as well as global corporate service support costs such as security, minor construction and maintenance, general ecosystem monitoring, ecosystem maintenance, etc. Because these will all be relatively new facilities, maintenance costs as the lower end of this range are reasonable. Accordingly, to estimate the incremental cost of this, 2% of the cumulative development budget that year had been assumed as the additional maintenance and replacement cost[8].

Table 5-10 (in Appendix II) shows the calculation for the maintenance costs associated with the new development in Rattlesnake Point Conservation Area. As shown, this is expected to rise to just over $170,000 by the end of the development period.

5.3.4 Enhanced Standard of Care for Trails and Forests

In addition to the expected maintenance costs, enhanced standard of care, relative to current levels of treatment, shall be implemented. Costs associated with this enhanced standard include monitoring and maintenance of the forest area for hazard tree and the cost for enhanced maintenance on trails. Hazard tree removal is estimated to cost approximately $39 per hectare and enhanced trail management is estimated at $1,000 per linear km[9]. As the area of the Conservation Area is set (264 ha.), this budget item (measured in terms of 2010 dollars) will be fixed. However, because new trails are coming on-stream over the development of the plan, this element will increase over time. Table 5-11 in Appendix II outlines these anticipated operating costs.

5.3.5 Estimate of Species Management and Monitoring Costs

Table 5-12 in Appendix II shows the costs associated with species management and monitoring. As the table shows, over the ten-year period of this master plan nearly $20,000 will be spent on control of invasive species, and just over $59,000 on monitoring activities.

5.3.6 Marketing Budget

The current estimated marketing budget for Rattlesnake Point is $18,750[10], (excluding the provincial directional signs to the site – see below). However, in future, Conservation Halton wishes to move to a more active marketing stance where out-of-pocket marketing costs are funded as a percentage of

[8] Actually, the maintenance cost is estimated as 2% of the cumulative new development costs to the *previous* year (no maintenance costs are assumed for new development in its initial year). So, for example, in Year 7, maintenance costs would be assumed for new development only up until Year 6 – development in year 7 is not assumed to need any maintenance until Year 8.

[9] Based on figures provided by a provincial park employee.

[10] Based upon communications with Hassaan Basit, Director, Communications Services, Conservation Halton.

overall direct revenues generated at the conservation area. This is the approach currently in place at Glen Eden, where the marketing budget is set at 2.5% of total direct revenues. However, taking this approach to Rattlesnake Point Conservation Area now would imply a diminution in the total marketing budget. Accordingly, in the forecast of costs, flat marketing cost of $19,000 has been assumed until the increase in direct revenues from all sources is sufficient to bring this marketing budget above this threshold (which actually does not occur over the development period.) Added to these costs is the annual fee for participation in the provincial signage program.

5.3.5.1 Provincial Signage Program (TODS)

Another key element of the marketing budget is the cost of participation in the Tourism-Oriented Directional Signage TODS program (Tourism-Oriented Directional Signage) signs, which permits qualifying tourism operators to place their business signs along Provincial roadways. Offered jointly by the Ministries of Tourism and Transportation, the TODS program provides directional information to travelers throughout the Province of Ontario. Signs on the freeway display the business name and icon or logo. There is an annual fee per sign to participate in the signage program.

Specific assumptions relating to the deployment of TODS for Rattlesnake Point are as follows:

- Four freeway regular attraction destination signs will be placed from Hwy. 401 and the Queen Elizabeth Way at $600 each
- One 'high speed' trailblazer sign @ $153
- One 'low speed' trailblazer sign @ $60

Accordingly, $2,600 has been added to the marketing budget in each year for these costs.

5.3.7 Total Operating Costs

Table 5-13 in Appendix II outlines the total operating costs for the 10-year development timeframe of Rattlesnake Point Conservation Area, summing each of the foregoing six components over the period. At the outset of the development period, operating costs are estimated to be nearly $270,000 annually; by year ten, they are estimated to have risen to approximately $600,000 annually.

5.4 Net Operating Position

Table 5-14 in Appendix II shows the net financial position of Rattlesnake Point Conservation Area at the end of the 10-year development period, under the assumptions outlined here. Note that at present, Rattlesnake Point Conservation Area is a 'profit centre' for Conservation Halton; the development plan presented here shows that its potential as a revenue generator can be enhanced significantly beyond this, although with a short deficit period throughout the middle of the development period.

One management approach would be to target a certain level of revenue generation per visitor each year in order to overcome the anticipated shortfall in these middle years. Table 5-15 (in Appendix II) shows that a very nominal surcharge of less than 50 cents per visitor (in the year of the highest deficit) would be required in order to eliminate the shortfall in the years showing the highest deficit. This could be undertaken through an increase in the admission fee, or the annual membership fee (across all conservation areas), or possibly through more aggressive pricing for specific services and programs. The price-sensitivity of the offering at the park would need to be examined (although, pricing could be one way to adjust attendance levels if it were thought that attendance levels were exceeding the capacity of the park).

It should be noted that, at the highest level of surcharge that might apply, the cost of the experience at Rattlesnake Point is approximately equivalent to that of a movie – certainly an affordable experience for most people.

Another related consideration would be whether or not pricing levels (in particular, admission fees) consistent with fees charged at other conservation areas was a desirable policy position. If so, then an average surcharge target for a group of parks would need to be considered. These management considerations will need to be addressed and adjusted periodically over the development period.

5.4.1 Portfolio Approach to Management for Rattlesnake Point, Mount Nemo and Hilton Falls

Conservation Halton treats the Rattlesnake Point, Mount Nemo and Hilton Falls Conservation Areas as a single management unit. This approach could make sense in terms of a pricing / revenue generation and business model philosophy for the three conservation areas.

The analysis for each of the three parks on its own has shown that each will incur a deficit at some point over their 10-year development timeframe. The specific situation for the three combined parks is shown below:

Table 5-16: Cumulative Deficit

Year	Total Revenues *(all three parks combined)*	Total Costs *(all three parks combined)*	Surplus / Deficit *(all three parks combined)*
Year 1	$793,095	$739,704	$53,391
Year 2	$829,917	$866,464	($36,547)
Year 3	$868,454	$1,003,000	($134,546)
Year 4	$908,787	$1,112,128	($203,341)
Year 5	$951,001	$1,172,563	($221,562)
Year 6	$1,039,939	$1,241,040	($201,101)
Year 7	$1,136,753	$1,331,729	($194,976)
Year 8	$1,308,318	$1,394,235	($85,917)
Year 9	$1,494,928	$1,478,154	$16,775
Year 10	$1,695,438	$1,529,566	$165,872

Looking at this deficit per visitor (again, thinking of the combined operation of the three parks together) shows the following:

Table 5-17: Cumulative Deficit Offset

Year	Total Deficit *(all three parks combined)*	Total Visitors *(all three parks combined)*	Deficit per Visitor
Year 1	$0	151,189	$0.00
Year 2	$36,547	158,251	$0.23
Year 3	$134,546	165,643	$0.81
Year 4	$203,341	173,382	$1.17

Year 5	$221,562	181,484	$1.22
Year 6	$201,101	194,382	$1.03
Year 7	$194,976	203,471	$0.96
Year 8	$85,917	212,987	$0.40
Year 9	$0	227,481	$0.00
Year 10	$0	237,910	$0.00

In years two through eight where the combined operations show a deficit the deficit per visitor ranges up to a high of $1.22 (Year 5). In other words, in Year 5, if each visitor were to generate an additional $1.22 (gross) in that year, the combined conservation areas would not incur a deficit and would instead break even. If each visitor were to generate additional revenue over the entire planning period, then the three conservation areas together would not only 'pay their way' but also generate a surplus for the conservation authority overall.

This study recommends that a pricing study review be undertaken within the next year to determine how Conservation Halton can raise net revenues by $1.00 to avoid projected operating deficits or, alternatively, proceed with an admission rate increase of $1.00. If such a pricing structure were put in place at the outset of the development period, a significant surplus could be generated in each year.

5.4.2 Rationale for Additional Investment in Conservation Halton

Conservation Halton creates significant direct economic benefit in the community. The operations of the conservation authority, plus the expenditures of visitors who come to the region to utilize the programs and services offered, create nearly $12 million of additional gross domestic product (GDP) in Halton Region alone. This is associated with 274 jobs in the region, $8.4 million is wages and salaries and $5.7 million in additional taxes paid. If this were a single business or industry, it would easily be recognized as a significant component of the economic base of the region. Beyond Halton Region itself, there are further economic benefits accruing across the Province of Ontario. Conservation Halton is a significant presence creating economic benefit in the community.

Beyond these positive economic impacts, Conservation Halton provides a valuable service to the community in terms of 'ecosystem services' – the value of the impact of the forest and wetlands maintained by the conservation authority in terms of filtering and cleaning water and air. This is a measurement of the cost of having to do this commercially as opposed to having Conservation Halton lands provide these benefits 'for free.' The estimated savings to society from these services provided by all the conservation authority's holdings are nearly $16 million annually.

In addition, Conservation Halton parks provide a growing population with access to abundant, natural green space for leisure and recreation, a significant value for residents opting to live or work in Halton Region. More specifically, these spaces offer opportunities that contribute to healthy living through physical activity and exercise, and in the process support Halton Region Health Department's physical activity objectives. By keeping costs low, Conservation Halton parks strive to offer accessibility to all residents while supporting culturally and socioeconomically diverse communities. As significant regional destinations, in addition to local residents, the parks also serve to attract tourists to the area.

Clearly, then, Conservation Halton creates valuable economic benefits, and provides significant value-added services, to the region. In order to enable the conservation authority to continue to provide and

generate these benefits (and indeed, to increase the value of these benefits to the region), on-going investment in the authority's conservation area facilities and programs will be required.

Through the master planning process, it has become abundantly clear that:

- While a prime focus of the Conservation Halton parks has been and will continue to be protection and enhancement of the natural heritage resources, it is also imperative that there be a concern for the social and economic components of the sustainability model;
- As growth in visitation inevitably increases, so must the amount of investment in infrastructure, amenities, related facilities and on-going visitor impact management that is required to protect and enhance the natural heritage features and thereby achieve and maintain the necessary balance between protection and usage;
- Protection of natural heritage requires key investments in:
    - Enhancements to existing facilities, infrastructure and amenities;
    - New facilities - educational, recreational and interpretive;
    - On-going funding and revenue generation to support protection and enhancement initiatives.

An annual base level of financial support should be sourced through Halton Region (and / or the Province of Ontario, local municipalities, etc.) as the main recipient(s) of the benefits provided by these conservation areas. This should result from the quite significant population growth occurring in the region, which by itself will place a heavier demand upon usage of Conservation Halton's areas and facilities. This would require that a new and different business model be developed for the conservation authority, one that acknowledges the significant economic benefits conferred upon the region by the Conservation Halton, and that recognizes the pressures placed upon it by population growth.

Consequences of not providing adequate on-going capital funding would result in the need to implement one or more of the following actions:

- Raise admission fees at specific parks;
- Raise membership fees across the board;
- Charge differentially at peak times;
- Limit visitation;
- Limit access to certain parks;
- Cut back on some of the programs and services currently offered; and / or
- Cutback or extend the proposed capital development program beyond the projected 10 year program with subsequent increases in cost.

It is likely that even with additional capital infusion, some combination of the above factors will be necessary.

5.5 Fundraising Considerations

5.5.1 General Orientation to Fundraising at Rattlesnake Point Conservation Area

The development plan outlined here for Rattlesnake Point Conservation Area offers the potential to solicit two types of support: the first for capital projects, and the second for on-going operational

support. Strategically, we suggest that capital fundraising efforts of Conservation Halton should be primarily focused upon other major projects such as the visitor centre at Crawford Lake; fundraising for Rattlesnake Point conservation area might be better oriented towards developing support for on-going operations. Possibilities in this regard are discussed below.

5.5.2 Potential Sources of Support

5.5.2.1 Organizations and Foundations

Conservation Halton has a history of working closely with a number of partners: municipalities and municipal agencies; provincial government departments and agencies; and various environmental and related foundations and agencies. It is anticipated that any plans developed for specific conservation areas will similarly take advantage of partnership possibilities in this regard, and these will be examined closely (as they relate to the specific development plans for each individual conservation area).

In addition to approaching these 'usual suspects' in terms of development projects and support for programming activities, there are additional foundations and funding sources that could be considered. A small sample of possibilities includes; GLOBE Foundation, TD Friends of the Environment Foundation, David Suzuki Foundation, The Evergreen Foundation, Harmony Foundation, and Unilever Canada Foundation.

Deciding which of these foundations might be the appropriate ones to approach for sources of support will be to some extent dependent upon the specific development plans prepared for each of the conservation areas. Additional working partnerships with First Nations, Métis Nation and local historical societies would not only strengthen programming but could enhance funding opportunities or support.

5.5.2.2 Corporate Sponsorship Potential

Given Conservation Halton's situation in a growing region with increasing demand and utilization, the fact that it has several sites with high visibility and profile, and its conservation mandate places it directly 'on trend' with the increasing interest in the environment, Conservation Halton has significant potential to develop partnerships with the corporate sector. Even though this may be difficult in the short term with the current economic situation, over the long-term timeframe of the plan developed here, corporate sector sponsorship should be a real possibility.

A number of potential corporate sector partners for Conservation Halton should be considered in its future development. Generically, these will include:

- Major employers in Halton Region (e.g., any company with over 100 employees);
- Companies with a track record of supporting local (i.e., Halton Region) activities and events ;
- Companies who have previously supported or been associated with Conservation Halton (for example, those who have advertised in Focus on Conservation);
- Major consumer-oriented companies whose target markets are young families, active individuals, etc. (e.g., running shoe makers, sporting goods manufacturers); and
- Companies throughout the GTA producing 'environmental' products or services (or companies that wish to position themselves as having an environmental or 'green' focus).

The importance of this last point cannot be over-emphasized. Given the growing awareness of, interest in, and concern about environmental issues, companies increasingly will wish to be perceived as environmentally friendly and 'green.' Association with Conservation Halton, a well-recognized leader in environmental and conservation issues, will be a logical route to developing immediate credibility and legitimacy in this regard. Other organizations with conservation mandates – for example the World Wildlife Fund – have been very successful in exploiting this route.

The kinds of sponsorship possibilities that could be considered include:

- Sponsorship of admission for some period (e.g., this free weekend admission at Rattlesnake Point Conservation Area brought to you courtesy of…);
- Sponsorship of specific programs or activities (which may be oriented towards conservation projects such as species protection, or public programs such as specific lecture series, interpretive tours, etc.);
- Sponsorship of outreach programs for schools, community groups, etc.;
- Sponsorship of festivals and events;
- For major innovative projects, possibly public-private partnerships (PPP) could be considered.

There is a wide range of potential benefits to potential corporate sponsors that should be stressed in any approaches made. These include:

- Positive exposure to the hundreds of thousands of users per year of Conservation Halton's facilities;
- Positive exposure in the various print and web-based promotional and informational publications of Conservation Halton;
- Depending upon nature and location of projects supported, significant exposure along major transportation corridors;
- Potential benefits for employees of corporate sponsors (e.g., discount admissions, reduced-fee memberships, access for company picnics, etc.); and
- Positive publicity and public relations.

A strategic implication for Conservation Halton is that they may need to develop or refine their policy regarding the solicitation and identification of potential partners and sponsors to ensure that only those partners who are a) strategic, serious and long-term about their commitment to the environment, and b) will reflect well on Conservation Halton's own image and identity, are eligible.

The following evaluation considerations must apply to the selection of partners and sponsors for any given initiative:

- Ability to contribute materially to a needed program or service (either in-kind or financially);
- their commitment to overall operation according to the same standards adopted by Conservation Halton;
- Overall image and reputation as a good employer;
- Overall positive image as good corporate citizen;
- Operation in the watershed;
- Willingness to participate with Conservation Halton on a longer-term basis; and

- Willingness to become involved in other projects.

Just as Conservation Halton will scrutinize potential partners and sponsors using these (and likely other) criteria, so, too, will the potential sponsor evaluate Conservation Halton. Accordingly, it is imperative to maintain a positive brand and identity throughout the watershed and beyond.

5.5.3 Next Steps

The implementation of the development plan for Rattlesnake Point Conservation Area will not be undertaken in isolation from other Conservation Halton projects. On the contrary, the conservation authority will have several major development projects underway simultaneously over the next decade: including Rattlesnake Point Conservation Area, these include development plans at other conservation Areas. Each of these has capital elements and operating support possibilities. In approaching potential sources of support, it will be important to adopt a consistent and coordinated approach to the market.

Accordingly, after the development plans for all of the conservation areas subject to this master plan process have been approved, a specific fundraising plan should be designed to assess the amount of funding that could be raised (capital and operating) and the most appropriate approach to be taken to potential sponsors (matching the nature of the projects requiring support to the needs of potential sponsors). Once this plan has been developed, the authority will likely need to retain assistance to manage the many activities that will be involved such as event organizing and sponsor contacts. This would be done in conjunction with the Conservation Halton Foundation.

The fund raising program must consider three key areas:

1) Creation of an authority-wide **fundraising plan**, to coordinate all of the various fundraising initiatives, both capital and operating, that will need to occur. This effort must be coordinated – each conservation area cannot go out fundraising on its own – the overall effort needs to be managed properly because, in total, it will be a big 'ask.'
2) A **pricing review**, again authority-wide, to look at the potential to increase prices and to raise additional revenues through more intelligent pricing packaging timing, and membership, combinations. Similar reviews at other public offerings have shown that gross revenues can often be increased by 10% or more simply through differential pricing strategies.
3) Creation of a **new business model** for Conservation Halton that examines different, and fairer, ways and means of generating revenues from municipal participants and other users.

Ongoing monitoring of the progress of the master plan implementation should be addressed through adoption of an annual reporting procedure that identifies key projects and tasks including existing initiatives, new initiatives and assessment of overall progress relative to established targets.

Section Six: Sustainability Evaluation

Table 6-1 presents the evaluation structure used to assess the master plan (EDA 2010b). Within each of the three domains of environment, social and economic, the evaluation methodology lists several specific criteria to consider.

Table 6-1: Evaluation Matrix

Environmental
Avoidance of impacts and encroachment on very high and high priority protection areas (PPA's)
Avoidance of impacts on natural heritage functions such as spread of invasive species, trampling, loss of natural cover, habitat fragmentation, noise and increased imperviousness
Potential to restore or improve natural features and natural heritage systems, diversity and connectivity,
Achieve long-term ecological function and native biodiversity
Conformity to national, provincial, regional or local plans with respect to natural heritage objectives
Social
Accessibility – physical, visual, transportation, affordability
Provision of educational opportunities / facilities
Provision of outdoor recreational opportunities
Access to views, quiet spaces, contemplative areas
Conformity to provincial, regional & local recreational plans
Economic
Capital costs (cumulative over 10 year period)
Operating costs
Direct revenue generation potential
Sponsorship or partnership potential
Potential for positive economic impact upon the community

6.1 Environmental Sustainability Evaluation

This section provides an evaluation of the Rattlesnake Point Conservation Area Master Plan and its ability to protect the natural heritage system for the long term. The evaluation of potential impacts integrates relevant policies of the *Species at Risk Act* (Government of Canada 2002), *Endangered Species Act* (Province of Ontario 2007), *Provincial Policy Statement* (Ministry of Municipal Affairs and Housing 2005), *Niagara Escarpment Plan* (Niagara Escarpment Commission 2005), *Regional Official Plan* (Regional Municipality of Halton 2006), and *Town of Milton Official Plan* (Town of Milton, 1997). In line with the above documents, some of the items considered during the evaluation include the master plan's intention to:

- Protect natural features and areas for the long term;

- Maintain natural features and natural heritage systems (e.g. diversity and connectivity) and their long-term ecological function;
- Restore the natural heritage systems, where necessary;
- Not propose any development or site alteration in significant habitats (e.g. PSW, etc.);
- Maximize the overall benefit to the natural features or their ecological functions (e.g. woodlands, significant wildlife habitat; ANSIs and ESAs);
- Ensure that proposed development and site alteration on adjacent lands does not impact significant natural heritage features;

6.1.1 Avoidance of Impacts and Encroachment on Nature Reserve Zone

The existing infrastructure of Rattlesnake Point Conservation Area occurs within areas designated as Development Zone. Expansion of facilities, including the improved parking areas and picnic area, occur outside of Nature Reserve and Natural Zones. The plan to improve facilities such as the road network and parking areas with limestone chip surfaces carries the risk of sedimentation of adjacent natural features (e.g. stream) via surface runoff. To avoid this impact, an erosion control plan should be implemented to avoid off site sedimentation with limestone chips.

The expansion of day use facilities, picnic shelter and campground will have limited to no impact on Nature Reserve Zone as the majority of these facilities would be placed in the Development Area. The intensive rock climbing focus has the potential to impact rare carbonate vegetation communities and ancient Eastern White Cedars, located within the Nature Reserve Zone .

6.1.2 Avoidance of Impacts on Natural Heritage Functions

The decommissioning of unauthorized trails, removal of trails in areas of higher sensitivity, upgrade of existing trails to prevent ponding and braiding, as well as the inclusion of boardwalks and bridges will significantly improve the existing protection of the natural features of the conservation area. In addition, the higher standard for amenities and service (e.g. trail maintenance) will help reduce localized impacts from visitor use. These proactive steps should help curtail the spread of invasives, trampling and loss of natural cover. Strategic trail closure will reduce the impact of visitor noise in the most sensitive areas. Hard surfaces (e.g. parking) will be of pervious material and therefore will not affect infiltration.

Additional day use facilities, an additional picnic shelter in the camping area are likely to increase the number and duration of visits to the conservation area. This, and a continuation of rock climbing, has the potential to have a negative impact on the rare carbonate vegetation communities and ancient Eastern White Cedar trees. Impacts may include trampling, loss of natural ground cover and possible spread of invasive species as a result of ongoing disturbance. Some of these impacts will be mitigated by strict control of climbing routes to avoid areas of higher sensitivity. Others could be monitored as part of the VIM and site specific mitigation applied that would help to reduce impacts.

6.1.3 Potential to Restore or Improve Natural Features

Rattlesnake Point Conservation Area covers approximately 295 ha, of which the majority is forested and contains a good portion of interior forest area. Restoration of the perimeter of forest areas to decrease the edge to interior ratio provides an excellent opportunity to meet many of the basic forest habitat guidelines recommended in Environment Canada (2004). With the exception of road corridors, Rattlesnake Point Conservation Area is well connected to local habitat as well as habitat at the

watershed and landscape level relative to many sites in southern Ontario. Connections are primarily to habitat in the north and west. Limited connections occur to the south via watercourses and riparian areas. Rattlesnake Point Conservation Area maintains some natural corridor linkages with the surrounding ESAs and ANSIs including but not necessarily limited to Milton Heights, Crawford Lake - Rattlesnake Point Escarpment Woods, and Guelph Junction Woods ESAs and the Halton Forest Life Science ANSI.

The limited habitat restoration that is proposed will be implemented and directed towards improving habitat in key areas for targeted species, improving interior forest conditions, advancing the natural succession of plantation plans and curtailing the spread of invasive species. The implementation of these restoration targets will improve natural features for the long-term. Restoration being planned will help to expand cover but will not increase the conservation area's connectivity with other natural features.

Subject to the acquisition of additional lands, some improvement to the extent of natural features is likely to result. Most features in the immediate area are, to some degree, connected. Therefore, the additional land acquisition is likely to have only a minimal improvement on the natural heritage system and its connectivity with other features.

6.1.4 Achieve Long-term Ecological Function and Native Biodiversity

The conservation area and its immediately adjacent contiguous communities are made up of 51 Vegetation Types (EDA 2010a). Forested vegetation communities are the most abundant vegetation community type. Interior forest (≥100 m from forest edge) is mainly limited to lands in the northwest portion of the conservation area with a small area in the centre. Two ELC communities in the conservation area are considered *Very Rare* (G2) *to Uncommon* (G3) globally, and provincially Rare (S3) (Table 3-3 and Figure 3-7 in Section 3.2 of EDA 2010a). An additional nine vegetation communities documented in Rattlesnake Point Conservation Area are considered Critically Imperiled (S1), Imperiled (S2) or Rare (S3) provincially (Table 3-4 and Figure 3-7 in Section 3.2 of EDA 2010a). Several *Rare* and *Uncommon* and one *endangered* plant species occur; while several wildlife species occur including some that are *Rare*, *Uncommon* or species at risk.

The master plan is based around the protection of sensitive communities and species, and maintaining corridor connections, with exception to those in proximity to climbing routes along the escarpment. Therefore, the protection of the long-term ecological function and native biodiversity of the conservation area is under some pressure that would require some specific management criteria and monitoring to reduce possible impacts. Impacts will likely be local in nature and affect vegetation in areas immediately adjacent to climbing routes. Some of these impacts can be mitigated by strict control of climbing routes to avoid areas of higher sensitivity. Others could be monitored as part of the VIM and site specific mitigation applied that would help to reduce impacts.

6.1.5 Conformity to National, Provincial, Regional and Local Plans

The master plan conforms to national, provincial, regional and local plans. An adaptive management plan for climbing routes, which protect natural features identified as in the Nature Reserve Zone, is to be developed to provide further assurance that the master plan conforms to provincial plans, Regional Plans and the Niagara Escarpment Plan (2005). (I.e. *Provincial Policy Statement* – protection of the ecological function and biodiversity for the long-term).

6.2 Social Sustainability Evaluation

6.2.1 Accessibility

The master plan offers improved physical access insofar as the trails, roads and parking areas are improved and many features are made accessible to people with disabilities. It also improves physical access by improving parking and picnic facilities. It will also make interpretative materials more available to people whose first language is not English.

6.2.2 Education Opportunities

The master plan offers opportunities for natural and cultural heritage education and interpretation, whether informal (potentially web-based), through schools or universities or through programs offered by Conservation Halton.

6.2.3 Recreation Opportunities

Recreation opportunities will be similar to what currently exists at the conservation area; however, enhanced Visitor Impact Management will allow the area to accommodate an increase in visitors.

6.2.4 Open Space Functions

The master plan fulfills open space functions and provides visual relief from the urban landscape. It also offers access to quiet spaces and views.

6.2.5 Conformance with Policy

Conservation Halton Strategic Plan 2009-2013

The master plan conforms to the *Conservation Halton Strategic Plan 2009-2013* to a great degree. A summary of the relevant themes and objectives from the *Strategic Plan* are provided below.

> ***Parks***
>
> *Build awareness of Conservation Halton parks as regional destinations*
>
> *Promote healthy lifestyles by providing access to green spaces for quality year round recreation experiences*
>
> *Significantly enhance the amenities at Conservation Halton's parks to ensure an enjoyable experience for visitors*
>
> *Demonstrate leadership in environmental management of Conservation Halton properties*
>
> ***Education***
>
> *Deliver innovative and curriculum linked experiential education programs*
>
> *Offer outdoor education and interpretive programs that promote lifelong learning experiences*
>
> *Deliver strong community stewardship programs to promote watershed health*
>
> *Create awareness of climate change and water conservation within the watershed community and encourage social change among watershed residents*
>
> ***Community***
>
> *Offer a variety of volunteer and community engagement opportunities to enhance the natural environment in the watershed*

Governance

Provide quality full-time, seasonal and part-time employment to enhance economic activity in the watershed

Over and above ample recreational opportunities, the Master Plan for Rattlesnake Point Conservation Area includes interpretive, educational and volunteer opportunities that will help Conservation Halton achieve the above objectives. Moreover, the LEED and SITES standards as well as the Visitor Impact Management program demonstrate leadership in environmental management.

Niagara Escarpment Plan (2005)

The objectives of the Niagara Escarpment Plan *(2005)*

To protect unique ecological and historical areas;

To provide adequate opportunities for outdoor education and recreation;

To provide for adequate public access to the Niagara Escarpment;

To complete a public system of major parks and open space through additional land acquisition and park and open space planning;

To secure a route for the Bruce Trail;

To maintain and enhance the natural environment of the Niagara Escarpment;

To support tourism by providing opportunities on public land for discovery and enjoyment by Ontario's residents and visitors;

To provide a common understanding and appreciation of the Niagara Escarpment; and

To show leadership in supporting and promoting the principles of the Niagara Escarpment's UNESCO World Biosphere Reserve Designation through sustainable park planning, ecological management, community involvement, environmental monitoring, research and education.

The *Master Plan for Rattlesnake Point Conservation* Area fulfills the objectives and policies of the Niagara Escarpment Plan (2005) (including Part 3 which relates specifically to NEPOSS) in preserving valuable ecological resources and provided adequate public access and the unique recreational opportunities they afford. The aim of the Visitor Impact Management plan and other management, restoration and monitoring programs recommended in this master plan is to protect and enhance the natural environment. All of Conservation Halton's six conservation areas contribute greatly to the public system of major parks and open space and other of the NEP and objectives, especially with the commitment to bringing an enhanced level of services to visitors to all parks and by having consistent signage promoting the Niagara Escarpment as a precious natural heritage resource.

Halton Region Official Plan

In the regional context, the *Regional Official Plan* (2006) Part 4 - Healthy Communities: Cultural and Recreational Services includes the following:

161. The objective of the Region is to support the provision of a diverse range of accessible cultural and recreational facilities and services.

162. It is the policy of the Region to:

162(2) Encourage the coordination of recreational services in Halton between the Conservation Authorities and Local Municipalities to avoid duplication and to increase diversity in programming.

The master plan meets the criteria as unique recreational opportunities, in a pristine natural environment, are made available as well as more picnic facilities. While Rattlesnake Point Conservation Area is appreciated for its climbing opportunities, Conservation Halton is committed to providing climbing opportunities in a sustainable manner.

Town of Milton Official Plan

In the local context, the master plan contributes to the *Town of Milton Official Plan* objectives as cited below:

> *2.5.2.1 To provide and maintain a system of parks, open space and leisure facilities for both active and passive pursuits, with a diversity of recreational experience for special use groups. [. . . .]*
>
> *2.5.2.2 To develop an open space system which incorporates a full range of environmental, open space and recreation facilities, recognizing that extensive recreation facilities are also provided by the Conservation Authorities which serve the residents of the Town, as well as the Greater Toronto Area.*
>
> *(Section 2.5 Community and Cultural Services, 2.5.2 Objectives).*

Conservation Halton is uniquely positioned to offer recreation experiences in a natural environment.

In summary, the plan offers many social and cultural benefits to the community as well as being strongly geared towards environmental protection.

6.3 Economic Sustainability Evaluation

In the 'economic' section of the sustainability framework used to assist in the selection of the preferred development alternative, five specific criteria were used to assess the alternative plans proposed. Here we comment upon the preferred development scenario described in this report on each of these five criteria:

6.3.1 Capital Costs

Over the 10-year development period for the Rattlesnake Point Conservation Area, total development costs are estimated to be approximately $6.1 million (measured in 2010 dollars). Given the iconic status of Rattlesnake Point Conservation Area within the overall portfolio of conservation areas within Conservation Halton's will have in the investment in this asset is a very cost effective one (see next section on operating costs). Moreover, as has been pointed out, relative to the capitalized value of the conservation area as a generator of economic and ecosystem benefits, this proportionately represents quite a small investment with significant payback potential.

6.3.2 Operating Costs

As shown, Rattlesnake Point Conservation Area is currently a 'profit centre' for Conservation Halton (enabling the Authority to subsidize operations in other conservation areas). The development plan presented here shows that the conservation area has the potential to become an even greater economic engine for the authority in future after the development plan articulated here has been put in place.

6.3.3 Direct Revenue Generation Potential

Further to the points raised above, there is significant potential for Rattlesnake Point Conservation Area to generate direct revenues. Attendance will increase significantly as a result of three factors:

natural population growth within the area; increased amenities and services within the conservation area to attract users; and a significantly enhanced and focused marketing orientation. This significantly increased visitation, with a higher admission fee reflecting the enhanced amenities and services, has the potential to generate greatly enhanced revenues.

6.3.4 Sponsorship or Partnership Potential

Rattlesnake Point Conservation Area is one of the most visible and known assets in the Conservation Halton portfolio. This iconic status should be a key asset in developing corporate, foundation and individual sponsorship and support for both the capital and operating cost dimensions of this project. (See Section 8.6 for a more in-depth discussion of fundraising considerations.)

6.3.5 Potential for Positive Economic Impact upon the Community

The *Stage One Report* outlined the significant economic impact that the overall Conservation Halton operation had upon the regional and provincial economies (EDA 2010a). It was pointed out that because of the difficulty of isolating specific costs for each conservation area it would be effectively impossible to undertake a separate economic impact assessment at that level. However, there can be no doubt that insofar as Rattlesnake Point Conservation Area will attract and serve even more visitors than it has in the past, and that these additional visitors will all spend time and money in the area, therefore it will help Conservation Halton overall become an even more powerful economic engine in the community and region.

Section Seven: Recommendations and Implementation

7.1 Infrastructure Development

Conservation Halton will endeavour to complete the following works at the Rattlesnake Point Conservation Area in the following phased and orderly manner as funds permit. Certain variances may occur due to funding availability or changed circumstances.

It is recommended that all the upgrades necessary to bring Rattlesnake Point Conservation Area up to the enhanced base level of services and amenities called for by this master plan (see Section 3.2 for further details) be done in the first three years of the 10-year development program. These upgrades, meant to help Conservation Halton develop a standard of excellence within their conservation area system, include entrance and directional signage, trail upgrades and delineation, and site furnishings.

It is especially necessary for Conservation Halton to complete the trail management improvements in preparation for welcoming larger numbers of visitors. In the mid-term phase of the project, the larger infrastructure items, should be constructed. Leaving these items to years 4, 5 and 6 allows Conservation Halton enough time to raise the funds and complete any design studies and public consultation necessary for these larger projects. The final phase will incorporate items that are not a high priority.

Table 7-1: Short, Mid and Long Term Capital Costs

Short Term Years 1 through 3	Mid Term Years 4 through 6	Long Term Years 7 through 10	Total
Main entrance and directional signage Trails directional signage Trailheads Road and parking upgrades with bioswales and trees Site furnishings Upgraded toilets Automated gate Decommissioned, fenced or delineated, and upgraded trails Gatehouse renovations Restoration Visitor Impact Management Plan*	Picnic shelter Accessibility upgrades Site services Interpretive signage with language outreach upgrades Fenced maintenance compound Visitor Impact Management Plan*	Group campsites with 10-car parking lot and access road Visitor Impact Management Plan*	
$5,566,600	**$146,000**	**$135,200**	**$6,117,800**

* The Visitors Impact Management Plan has allotted $60,000 per year to be divided between the four parks based on need. For budgeting purposes $15,000 has been allotted for each park per year.
* The Visitors Impact Management Plan includes sub plans like cliff monitoring and climbing management plans.

For detailed costing by year over the 10-year development program, see Table 5-2 in Appendix II.

7.2 Critical Path

In order to implement this master plan, Conservation Halton will need to undertake the following:

- Review and revise the Visitor Impact Management plan including appropriate recreation management plans for activities hiking, climbing and camping; involve the public in this process. The climbing management plan is a sub document to the VIM and will be available in fall 2014.
- Set standards for VIM indicators, form an action committee, recruit volunteers and designate a VIM coordinator;
- Begin monitoring visitor impacts, carry out necessary management actions and periodically review carrying capacity guidelines
- Finish writing all resource management plans such as for species at risk, forestry and invasive species and then ensure operations are brought into conformance with them
- Develop design guidelines for facilities and site furnishings
- Develop an interpretive program, identifying specific topics and places to install signage
- Develop a marketing and tourism promotion plan
- Develop a fundraising plan and hire a fundraising advisor, and
- Define strategies and priorities for use of such funds as can be obtained

7.3 Plan Approvals and Review

Following approval of this master plan, certain additional approvals will still need to be obtained from the appropriate agencies as shown in Table 7-2. (**X** indicating approval and or review and an x indicating approval if within a CH regulated area), including NEC Development Permit, Milton Building Permit, Milton Site Plan Approval or Site Alteration Permit and Conservation Halton Internal Review.

Certain works are automatically exempt from the requirement of obtaining a Development Permit under Ontario Regulation 828/90 including maintenance of lands, buildings, structure maintenance, renewal or repair of septic systems connected to public utilities, tree plantings and trail development within Conservation Halton lands. The master plan components that are exempted from the development permit process are set out in the "Master Plan Approval Only" column of Table 7-2.

Typical development components such as buildings, roads and picnic shelter may be exempt from requiring a NEC Development Permit if the requirement under section 41 of Ontario 829/90 is met.

> Section 41 of Ontario Regulation 828/90 states that development permits in Parks and Open Space Systems are exempted if;
>
> > *"The construction of buildings, structures, facilities and related undertakings identified in a Parks and Open Space Plan as defined in the Niagara Escarpment Plan (2005) for a park or open space area listed in Appendix 1 of the Niagara Escarpment Plan (2005) if: (i) The plan has been approved by the Niagara Escarpment Commission and* Ontario Ministry of Natural Resources and Forestry *under Part 3 of the Niagara Escarpment Plan (2005) after coming into force of Regulation 423/13 (Note: Regulation came into force on January 1, 2013); (ii) The plan has specifically identified and detailed the buildings, structures, facilities and related undertakings that are to be exempted under this section. (iii) The construction and installation of buildings,*

structures and facilities and related undertakings occurs within 5 years of the approval of the master plan under subparagraph i."

Proposed water distribution works and sewage disposal or treatment works will also require approval under the *Ontario Water Resources Act* as administered under the Ministry of the Environment (MOE) and through which additional public input will be available.

Depending on the location and component of the master plan, a permit for activities with conditions to achieve overall benefit to species at risk may be needed from the MNRF. Under Ontario Regulation 230/08 of the *Endangered Species Act*, 2007 (ESA), habitat protection is granted under subsection 10(1) (a) for Threatened and Endangered species.

Any works proposed in areas regulated by Conservation Halton under Ontario Regulation 162/06 will be reviewed by appropriate Watershed Management Division staff through the internal review process as detailed in Section 6.4.1.

Table 7-2: Approvals and Review

Phase One

Master Plan Component	Master Plan Approval Only	NEC Dev. Permit	Milton Bldg. Permit	Milton Site Plan Approval or Site Alteration Permit	CH Watershed Internal Review Process
Main entrance and directional signage	X				
Trails directional signage	X				
Trailheads	X				
Road and parking upgrades with bioswales and trees	X			X	X
Automated gate	X				
Decommissioned, fenced or delineated, and upgraded trails	X				X
Gatehouse renovations	X		X	X	x
Ecosystem restoration	X				X

7.3.2 Phase Two

Master Plan Component	Master Plan Approval Only	NEC Dev. Permit	Milton Bldg. Permit	Milton Site Plan Approval or Site Alteration Permit	CH Watershed Internal Review Process
Picnic shelter	X		X		x
Site furnishings	X				
Accessibility upgrades	X				x

Site services	**X**		**X**	**X**	**x**
Interpretive signage with language outreach upgrades	**X**				
Fenced maintenance compound	**X**		**X**	**X**	**x**

7.3.3 Phase Three

Master Plan Component	Master Plan Approval Only	NEC Dev. Permit	Milton Bldg. Permit	Milton Site Plan Approval or Site Alteration Permit	CH Watershed Internal Review Process
New trails	**X**				**X**
Campsites with parking	**X**		**x**		**X**

7.4 Plan Review and Amendment

This master plan shall be the prevailing policy document for the planning and development of the Rattlesnake Point Conservation area for the next ten years from signed approval. Periodic review may be undertaken as required with amendments processed under the following means:

- A major amendment would involve any change that would represent a marked departure from the plan's original intent and direction. Such changes could have significant impacts on the conservation area's environment, affect users of adjacent lands or result in significant public reaction. Major amendments will require an application to the Ontario Ministry of Natural Resources and Forestry with full public consultation
- A minor amendment would involve administrative or housekeeping changes that would not alter the plan's intent, affect the conservation area's objectives or its ability to meet those objectives, or have any significant impacts on the conservation area's environment. Any minor amendments will be processed simply as a Development Permit under the Niagara Escarpment Plan *(2005),*

7.5 Niagara Escarpment Development Control

Subject to prior consultation with the Niagara Escarpment Commission, the following development may be exempted from requiring a Niagara Escarpment Commission Development Permit upon approval of the Rattlesnake Point Conservation Area Master Plan provided that Niagara Escarpment Commission is satisfied that these developments are in accordance with Section 5.41 of Ontario Regulation 828/90:

- **Picnic Shelter** -100 m²: An open air picnic shelter located in lower area near campsite #12, which is available for rent.
- **Road Network:** Improved existing 11,400 m² road route in park. The road is to be re-graded, compacted and resurfaced.

- **Existing Parking Lot**: Improve existing 1010 m² (40 car) parking lot in upper day use area. Re-grade, compact and resurface parking lot, as well as rebuild retaining wall (75 linear meters.)
- **Existing Parking Lot**: Improve existing 1250 m² (50-car) parking lot in lower area. Re-grade, compact and resurface.
- **Existing Parking Area:** Improve existing 250 m² (10-car) parking area in lower area at campsite #10. Re-grade, compact and resurface.
- **Existing Parking Area:** Improve existing 250 m² (10-car) parking area in upper area at campsite# 2. Re-grade, compact and resurface.
- **Existing Parking Lot:** Improve existing 500 m² (16-car) parking area in lower area at comfort station. Re-grade, compact and resurface.
- **Gatehouse Renovations**: Interior re-design, washroom upgrade and reinsulated
- **Site Service Upgrades:** Potable water, electrical and wastewater upgrades
- **Fenced Maintenance Compound**: 350 m² fenced compound. Compound for storage of machinery, a working yard to fix materials such as picnic tables and encompasses the existing wood shed. The 180 m² access trail to the compound will be upgraded.
- **Automatic Gate:** This gate will be located adjacent to the kiosk, which will allow pass holders to swipe and enter the park.
- **New Camp Sites and Parking Area –** 9,300 m²: This is to be made into additional camping spots. Area to be cleaned up to create four separate camping sites. A 930 m² stone chip access road to the campsites and an additional 250 m² granular parking area for 10 cars is to be created in conjunction with the new campsites.

ACRONYMS

ESA	Environmentally Sensitive Area
MNRF	Ontario Ministry of Natural Resources and Forestry
NEC	Niagara Escarpment Commission
NEP	Niagara Escarpment Plan
NEPOSS	Niagara Escarpment Parks and Open Space System

Glossary of Terms

Adjacent Lands: Those lands bordering the Rattlesnake Point Conservation Area.

Area of Natural and Scientific Interest (ANSI): Areas of land and water containing natural landscapes or features that have been identified as having life science or earth science values related to protection, scientific study or education.

Bruce Trail Corridor: The Bruce Trail Conservancy is committed to establish a public footpath along the Niagara Escarpment in order to protect its natural ecosystems and to promote environmentally responsible public access to this UNESCO World Biosphere Reserve. The corridor includes Main and Side Bruce Trails as well as the optimum route.

Conservation Halton: In 1956, the Sixteen Mile Creek Conservation Authority was formed followed by the formation of the Twelve Mile Creek Conservation Authority in 1957. In 1963, these conservation authorities amalgamated to form the Halton Region Conservation Authority [Conservation Halton]. The concept of conservation authorities was developed at a conference in Guelph, Ontario in the early 1940's. At that time, it was noted that extensive quarrying was taking place in escarpment areas and there was a risk of losing many significant natural sites. In fact, it was a quarry operation at Mount Nemo in 1958 that contributed to the formation of the Twelve Mile Creek Conservation Authority, which acquired 88 acres at Mount Nemo as their first action.

Development: As it pertains to the *Planning Act*, *Provincial Policy Statement*, *Greenbelt Plan* and *Conservation Halton Land Use Planning Policies* (Section 4) is defined as the creation of a new lot; a change in land use; or the construction of buildings and structures, requiring approval under the *Planning Act,* but does not include: (a) activities that create or maintain infrastructure authorized under an environmental assessment process; (b) works subject to the Drainage Act.

Development: As it pertains to the *Conservation Authorities Act,* is defined as:

- the construction, reconstruction, erection or placing of a building or structure of any kind,
- any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the size of the building or structure or increasing the number of dwelling units in the building or structure,
- site grading, or
- The temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere.
- The temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere.

Ecological Function: The natural processes, products or services that living and non-living environments provide or perform within or between species, ecosystems and landscapes. These may include hydrological, biological, physical, chemical and socio-economic interactions.

Ecological Land Classification (ELC): The Ontario Ministry of Natural Resources and Forestry defines ecological units based on bedrock, climate (temperature, precipitation), physiography (soils, slope, aspect) and corresponding vegetation, creating an Ecological Land Classification (ELC) system. This classification of the landscape enables planners and ecologists to organize ecological information into logical integrated units to enable landscape planning and monitoring.

Endangered Species Act: A provincial Act with three distinct purposes including: to identify species at risk based on the best available scientific information, including information obtained from community knowledge and aboriginal traditional knowledge; protect species that are at risk and their habitats, and to promote the recovery of species that are at risk; and to promote stewardship activities to assist in the protection and recovery of species that are at risk in Ontario.

.**Endangered Species:** Species listed or categorized as an "Endangered Species" on the Ontario Ministry of Natural Resources and Forestry' official species at risk list or on the COSEWIC list of endangered species, as updated and amended periodically.

Hydrologic Function: The functions of the hydrological cycle that include the occurrence, circulation, distribution and chemical and physical properties of water on the surface of the land, in the soil and underlying rocks, and in the atmosphere, and water's interaction with the environment including its relation to living things.

Natural Heritage Features and Areas: These features and areas, including significant wetlands, significant coastal wetlands, fish habitat, significant woodlands, significant valleylands, significant habitat of endangered species and threatened species, significant wildlife habitat, and significant areas of natural and scientific interest, which are important for their environmental and social values as a legacy of the natural landscape of the area.

Natural Heritage System: A system made up of natural heritage features and areas, linked by natural corridors necessary to maintain biological and geological diversity, natural functions, viable populations and indigenous species and ecosystems. These systems include lands that have been restored and areas with the potential to be restored to a natural state.

Negative impacts: In regard to natural heritage features and areas, degradation that threatens the health and integrity of the natural features or ecological functions for which and areas is identified due to single, multiple or successive development or site alteration activities.

NEPOSS: The Niagara Escarpment Parks and Open Space System is a linear system of over 130 parks and open spaces owned / managed by public agencies or conservation authorities. The System is based on public lands acquired to protect significant areas and features along the Niagara Escarpment, the majority of which are linked by the Bruce Trail. Park managers are required to develop management / master plans that are not in conflict with the objectives and policies of the NEP.

Niagara Escarpment Commission (NEC): An agency of Ontario's Ministry of Natural Resources and Forestry, the NEC works to preserve the Niagara Escarpment as a continuous natural landscape and a vital corridor of green space through south-central Ontario.

Ontario Ministry of Natural Resources and Forestry (MNRF): This Ministry manages and protects Ontario's natural resources for wise use across the province, contributing to the environmental, social and economic well-being of Ontario.

Provincially Significant Wetlands (PSW): Provincially Significant Wetlands are wetlands that, in the opinion of the Ontario Ministry of Natural Resources and Forestry contain habitats of critical importance to fish or wildlife, have a significant hydrologic role in the watershed in which they exist, provide significant social or economic benefits and have unique or provincially significant features. Development is not permitted in Provincially Significant Wetlands.

Species at Risk (SAR): A federal Act for the purposes of preventing wildlife species from being extirpated or becoming extinct, to provide for the recovery of wildlife species that are extirpated, endangered or threatened as a result of human activity and to manage species of special concern to prevent them from becoming endangered or threatened.

Threatened Species: As defined by the Ontario Ministry of Natural Resources and Forestry, a species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.

Visitor Impact Management (VIM): This tool covers a range of processes and techniques for managing visitors, their activities and their impacts, in a specific area. It is a key aspect of tourism management by both private and public organizations, especially in natural areas with special values that need protection.

Watershed: An area that is drained by a watercourse and its tributaries.

Wetland: As defined in the Provincial Policy Statement (2005) are lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. In either case the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophytic plants or water tolerant plants. The four major types of wetlands are swamps, marshes, bogs and fens.

Wildlife: All wild mammals, birds, reptiles, amphibians, fish, invertebrates, plants, fungi, algae, bacteria and other wild organisms.

Wildlife Habitat: Areas where plants, animals and other organisms live, and find adequate amounts of food, water, shelter and space needed to sustain their populations. Specific wildlife habitats of concern may include areas where species concentrate at a vulnerable point in their annual or life cycle; and areas important to migratory or non-migratory

Woodlands: Treed areas that provide environmental and economic benefits to both private landowners and the public, such as erosion protection, hydrological and nutrient cycling, provision of clean air, provision of wildlife habitat, outdoor recreational opportunities and the sustainable harvest of a wide range of woodland products. These include treed areas, woodlots or forested areas and can vary in their level of significance at the local, regional and provincial levels.

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Appendix I: Resource Management

Carrying Capacity Calculations

- Understanding of **carrying capacity**
  - The term carrying capacity no longer refers to an absolute number or formula-based decision.
  - Rather, it refers to the desired experience and resource conditions that are to be sustained (limits of acceptable change).
  - By managing to stay within desired resource & social conditions, the area is being managed within the "carrying capacity."

- Emphasis is on protection and enhancement of the **natural environment** and the **visitor experience** as opposed to accommodation of unlimited numbers of visitors.
  - This is not a finite or absolute science – there are social values and judgments that enter into the equation;
  - Management actions and weather conditions also influence the ability of the facilities to accommodate visitors.

- **Method of Computation**
  - "People-at-one-time" carrying capacity (PAOT) for each activity such as:
    - Trails,
    - Picnicking,
    - Climbing areas;
  - Extrapolation to annual sustainable use based on traditional patterns of percentage of use in a particular period (peak season, shoulder season and off-season, for example).
  - Comparison with market projections:
  - The results:
    - Too many people / can't accommodate the numbers, whether due to environmental or social considerations – adjust downward;
    - Within acceptable limits or room to grow - no adjustment required.

- **On-going management and budgeting commitment**
  - Confirm and adopt Visitor Impact Management program;
  - Provide adequate operational budgeting to support VIM programs and ongoing monitoring and mitigation programs;
  - Continue to refine established indicators (see Visitor Impact Management Matrix)

Adopting a recreational carrying capacity approach is not a one-off exercise, but requires a continuing commitment to monitoring and decision-making.

Desired Conditions / Objectives

Trails

Management Considerations: Recent site inventory has revealed that some trails are currently in the level 1 priority protection areas. Conservation Halton will review these sections of trail during the trail upgrade process (years 1-3 of the plan) and will decide on a case-by-case basis whether to close or re-route these trails, or if delineation and signage are adequate measures. If any of these trails are designated Bruce Main or Side Trails, management options will be discussed with the Bruce Trail Conservancy.

Trail Upgrades

This will include regrading, resurfacing, drainage control and potential re-routing of trails.

Trail Delineation

This will consist of natural materials such as rocks or logs lining the trail. In some cases, boardwalks or fences may be required.

Interpretive Signage

The intention is for signs to alert visitors to the presence of a natural heritage feature and explain why it is necessary to stay on the designated trail.

These measures have shown to be very effective in garnering cooperation from park users (Marion and Reid 2007).

People At One Time (PAOT) – Assumptions

The following assumptions are applicable to the PAOT calculations that are summarized below:

Trails: Number of people at one time per 1500 m of trail

- All groups are assumed to be 2 people;
- If more people per group, time between encounters will be greater;
- Frequency of encounters depends on whether traffic is going two directions and from how many trailheads;
- Turnover is 2 times per day;
- A day is considered to be 6 hours, given 80 – 85% of usage is traditionally within this period.

Single-track Trail

- 5 groups per 1500 m of trail = 300 metres, or 3.6 minutes, between groups (if all are going one direction)

Medium Service Nature Trail

- 10 groups; assume they are going TWO directions and evenly spaced over the trail – there is still 300m or 3.6 minutes between groups

High Capacity / Service Access Trail

- 20 groups, 75 metres between groups
    - If going two directions as above – 150 m between encounters = 2 minutes.
    - If viewshed is assumed to be 100 m – at some moments, you won't see anybody.
    - Within earshot, 10 m
    - Again, larger groups would be more infrequent, if daily capacity remains the same.

Picnicking

Calculated for 54 peak days per year (weekends + one long weekend over 6-month peak season)

- *Tables or Grass* – (turnover 2 times a day)
    - Mount Nemo Conservation Area – current capacity, 10 people
- *Shelters* – assume capacity is 50 people (no turnover)

Washroom Facilities

- 4 stalls each male and female, assume 10 persons at one time;
- Turnover 50 times per day (~7 minutes);
- = 500 per day per 'comfort station' or visitor centre.
- Vault toilets have not been factored in. On above peak days and for special events, portable toilets are rented to augment supply.

Group Camping

- Current average is 350 campers at one time; grounds can accommodate up to 650.
- New facilities will accommodate 600 campers.
- Parties stay 2 or 3 days.

Climbing

- Average 240 per day spread over 3 locations.
- Absolute maximum capacity is 2 or 3 climbers per route.

Management Consideration: Conservation Halton is going to take a more active role in booking and managing climbing activities and may decommission some routes if sensitive features are being damaged.

Extrapolating to Get Peak-Day and Annual Sustainable Visitation Figures

The site's "total at-one-time recreational capacity" figure will be the sum of the figures for each of the activities. Knowledge of visitors' length of stay at the site or the area (= turnover) will allow a calculation of the "peak day number." It is important to realise that this number is not scientifically reached and is only a starting point for the exercise.

From these "at-one-time capacity" and "peak day numbers," it is possible to derive a sustainable annual visitation rate by applying a percentage of the peak day capacity figure to different days of the year, depending on the known temporal distribution of tourism and recreational activity (see table below). Peak season was assumed to be 6 months for walking trails. Peak days are assumed to be 9 days per peak month (weekends, including one long weekend per month).

Peak day rates are better than yearly figures to use for management decisions and may vary according to weather conditions.

Management Consideration: It is understood that there are a few days per year, up to five, when visitation is beyond the peak acceptable levels given here. Past practice has been to limit the number of people at one time based on parking capacity. These 'above-peak' days have not proved to cause a noticeable increase in damage to the facilities.

The following table shows the method of calculation of annual sustainable use, distributed according to current attendance patterns. It is shown to illustrate how yearly sustainable levels were derived in the spreadsheet (*sample only*). It assumes that the peak day capacity for the trails is 100 people.

Months	Days	Estimate	
(assume 12 months at 30 days each)		**Percentage of calculated capacity**	**Total**
Peak Season 6 months	54 weekend days in peak months (9 per month x 6 months = 54)	100% = Peak Day (total of all trails) **Sample figure 100**	54 x 100 PAOT = 5400
	126 weekdays in peak months (21 per month)	60%	126 x 60 = 7560
Shoulder Season 3 months	27 weekend days in shoulder season	60%	27 x 60 = 1620
	63 weekdays in shoulder season	40%	63 x 40 = 2520
Off Season 3 months	27 weekend days in off-season	30%	27 x 30 = 810
	63 weekdays in off-season	10%	63 x 10 = 630
Yearly Total			**18,540**

Summaries of calculations for this conservation area based on current and proposed facilities are provided below; spreadsheet follows.

PAOT = People at One Time

1. Current Facilities

Trails - results of computations based on trail classifcations - Peak Day 460, Annual Sustainable Use 85,284 (using percentage table shown as example in assumptions section above). Spreadsheet follows.

Single-track Trail – Peak Acceptable Loading

# of groups	Total people per 1500m	length of trail 4532m	PAOT	Peak day rounded
5	10	multiplier 3.02	30	60

Explanation: If the comfortable carrying capacity for single-track trails is 5 groups of 2 people at one time per 1500 metres of trail (as in assumptions listed above) and Rattlesnake Point Conservation Area has 4532 metres of single-track trail, these trails can accommodate 30 people at one time. With an assumed turnover rate of twice a day, the Total Peak Day carrying capacity for these trails is 60 people.

Medium Service Trails – Peak Acceptable Loading

# of groups	Total people per 1500m	length of trail 5451m	PAOT	Peak day rounded
10	20	multiplier 3.64	73	144

High Capacity/ Service Access Trails – Peak Acceptable Loading

# of groups	Total people per 1500m	length of trail 4810m	PAOT	Peak day rounded
20	40	multiplier 3.2	128	256

Picnicking – Peak Day 150, Annual Sustainable Use 8,100

Assumed current capacity 50 at one time, turnover twice a day = 100 peak day x 54 = 5,400

One picnic shelter, capacity 50, no turnover x 54 = 2,700

Climbing - Peak Day 240, Annual Sustainable Use 44,496

240 (using percentage table shown as example in assumptions section above)

Group Camping – Peak Day 650, Annual Sustainable Use 35,100

18 sites – current use rate and distribution (current camping 6,800 in 2010)

54 peak days x capacity of 650 = annual sustainable use of 35,100

Total of trails, picnicking, camping and climbing = 147,024

2. Proposed Facilities

Trails – no change

Picnicking – Peak Day 350, Annual Sustainable Use 16,200

Assume double current usage due to addition of picnic tables = 200 x 54 = 10,800

Add two picnic shelters 100 m2; capacity 100 x 54 = 5400 + 2700 current = 8100

Climbing – no change

Group Camping - Peak Day 600, Annual Sustainable Use 32,400

Replacing upper camp sites with 10 sites that accommodate 15 people each – Capacity 150 + existing lower camp sites @ 450 = 600 total x 54 opportunities = 32,400

Visitor Centre – Peak Day 100, Annual Sustainable Use 5,400

Classroom	Camp Store	General	Total
40	36	24	100

The purpose of this visitor centre is to: a) serve as an additional comfort station, b) as a clubhouse for climbing groups and c) to allow Conservation Halton to offer climbing management, storage and a camp store.

Location of new built features: ELC None - manicured, Development Zone, Priority Protection Level 4

Total of trails, picnicking, climbing, camping and visitor centre: 151,254

3. Results

Sustainable Annual Visitation Rate

With Current Facilities – Peak Day 1,167, Annual Sustainable Use 147,024

With Proposed Facilities – Peak Day 1,517, Annual Sustainable Use 157,824

Visitation

Actual Current Annual Attendance – 60,000

Potential Market for the year 2021 (estimate from Section 5.2.1 of the *Master Plan*) – 111,832

The potential visitation rate for Rattlesnake Point Conservation Area is well below the sustainable annual visitation rate. Attendance at this park, with implementation of the visitor impact management program including climbing management, is believed to be sustainable. If ongoing monitoring proves this to be untrue, further management options will be investigated and implemented as required.

Rattlesnake Point Conservation Area

	Picnic Area				Shelters			Trails			Climbing		
	PAOT	Turnover	Days	Total	PAOT	Days	Total	Days	PAOT	Total	Days	PAOT	Total
Current	50.00	2.00	54.00	**5,400.00**	50.00	54.00	**2,700.00**	54.00	460.00	24,840.00	54.00	100.00	5,400.00
Proposed				**10,800.00**	100.00	54.00	**5,400.00**	126.00	276.00	34,776.00	126.00	60.00	7,560.00
								27.00	276.00	7,452.00	27.00	60.00	1,620.00
								63.00	184.00	11,592.00	63.00	40.00	2,520.00
								27.00	138.00	3,726.00	27.00	30.00	810.00
								63.00	46.00	2,898.00	63.00	10.00	630.00
										85,284.00			**18,540.00**

	Visitor Centre	Camping
Current		**35,100.00**
Proposed	**5,400.00**	**32,400.00**

Proposed Trails		
Days	PAOT	Total
54.00	460.00	24,840.00
126.00	276.00	34,776.00
27.00	276.00	7,452.00
63.00	184.00	11,592.00
27.00	138.00	3,726.00
63.00	46.00	2,898.00
		85,284.00

Total	
Current	**147,024**
Proposed	**157,824**

Table 3-1 Natural Heritage System Evaluation Matrix

Category	Primary Evaluation Criteria	Secondary Evaluation Criteria	Rationale	Priority Level
Core Conservation Lands	Environmental Sensitive Areas		Regional designation based on an area meeting several primary and secondary criteria which generally include relatively high native species richness, connections to natural system, diverse/rare plant and animal communities, relatively undisturbed, species at risk, earth science features, contribution to groundwater recharge/discharge/quality, surface water quality, scientific research and/or education.	3
	Area of Natural and Scientific Interest	Life Science	MNR designation for areas of land and water containing natural landscapes or features which have been identified as having values related to natural heritage protection, scientific study, or education. Development and site alteration shall not be permitted in significant areas of natural and scientific interest unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions (PPS 2005).	3
		Earth Science		4
	Provincially Significant Wetlands		Historically, wetland coverage within the Great Lakes Basin exceeded 10% (Detenbeck et al. 1999). The number of wetlands remaining in the Southern Ontario Landscape has been reduced to allow for urban settlements, shoreline development and agriculture. Wetlands have been shown to reduce the amount of water flowing out of a watershed, reduce flooding, create higher base flows, and reduced occurrence of high flows (Hey and Wickencamp 1996). Development and site alteration shall not be permitted in significant wetlands (PPS 2005).	1
		30 m Buffer		2
		31 – 120 m Buffer		4
	Niagara Escarpment Planning Areas	Escarpment Natural Area	"Escarpment features which are in a relatively natural state and associated stream valleys, wetlands and forests which are relatively undisturbed are included within this designation. These contain important plant and animal habitats and geological features and cultural heritage features and are the most significant natural and scenic areas of the Escarpment. The policy aims to maintain these natural areas." (NEC 2009)	3
		Escarpment Protection Area	"Escarpment Protection Areas are important because of their visual prominence and their environmental significance. They are often more visually prominent than Escarpment Natural Areas. Included in this designation are Escarpment features that have been significantly modified by land use activities such as agriculture or residential development, land needed to buffer prominent Escarpment Natural Areas, and natural areas of regional significance. The policy aims to maintain the remaining natural features and the open, rural landscape character of the Escarpment and lands in its vicinity." (NEC 2009)	4
		Escarpment Rural Area	"Escarpment Rural Areas are an essential component of the Escarpment corridor, including portions of the Escarpment and lands in its vicinity. They provide a buffer to the more ecologically sensitive areas of the Escarpment." (NEC 2009)	5
Areas of Functional Ecological Importance	Forest Cover	Sensitive Deep Forest Interior (≥ 200 m)	Recognition of the Hilton Falls Conservation Area interior forest northwest of Sixteen Mile Creek. "The Halton Forest South includes a major portion of the largest continuous tract of forest and wetland along the Niagara Escarpment south of Grey County, one of the largest natural areas within 100 km of Toronto, and the largest natural area in Halton Region. This woodland corridor covers approximately 35 square km, providing refuge for a high diversity of species requiring large tracts of forest to maintain viable populations" (Riley, et at. 1996).	1
		Deep Forest Interior (≥ 200 m)	Factors such as overall forest cover, patch size and shape (i.e. interior forest) all have a positive effect on the viability of habitat for flora and fauna. Overall forest cover appears to be the single most important factor in protecting bird species diversity but at the very large scale (160,000 ha), forest interior the amount of 200m forest in a patch was correlated with species richness. Forest cover is based on Ecological Land Classification.	2
		Forest Interior (≥ 100 m)		3
		Fringe Forest (<100 m)		4
		Plantation		4
	Hedgerows		Hedgerows can provide corridor function for a variety of wildlife species and can help maintain overall biodiversity in the landscape. Species within hedgerows tend to be less sensitive to disturbance as more sensitive species have likely been extirpated due to previous disturbances (e.g. agriculture).	4
	Regenerating Habitat (Habitat Restoration)		Similar to forest ecosystems, non-forest habitat cover (e.g. meadow), patch size and shape all have a positive affect on the viability of flora and fauna. Patch size and interior space has been maximized, where possible.	4
	Watercourse		Maintenance or rehabilitation of natural watercourse abiotic and biotic conditions including thermal regime and cover are important factor which influences a variety of attributes including dissolved oxygen concentrations, photosynthesis, metabolic rates of aquatic organisms, timing of life-history stages, and the decomposition rates of organic material. These influences in turn, affect ecosystem components such as algal, invertebrate, and fish communities.	2
		15 m Buffer		3
	Fish Community Class	Coldwater and potential coolwater / Redside Dace (30 m from	Fish habitat is comprised of those physical, chemical and biological attributes of the environment, which are required by fish to carry out their life processes (e.g.,spawning, nursery, rearing, feeding, overwintering, migration). It consists of those environments that directly or indirectly support fish communities. These guidelines can be applied to habitat, which may not directly support fish, but may provide	1

Category	Primary Evaluation Criteria	Secondary Evaluation Criteria	Rationale	Priority Level
Areas of Functional Ecological Importance		meanderbelt, if not mapped 30 m from watercourse)	nutrients and/or food supply to adjacent or downstream habitats and may contribute to increased water quality for fish. Changes to riparian vegetation can alter watercourse temperatures, reduce stability of stream banks and decrease overhead cover and refugia for fish. A vegetate buffer adjacent to a watercourse can also assist in the removal of sediment, pesticides and other deleterious substances which degrade water quality and fish habitat. Fish require appropriate fish habitat to carry out their life processes and the provision of adequate vegetated buffers is essential to the maintenance and enhancement of fish habitat. With the exception of the Redside Dace setbacks (*draft* Redside Dace Recovery Strategy 2009) the remaining setbacks are from Ontario Regulation 162/06.	
		Potential coolwater and warmwater sportfish (30 m from watercourse)		**2**
		Warmwater forage fish (15 m from watercourse)		**4**
	Drinking Water Source Protection – Municipal Wellhead Protection Area	100 m radius	A wellhead is simply the physical structure of the well above the ground. A wellhead protection area is a surface projection of the zone surrounding the wellhead through which groundwater is reasonably likely to travel to the well. The various capture zones that make up a wellhead protection area are based on how long it takes water to reach the well. The amount of land involved in a wellhead protection area is determined by a variety of factors such as the amount of water being pumped and the type of soil/rock through which the water moves. Well capture zones differentiate the potential risks to water quality from contaminants that could move with groundwater to the well. -100-metre radius: The area where the risk to the well is highest and the greatest care should be taken in handling any potential contaminant. -100 m to 2-year time of travel: Bacteria and viruses from human and animal waste are a concern, as are hazardous chemicals. -2 to 5-year time of travel: Chemical pollutants are the primary concern, however, microbiological risks may still be a concern. -5 to 25-year time of travel: The most persistent and hazardous contaminants remain a concern.	**1**
		100 m to 2-year time of travel		**2**
		2 to 5-year time of travel		**3**
		25-year time of travel		**4**
	Rare Vegetation Community	G1 - G3 and S1 - S3	Globally and provincially rare vegetation communities may arise as a result of rare growing conditions including, soil attributes (nutrients), water availability, and sun exposure. Or, more commonly in urbanized environments, rare vegetation communities arise as a result of being one of the few remaining examples of a once more common community.	**1**
	Species at Risk		Species at risk and habitat for endangered and threatened species are protected by the Federal Species at Risk Act (birds and fish) and Provincial Endangered Species Act (2007).	**1** (See Table 4-1)
		Critical Function and Protection Zone	Legislation mandates that species at risk habitat be protected. To protect it for the long-term, critical areas based on life process must be identified and protected from degradation. See species specific Table 5-1.	
	Globally and Provincially Rare Species	G1 - G3 and S1 - S3	Similar to species at risk, species considered globally rare should be protected to maintain current biodiversity.	**1** (See Table 4-1)
		Critical Function and Protection Zone		
	Halton Region Rare Species		Similar to species at risk, species considered rare at the regional level should be protected to maintain current biodiversity.	**2** (See Table 4-1)
		Critical Function and Protection Zone	See species specific Table 5-1.	
	Non-Provincially Significant Wetlands		The preservation of all wetlands help preserve native plant and animal species, wildlife habitat, ecological process, maintenance of biological diversity and erosion and flood control.	**2**
		Wetlands > 2ha 30 m Buffer	Wetlands that are greater than or equal to two hectares in size and not Provincially Significant are regulated 120 metres from the limit of the wetland. (Policy 3.38, Ontario Regulation 162/06). Wetlands less than two hectares in size and not Provincially Significant are regulated 30 metres from the limit of the wetland (Policy 3.39, Ontario Regulation 162/06).	**2**
		Wetlands > 2 ha 31 – 120 m Buffer		**4**
		Wetlands < 2ha 15 m Buffer		**2**
		Wetlands < 2 ha 16 – 30 m Buffer		**4**
	Vernal Pools		Vernal pools provide critical habitat for a variety of species, most notably amphibians during the breeding season. Many amphibian species have evolved to be obligate, or near obligate, vernal pool species and are therefore necessary to maintain existing populations.	**1**
		Critical Function Zone 30 m Buffer	Adjacent uplands (0-30m) provide important foraging habitat for amphibian species as well as providing important water quality functions. Natural habitat that is located further from vernal pools can be particularly important to the maintenance of functions and species populations that are more terrestrial during their adult stage.	**2**
	Seeps		Seeps provide base flows to streams and help in the regulation of coldwater / coolwater thermal designations. Development and site	**1**

Category	Primary Evaluation Criteria	Secondary Evaluation Criteria	Rationale	Priority Level
Areas of Functional Ecological Importance		30 m Buffer	alteration shall be restricted in or near sensitive surface water features such that these features and their related hydrologic functions will be protected, improved or restored (PPS 2005).	**3**
	Bat Hibernacula		Banding studies have confirmed that bats normally show high fidelity to specific hibernation sites over the years. Bats are particularly sensitive to disturbance during hibernation, and their ability to survive through winter is often jeopardized if disturbed (Stebbings 1969, OMNR 1984). Arousal is energy expensive, equivalent to about 65 days of hibernation (Brack 2004). The availability of suitable winter hibernacula is limited. Consequently, those caves that are presently used by hibernating bats are considered significant habitat and are critical to the survival of existing populations (OMNR 2006).	**1**
	Floodplain	Hazard Component	Floodplains occur adjacent to watercourse features and experience occasional and periodic flooding. These areas tend have higher biodiversity as they represent the transition zone between ecosystem types. As well, these areas tend to have greater natural vegetation due to their flood prone nature and have regulations limiting their development. Policy 3.25.2.4 (Ont. Reg. 162/06) states that, "Except as provided for in Policies 3.25.2.1–3.25.2.3, no new development is permitted within 15 metres of the flood plain" of major valley systems.	**2**
		15 m Buffer		**3**
	Meander Belt	Hazard Component	Policy 3.26.2.4 (Ontario Regulation 162/06) states that, "Except as provided for in Policies 3.26.2.1 – 3.26.2.3, no new development is permitted within 15 metres of the meander belt allowance" for major valley systems.	**2**
		15 m Buffer		**3**
	Stable Top of Bank	Hazard Component	Policy 3.35.3 (Ontario Regulation 162/06) states that, "Except as provided for in policies 3.35.1 and 3.35.2, no new development or redevelopment is permitted within 15 metres of the stable top of bank of major valley features".	**2**
		15 m Buffer		**3**
Significant Natural and Cultural Features	Look Outs		The vista or open area often focuses on a specific feature in the landscape. Views add an additional dimension to landscape quality and enhance opportunities for appreciation of the landscape for park visitors.	**4**
	Veteran Tree		Veteran trees are rare in many southern Ontario forest due to selective cutting of wood for timber. These older trees (>60dbh) play and important role in diversify the age structure of forest and can signify areas with fewer disturbances in the past. Older trees often produce large masts which ensure regeneration of a new forest canopy.	**3**
	Ancient Cedars		The Niagara Escarpment is the most significant site for ancient Eastern White Cedars in Ontario. The Niagara Escarpment Ancient Tree Atlas Project (NEATAP) was started in 1998 to search for the oldest living trees at numerous cliff sites along the Escarpment. Germination dates for these trees date back to as early as 1134 A.D. In total 111 trees have been identified in Halton, the majority of which are found at Mount Nemo, Rattlesnake Point, Crawford Lake and Kelso Conservation Areas.	**1**
	EMAN Plot / MOE Plot / Forest Bird Monitoring Program Station / Fish Sampling Station		The Ecological Monitoring and Assessment Network is a Canada wide monitoring program overseen by Environment Canada designed to better detect, describe, and report on ecosystem changes. The program and requires protection to ensure the accuracy of long-term datasets. The Forest Bird Monitoring Program is designed to monitor habitat specific population changes of Ontario birds breeding in mature forests. Fish Sampling Stations are part of Conservation Halton's Long-term Environment Monitoring Program for fish diversity.	**1**
		EMAN Plot / MOE Plot 30 m Buffer		**1**
		EMAN Plot / MOE Plot 31 - 100 m Buffer		**2**
	Steep Slopes	Scarp Face Slope (45-80%)	The near vertical escarpment face and steep talus slope are part of the larger Niagara Escarpment. The scarp face is a distinctive regional landmark, boasts magnificent views and vistas and contains significant ecological features. While providing dramatic visual presence and some limited recreational opportunities, the steep slopes require careful management to ensure the protection of their physical and ecological attributes.	**1**
		Talus & Other Slope (8-25% & 25-45%)		**2**
Other	Agricultural Fields		Low diversity and ecological function	**5**
	Existing Facilities	e.g. parking lot, building, and access / maintenance road		**5**
	Cultural Heritage	e.g. historic foundations, ruins, archeological sites		**3**
	Utility Easements	See Table X.X		**5**
	Cultural Meadows	CUM 1-1	Provides an ecological function and supports surrounding environments. Not present in enough area to maintain fully functioning meadow ecology. Deemed appropriate for restoration or to accommodate facilities in limited areas.	**5**

TABLE 4-2: VISITOR IMPACT MANAGEMENT MATRIX FOR RATTLESNAKE POINT CONSERVATION AREA (BASED ON KELSO CONSERVATION AREA MASTER PLAN)

Activity	Permitted Uses Areas	Ecological and Physical Impact Indicators	Service Level	Development and Operational Guidelines	Probable Impact Cause	Potential Management Strategies
Trail Uses (Hiking)	Trails selectively permitted in any Park Management Zones except 'Special' Nature Reserve Zone	▪ Evidence of loss of vegetation and / or soil-litter in excess of designated trail width (i.e., trampling damage or compaction) ▪ Trail rutting, ponding or expanding wet areas ▪ Surface soil erosion, gullying or compaction ▪ Tree root exposure or damage ▪ Unauthorized new trail development – braiding, widening ▪ Waste litter ▪ Breeding disturbance, nest abandonment	Primitive (i.e., Single Track Bruce Trail)	▪ Avoid poor soil conditions ▪ Maximize sheet water drainage and utilize water bars and gutters ▪ maximum 120 cm trail width ▪ Packed earth or natural bedrock path ▪ Route away from rare or endangered plant or animal species ▪ Maximum slope 20% on erodible soils ▪ Avoid wet areas unless protection measure provided ▪ Avoid habitat fragmentation and minimize intrusion into interior forest habitat or wildlife corridors	▪ Lack of trail etiquette knowledge ▪ Excessive group size and / or supervisions ▪ Improper behaviour ▪ Curiosity seekers exploring off trails ▪ Seasonal weather or unsuitability ▪ Unauthorized use ▪ Improper trail route	▪ Informational signage ▪ Temporary trail closure ▪ Better trail definition with wood chip or stone surfacing and bordered with an edging of rocks, logs or simple barriers ▪ Native material trail surfacing with bark chips or limestone screenings on high capacity trails or problem sections ▪ Remedial drainage works: water bars, ditches, culverts, footbridges, etc. ▪ Boardwalks for wet areas ▪ Limit group sizes ▪ Increased trail supervision or trails monitoring – trail stewards ▪ Reroute users to less / under used areas ▪ User trail maps come with responsibility code ▪ Educational programs ▪ Bike patrols ▪ Barriers to prevent non-pedestrian usage ▪ Wet-weather trail closure ▪ Adopt-a-Trail maintenance program ▪ Convenient waste receptacles ▪ Remediation of impacted areas
			Medium Service Nature Trail	▪ Maximum 200cm trail width ▪ Avoid highly sensitive habitats ▪ Maximum 18% slope for short distances ▪ Additional as above		
			High Capacity Nature Trail	▪ Maximum 300 cm trail width ▪ Handicapped accessible ▪ Packed granular surfacing ▪ Maximum slope 12% ▪ Additional as above		
Rock Climbing	Designated areas of escarpment face Within any zone excluding 'Special' Nature Reserve Zone	▪ Tree trunk abrasion / damage and decline in health ▪ Waste litter ▪ Slope access erosion and vegetative loss ▪ Rock displacement ▪ Loss of moss, lichen, forest litter and soil ▪ Compaction and trampling on brow with braided tails ▪ Decline in old growth cedar forest ▪ Many damaged trees and lowest density of living trees in climbed locations	Group instructional by permit only and recreational	▪ No vegetative cutting or clearing ▪ No tree tie-offs without trunk padding ▪ Designated trail access ▪ Route away from rare or endangered plant or animal species	▪ Improper behaviour ▪ Lack of knowledge ▪ Lack of supervision ▪ Unauthorized or improper use	▪ Separate user groups and dedicate trails to specific users ▪ Improved education and informational signage ▪ Increased supervision ▪ Joint supervision with climbing instructors ▪ Educational programs to disseminate details of site sensitivity and proper conduct ▪ Permanent rope anchors and bolted climbing routes ▪ Trails map ▪ Restrict areas and / or climbing numbers ▪ Better define access trails and staging areas ▪ Remediate overuse areas with soil replenishment or leaf compost

Caving	Designated areas of escarpment face within any zone excluding 'Special' Nature Reserve Zone	▪ Graffiti ▪ Garbage or waste litter ▪ Damage, breaking or discoloration of stalactites and stalagmites ▪ Disturbance of bat habitat or hibernation	Recreation and by permit groups	▪ Maintain natural cave environment and features	▪ Improper behaviour ▪ Lack of knowledge ▪ Excessive group size or lack of supervision ▪ Caving during hibernation season ▪ Unauthorized collection of mineral and specialized animal samples	▪ Information / education ▪ Joint supervision with instructors / groups ▪ Increased supervision and monitoring ▪ Limit group sizes ▪ Interpretive cave signage ▪ Limit or close access to certain significant caves
Group Picnicking	Designated picnic areas in Development or Resource Management Zones	▪ Turf trampling and destruction ▪ Noise pollution ▪ Litter / garbage ▪ Sewage odours or overflow	General	▪ Provide healthy turf cover ▪ Provide accessible sanitary facilities within 100 metres ▪ Provide scattered shade tree plantings throughout area ▪ Provide surface walking trails on major area linkages	▪ High use area in variable weather conditions ▪ Shortcut route to designation ▪ Excessive peak day loading	▪ Provide additional picnic facilities (i.e., washroom facilities, trails, waste receptacles) ▪ Develop additional picnic facilities throughout park to disperse crowds ▪ Limit peak day attendance
Group Camping	Designated campsites in Development or Resource Management Zones	▪ Turf trampling and destruction ▪ Noise pollution ▪ Litter /garbage ▪ Sewage odours or overflow ▪ Unauthorized campfires ▪ Foraged firewood	Recreation group camping by permit	▪ Provide healthy turf cover ▪ Provide accessible sanitary facilities within 100 metres ▪ Provide plantings for privacy between group campsites ▪ Provide convenient waste receptacles	▪ High use area in variable weather conditions ▪ Shortcut to designation ▪ Lack of knowledge of campground regulations ▪ Lack of supervision	▪ Rotate campsite bookings to allow overused sites to rest or re-establish turf growth ▪ Provide additional campground facilities (i.e., washroom facilities, waste receptacles) ▪ Provide increased supervision ▪ Provide improved campground regulation signage

Table 4-3: Schedule of Restoration Costs

GENERAL EARTHWORK ITEMS	Size	Qty.	Unit	Unit Price	Price/m2	Total
Mobilization / Demobilization	-	0	L.S.	$5,000.00	$ -	$ -
Trail Signage	-	0	ea	$200.00	$ -	$ -
Access paving protection and restitution	-	0	L.S.	$1,000.00	$ -	$ -
Heavy Equipment Clearing and Grading	-	0	m²	$1.50	$ 1.50	$ -
mudtracking/road clean-up		0	L.S.	$1,000.00	$ -	$ -
Trail Markers		0	ea	$10.00	$ -	$ -
Wood Box Culvert		0	ea	$220.00	$ -	$ -
CMP culvert		0	ea	$ 300.00	$ -	$ -
Light Equipment Clearing and Grading		0	m²	$6.50	$ 6.50	$ -
Topsoil Stripping and stockpile for reuse		0	cu.m.	$28.00	$ 9.30	$ -
Midden / Refuse / Fence Removal		0	hec	$5,000.00	$ 0.50	$ -
Site sourced woody debris		0	L.S.	$500.00	$ -	$ -
Bridge Crossing single wood		0	m²	$86.00	$ 86.00	$ -
Trailhead Closures		0	ea	$1,500.00	$ 100.00	$ -
Dewatering (pump-and-pipe)	-	0	L.S.	$5,500.00	$ -	$ -
Pedestrian and tree protection fencing	-	0	l.m.	$10.00	$ -	$ -
Silt fence-install, maintain and remove	-	0	l.m.	$15.00	$ -	$ -
Excavation and Grading (removal offsite)	-	0	m²	$16.66	$ 16.66	$ -
Trail Double granular		0	m²	$46.00	$ 9.20	$ -
Trail Double Mulch		0	m²	$7.50	$ 7.50	$ -
invasive species removal		0	m²	$0.50	$ 0.50	$ -
Eagle bridge single wide 7.5m x 1.8m		0	ea	$20,000.00	$ 1,500.00	$ -
ecoblanket terraseed		0	m²	$ 3.50	$ 3.50	$ -
Imported topsoil	-	0	cu.m.	$35.00	$ 11.66	$ -
400-500mm Rip Rap	-	0	cu.m.	$76.50	$ 38.25	$ -
700g/sq.m. Coir Cloth (ECB - 4m wide)	-	0	m²	$8.00	$ 8.00	$ -
Straw much / photodegradable netting ECB	-	0	m²	$1.95	$ 1.95	$ -
REVEGETATION ITEMS						
Caliper Trees						
Acer saccharinum, Silver Maple	40mm cal.	0	ea	$ 300.00		$ -
Quercus macrocarpa, Bur Oak	40mm cal.	0	ea	$ 300.00		$ -
Whip Size Trees						
Juniperus viginiana, Red Cedar	150cm hgt	0	ea	$ 85.00		$ -
Acer saccharum, Sugar Maple	150cm hgt	0	ea	$ 85.00		$ -
Quercus macrocarpa, Bur Oak	150cm hgt	0	ea	$ 85.00		$ -
Tilia americana, Basswood	150cm hgt	0	ea	$ 85.00		$ -
Populus tremuloides, Trembling Aspen	150cm hgt	0	ea	$ 85.00		$ -
Native Shrub Mix						
Rosa palustris , Wetland Rose	50cm hgt #2	0	ea	$ 40.00		$ -
Spirea latifolia , Meadowsweet	50cm hgt #2	0	ea	$ 40.00		$ -
Rhus typhina, Staghorn Sumac	50cm hgt #2	0	ea	$ 40.00		$ -
Amelanchier canadensis, Serviceberry	100cm hgt. #5	0	ea	$ 85.00		$ -
Lindera benzoin, Spicebush	50cm hgt #2	0	ea	$ 40.00		$ -
Cornus alternifolia, Alternate leaved Dogwood	50cm hgt #2	0	ea	$ 40.00		$ -
Cornus sericea, Red Osier Dogwood	50cm hgt #2	0	ea	$ 40.00		$ -
Salix exigua, Sandbar Willow	75cm hgt #2	0	ea	$ 35.00		$ -
Symphoricarpos albus, Snowberry	75cm hgt #2	0	ea	$ 35.00		$ -
Rubus idaeus, Wild Raspberry	50cm hgt #2	0	ea	$ 35.00		$ -
Sambucus canadensis, Elderberry	50cm hgt #2	0	ea	$ 35.00		$ -
Viburnum lentago, Nannyberry	50cm hgt #2	0	ea	$ 35.00		$ -
Plugs and other forms						
Upland basic grass mix	drill seed	0	m²	$ 0.25	$ 0.25	$ -
Aquatic Plugs	50mm plug	0	ea	$ 3.50		$ -
Forbs	100cm pot	0	ea	$ 5.00		$ -
VPL Shrubs	20-60cm	0	ea	$ 35.00		$ -
I year Transplant	125cm hgt #1	0	ea	$ 25.00		$ -
2 year Transplants	200cm hgt #2	0	ea	$ 45.00		$ -
conifer seedlings	15cm hgt	0	ea	$ 5.00		$ -
Live willow stakes	-	0	ea	$ 5.00	$ 10.00	$ -
Shoreline Herbaceous Native Regeneration Seed Mix	-	0	m²	$ 4.50	$ 4.50	$ -
					Revegetation subtotal	**$ -**

The Conceptual Cost Estimates provided herein is for budgetary purposes only and may vary considerably from a Contractor's quotation. All plant material is restoration quality. One year warranty at 70% take.

COST SUMMARY	
General Earthworks Items	$ -
Revegetation Items	$ -
Subtotal	$ -
15% contingency	$ -
TOTAL COST	**$0.00**

Table 4-4: Supplementary Restoration Costs

Reference Project	Size	Project Description
Solar Farm - Under Construction Estimated Cost: $575,000	4.12ha	Combination of tall grass prairie, nucleation plant cells and pit and mound micro-topography.
Industrial Restoration Site - Completed 2007 Total Cost: $92,000	<5ha	Enhancement of existing woodlot and repair of industrial disturbances using successional forest buffers and open meadow restoration treatments.
Restoration of Rouge River Riparian Areas - Under Construction. Estimated Cost: $500,000	>1km of river	Extensive repair and restoration to several Rouge River Tributary sites protecting municipal infrastructure and enhancing the ecological system. Work included riparian habitat improvements and channel realignment to provide flood relief.
West Side Marsh - Completed 2004 Total Cost: ~$2,300,000	<25ha	Enhancement to existing wetlands as well as construction of new wetland areas, providing multiple habitat types including: pike nursery, littoral shelves, raptor poles, nesting islands, bass basin shelters and hibernacula.
Edge Management Plan - Under Construction Estimated Cost: $250,000	>10ha	Woodlot management in new community development. Works included trail design, successional planting and trailhead closures.
Industrial Restoration Site - Under Construction Estimated Cost: $85,000	<5ha	Restoration to woodlot edge and lakeside slope disturbed by industrial activity using nucleation plant cells.

Master Plan for Rattlesnake Point Conservation Area

Stage Three Report Appendix II: Financials

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Appendix II

Financial Calculations

Appendix II

Financial Calculations

Table 5-1: Rattlesnake Point Conservation Area Development Timeframe Assumptions

Capital Cost Element	Total Cost ($2010)	Development Timeframe Assumptions
Signage		
Main Entrance	$30,000	year 1
Conservation Halton Parks Wayfinding/cross marketing	$25,000	year 1
Interpretive Signage	$20,000	year 4
Language Outreach Upgrades	$20,000	year 4
Road		
Stone chip surface road	$1,140,000	years 1, 2, 3
Bioswales	$190,000	years 1, 2, 3
Trees	$4,000	year 7
Parking		
Parking lots upgraded	$275,000	years 1, 2, 3
Bioswales	$24,000	years 1, 2, 3
Shade tree planting (caliper)	$23,500	years 1, 2, 3
Picnic and Site Furnishings		
Open Picnic Shelter/Pavilion	$80,000	year 5
Upgraded Toilets	$20,000	year 2 and year 7
Site Furnishing	$65,000	year 2
Other Infrastructure and Upgrades		
Gatehouse Renovations	$50,000	year 4
Automated Gate	$40,000	year 3
Site Service Upgrades	$50,000	year 4
Site Technology Upgrades	$15,000	year 5
Group Campsites with 10 car parking lot	$30,000	year 7
Fenced Maintenance Compound	$20,000	year 5
Accessibility Upgrades	$20,000	year 4
Trails		
Decommissioned trails	$25,000	year 1
Upgrading walking trails	$140,000	year 3
Fencing/Trail Delineation	$100,000	years 1, 2, 3
Directional Signage	$3,000	year 2
Trailhead(s)	$16,500	year 1
Interpretive Programming and Equipment	$60,000	year 2
Visitor Impact Management Plan*	$150,000	Year 1,2,3,4,5,6,7,8,9,10
Restoration	$2,070,000	years 1, 2, 3
Sub-Total	**$4,706,000**	
Professional Fees /Soft Costs	$705,900	calculated for each year
Contingency	$705,900	calculated for each year
Grand Total	**$6,117,779**	

Table 5-2: Rattlesnake Point Conservation Area Site Development Costs Over 10-Year Period

Facility	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total Cost Over Period
Signage											
Main Entrance	$30,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$30,000
Conservation Halton Parks Wayfinding/cross marketing	$25,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$25,000
Interpretive Signage	$0		$0	$20,000	$0	$0	$0	$0	$0	$0	$20,000
Language Outreach Upgrades	$0	$0	$0	$20,000	$0	$0	$0	$0	$0	$0	$20,000
Road											
Stone chip surface road	$380,000	$380,000	$380,000	$0	$0	$0	$0	$0	$0	$0	$1,140,000
Bioswales	$63,333	$63,333	$63,333	$0	$0	$0	$0	$0	$0	$0	$190,000
Trees	0	$0	$0	$0	$0	$0	$4,000	$0	$0	$0	$4,000
Parking											
Parking lots upgraded	$91,667	$91,667	$91,667	$0	$0	$0	$0	$0	$0	$0	$275,000
Bioswales	$8,000	$8,000	$8,000	$0	$0	$0	$0	$0	$0	$0	$24,000
Shade tree planting (caliper)	$7,833	$7,833	$7,833	$0	$0	$0	$0	$0	$0	$0	$23,500
Picnic and Site Furnishings											
Open Picnic Shelter/Pavilion	$0	$0	$0	$0	$80,000	$0	$0	$0	$0	$0	$80,000
Upgraded Toilets	$0	$10,000	$0	$0	$0	$0	$10,000	$0	$0	$0	$20,000
Site Furnishing	$0	$65,000	$0	$0	$0	$0	$0	$0	$0	$0	$65,000

Table 5-2: Site Development Costs Over 10-Year Period, continued

Facility	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total Cost Over Period
Other Infrastructure and Upgrades											
Gatehouse Renovations	$0	$0	$0	$50,000	$0	$0	$0	$0	$0	$0	$50,000
Automated Gate	$0	$0	$40,000	$0	$0	$0	$0	$0	$0	$0	$40,000
Site Service Upgrades	$0	$0	$0	$50,000	$0	$0	$0	$0	$0	$0	$50,000
Site Technology Upgrades	$0	$0	$0	$0	$15,000	$0	$0	$0	$0	$0	$15,000
Group Campsites with 10 car parking lot	$0	$0	$0	$0	$0	$0	$30,000	$0	$0	$0	$30,000
Fenced Maintenance Compound	$0	$0	$0	$0	$20,000	$0	$0	$0	$0	$0	$20,000
Accessibility Upgrades	$0	$0	$0	$20,000	$0	$0	$0	$0	$0	$0	$20,000
Trails											
Decommissioned trails	$25,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$25,000
Upgrading walking trails	$0	$0	$140,000	$0	$0	$0	$0	$0	$0	$0	$140,000
Fencing/Trail Delineation	$33,333	$33,333	$33,333	$0	$0	$0	$0	$0	$0	$0	$100,000
Directional Signage	$0	$3,000	$0	$0	$0	$0	$0	$0	$0	$0	$3,000
Trailhead(s)	$16,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$16,500
Interpretive Programming and Equipment	$0	$60,000	$0	$0	$0	$0	$0	$0	$0	$0	$60,000
Visitors Impact Management Plan*	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$150,000
Restoration Costs	$690,000	$690,000	$690,000	$0	$0	$0	$0	$0	$0	$0	$2,070,000
Sub-Total	**$1,385,667**	**$1,427,167**	**$1,469,167**	**$175,000**	**$130,000**	**$15,000**	**$59,000**	**$15,000**	**$15,000**	**$15,000**	**$4,706,000**
Professional Fees /Soft Costs	$207,850	$214,075	$220,375	$26,250	$19,500	$2,250	$8,850	$2,250	$2,250	$2,250	$705,900
Contingency	$207,850	$214,075	$220,375	$26,250	$19,500	$2,250	$8,850	$2,250	$2,250	$2,250	$705,900
Grand Total	**$1,801,367**	**$1,855,317**	**$1,909,917**	**$227,500**	**$169,000**	**$19,500**	**$76,700**	**$19,500**	**$19,500**	**$19,500**	**$6,117,779**

Table 5-4: Rattlesnake Point Conservation Area Attendance Projection

Average Annual Attendance (2005 - 2009)	**59,000**					
Weighted Annual Population Growth Factor	4.79% (based upon population projections of municipalities in the catchment areas of the Conservation Area)					
Year	**(A) Attendance Increase Due to Regional Population Growth Factor**	**(B) Increment Due to Marketing Factor (2%)**	**(C) Increment Due to 'Staycation' Factor (1%)**	**Resulting Attendance Projection**	**(D) Increment from Major New Facilities Coming On-Stream***	**Final Attendance Estimate**
2010	61,824	1,236	618	63,679	0	63,679
2011	64,784	1,296	648	66,727	0	66,727
2012	67,885	1,358	679	69,922	0	69,922
2013	71,135	1,423	711	73,269	0	73,269
2014	74,540	1,491	745	76,776	0	76,776
2015	78,108	1,562	781	80,451	0	80,451
2016	81,847	1,637	818	84,303	0	84,303
2017	85,765	1,715	858	88,338	4,417	92,755
2018	89,871	1,797	899	92,567	4,628	97,195
2019	94,173	1,883	942	96,998	4,850	101,848
2020	98,681	1,974	987	101,641	5,082	106,723
2021	103,405	2,068	1,034	106,507	5,325	**111,832**

** construction of the $1.4 million Visitors Centre by 2016 (Year 6) expected to result in additional 5% attendance in Years 7 (2017) and on.*

Table 5-6: Rattlesnake Point Conservation Area Attendance and Revenue Forecast

	Attendance	Revenue per User	Total Revenue from Attendance
Base Year (2005 - 2009 Average)	59,000	$4.56	$269,189
Year 1	69,922	$5	$349,610
Year 2	73,269	$5	$366,345
Year 3	76,776	$5	$383,880
Year 4	80,451	$5	$402,255
Year 5	84,303	$5	$421,515
Year 6	92,755	$5	$463,775
Year 7	97,195	$6	$534,573
Year 8	101,848	$6	$611,088
Year 9	106,723	$7	$693,700
Year 10	111,832	$7	$782,824

Table 5-7: Rattlesnake Point Conservation Area Current Operating Budget

Budget Line Item Category	2010 Preliminary Budget	2009 Budget
EXPENDITURES		
Administration (Full-Time Salaries and Related Costs)*	$141,760*	$102,186*
Salaries & Wages (Part Time/Seasonal)	$35,287	$31,209
Benefits (Part Time/Seasonal)	$4,146	$3,667
Equipment Rental	$546	$530
Telephone	$4,586	$4,368
Utilities - Hydro And Fuel	$2,826	$3,842
Insurance	$730	$925
Food Supplies	$2,000	$2,000
Firewood	$450	$675
Program Material	$1,000	$1,000
Advert & Promo - Brochure	$1,220	$1,000
Infrastructure Mtnce	$7,500	$8,500
Facilities	$3,910	$5,160
Gatehouse	$1,300	$1,252
Picnic Shelters	$1,000	$1,000
Miscellaneous	$0	$0
Total Expenditures	$208,261	$167,314
REVENUES		
Entry Fees	$203,912	$188,476
Camping	$43,757	$34,252
Food Sales	$7,065	$7,065
Bulk Food Sales	$0	$0
Rock Climbing Fees	$6,455	$7,000
Miscellaneous / Special Events	$8,000	$5,000
Total Direct Revenues	**$269,189**	**$241,793**
Excess Of Revenues Over Expenditures	**$60,928**	**$74,479**

** The budget contains grouped administrative expenses (consisting of tull-time wages, salaries and benefits, staff travel, vehicle rentals, and bank services) for Mt. Nemo, Rattlesnake Point, and Hilton Falls. CH's usual practice is to allocate 40% of these costs to each of Hilton Falls, and Rattlesnake Point, and 20% to Mount Nemo. Accordingly, 40% of this amount ($354,400 in the 2010 budget) has been allocated to Rattlesnake Point.*

Table 5-9: Rattlesnake Point Conservation Area Staffing Projections

	Incremental Staffing Increase (FTJEs)	Total Staffing Complement (FTJEs)	Incremental Direct Staffing Costs
Base Year (2011)	0.00	**2.60**	$0
Year 1	0.23	2.83	$17,480
Year 2	0.46	3.06	$34,960
Year 3	0.69	3.29	$52,440
Year 4	0.92	3.52	$69,920
Year 5	1.16	3.76	$88,160
Year 6	1.38	3.98	$104,880
Year 7	1.62	3.22	$123,120
Year 8	1.85	4.45	$140,600
Year 9	2.08	4.68	$158,080
Year 10	2.31	4.91	$175,560

Table 5-10: Rattlesnake Point Conservation Area Maintenance Costs Associated with New Development

Year	Capital Development in Year	Cumulative Development	Maintenance Costs (at 2% of cumulative costs to previous year)
Year 1	$1,781,867	$1,781,867	$0
Year 2	$1,835,817	$3,617,683	$35,637
Year 3	$1,890,417	$5,508,100	$72,354
Year 4	$208,000	$5,716,100	$110,162
Year 5	$234,000	$5,950,100	$114,322
Year 6	$2,275,000	$8,225,100	$119,002
Year 7	$274,950	$8,500,050	$164,502
Year 8	$0	$8,500,050	$170,001
Year 9	$0	$8,500,050	$170,001
Year 10	$0	$8,500,050	$170,001

Table 5-11: Rattlesnake Point Conservation Area Enhanced Standard of Care Budget

Year	New Trails Coming On-Stream	Cost of Trails Maintenance Allowance	Hectares of Park Area	Cost of Hazard Tree Allowance	Total Additional Maintenance Costs
Year 1	12.6	$12,600	264	$10,296	$22,896
Year 2	12.6	$12,600	264	$10,296	$22,896
Year 3	12.6	$12,600	264	$10,296	$22,896
Year 4	12.6	$12,600	264	$10,296	$22,896
Year 5	12.6	$12,600	264	$10,296	$22,896
Year 6	12.6	$12,600	264	$10,296	$22,896
Year 7	13.6	$13,600	264	$10,296	$23,896
Year 8	13.6	$13,600	264	$10,296	$23,896
Year 9	14.6	$14,600	264	$10,296	$24,896
Year 10	14.6	$14,600	264	$10,296	$24,896

Table 5-12: Rattlesnake Point Conservation Area Invasive Species Management and Monitoring Costs

Year	Invasive Species Control Costs	Species Monitoring Costs	Total Species Management / Monitoring Costs
Year 1	$4,400	$5,280	$9,680
Year 2	$2,200	$5,280	$7,480
Year 3	$2,200	$7,480	$9,680
Year 4	$2,200	$5,280	$7,480
Year 5	$2,200	$5,280	$7,480
Year 6	$2,200	$7,480	$9,680
Year 7	$0	$5,280	$5,280
Year 8	$2,200	$5,280	$7,480
Year 9	$0	$7,480	$7,480
Year 10	$2,200	$5,280	$7,480
Total Costs	**$19,800**	**$59,400**	**$79,200**

Table 5-13: Rattlesnake Point Conservation Area Operating Cost Projection

	Continuation of Existing Budget	Additional Capital Maintenance Costs	'Enhanced Standard of Care' Costs	Species Management & Monitoring Costs	Incremental Direct Staffing Costs	Additional Marketing Costs (including TODS)	Total Estimated Operating Budget
Year 1	$208,000	$0	$22,896	$9,680	$17,480	$21,600	$269,976
Year 2	$208,000	$35,637	$22,896	$7,480	$34,960	$21,600	$323,093
Year 3	$208,000	$72,354	$22,896	$9,680	$52,440	$21,600	$377,290
Year 4	$208,000	$110,162	$22,896	$7,480	$69,920	$21,600	$432,578
Year 5	$208,000	$114,322	$22,896	$7,480	$88,160	$21,600	$454,978
Year 6	$208,000	$119,002	$22,896	$9,680	$104,880	$21,600	$476,378
Year 7	$208,000	$164,502	$22,896	$5,280	$123,120	$21,600	$540,118
Year 8	$208,000	$170,001	$23,896	$7,480	$140,600	$21,600	$564,097
Year 9	$208,000	$170,001	$23,896	$7,480	$158,080	$21,600	$581,577
Year 10	$208,000	$170,001	$24,896	$7,480	$175,560	$21,600	$600,057

Table 5-14: Rattlesnake Point Net Financial Operating Position

	Estimated Operating Revenues	Estimated Operating Costs	Net Financial Operating Position
Year 1	$349,610	$269,976	$79,634
Year 2	$366,345	$323,093	$43,252
Year 3	$383,880	$377,290	$6,590
Year 4	$402,255	$432,578	($30,323)
Year 5	$421,515	$454,978	($33,463)
Year 6	$463,775	$476,378	($12,603)
Year 7	$534,573	$540,118	($5,546)
Year 8	$611,088	$564,097	$46,991
Year 9	$693,700	$581,577	$112,123
Year 10	$782,824	$600,057	$182,767

Table 5-15: Rattlesnake Point Conservation Area Revenues per Visitor to Break Even

Year	Anticipated Operating Deficit	Attendance in that Year	Additional Surcharge per Visitor Required to Break Even	Assumed per Visitor Revenue for that Year	Total Target Revenue per Visitor
2012	$0	69,922	$0.00	$5.00	$5.00
2013	$0	73,269	$0.00	$5.00	$5.00
2014	$0	76,776	$0.00	$5.00	$5.00
2015	$30,323	80,451	$0.38	$5.00	$5.38
2016	$33,463	84,303	$0.40	$5.00	$5.40
2017	$12,603	92,755	$0.14	$5.00	$5.14
2018	$5,546	97,195	$0.06	$5.50	$5.56
2019	$0	101,848	$0.00	$6.00	$6.00
2020	$0	106,723	$0.00	$6.50	$6.50
2021	$0	111,832	$0.00	$7.00	$7.00

Master Plan for Rattlesnake Point Conservation Area

Stage Three Report
Appendix III:
Limestone Legacy Visions, Goals and Objectives

TCI Management Consultants
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EDA Collaborative Inc.

Appendix III - Halton Escarpment Parks, A Limestone Legacy

October 1, 2007

LL Vision: A sustainable network of world class conservation parks for ecological health and to provide public green space for quality education and recreation experiences.

LL Goal: To build and maintain a network of spectacular natural parks in Halton that demonstrate and explain the rich natural history, cultural heritage and global significance of Ontario's Greenbelt and the Niagara Escarpment and to provide high quality recreational and educational experiences for watershed residents and beyond.

LL Objectives:

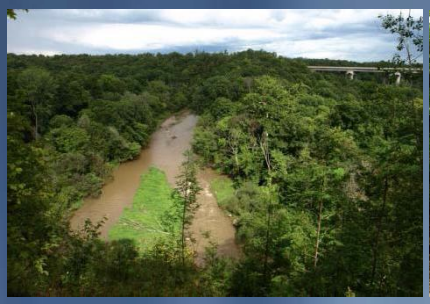
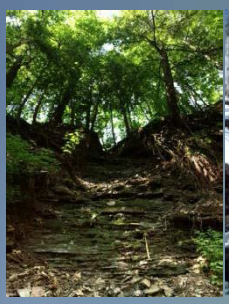
- A Halton gateway to the Niagara Escarpment with access to the Bruce Trail and future municipal trail connections, thereby linking our natural parks with other natural elements both in and beyond Halton Region.
- An outstanding premier ranked tourism attraction with multiple themed parks and features.
- A network of parks with consistent quality signage encompassing entrance signs, interpretive stations, information kiosks and internal directional signs.
- A wide range of educational and recreational opportunities for park visitors including one of the few downhill skiing and snowboarding facilities in southern Ontario.
- A planning and funding model that will enhance the Escarpment Parks and enable infrastructure improvements, capital expansion and quality maintenance standards.
- The development of guidelines for standards to ensure quality facilities, services and programs.
- The development of a sustainability plan for the Escarpment Parks that is complementary to the Sustainable Halton Plan and Halton's natural heritage system of greenlands. This would involve using Conservation Halton's parks as core lands, that would contribute to the range of habitat conditions (wetlands, forests, etc.) needed to maintain a high species biodiversity in the Region.
- The development of a management protocol for master planning the Escarpment Parks including the aspect of the Region's extensive forest tracts which are part of Halton's significant greenlands.
- The development of a partnership agreement for the development and funding of the Escarpment Parks.

Parks Master Planning:

Stage Three Reports for Four Conservation Areas:

Appendix IV: Community Engagement Materials and Results

FEB | 2011

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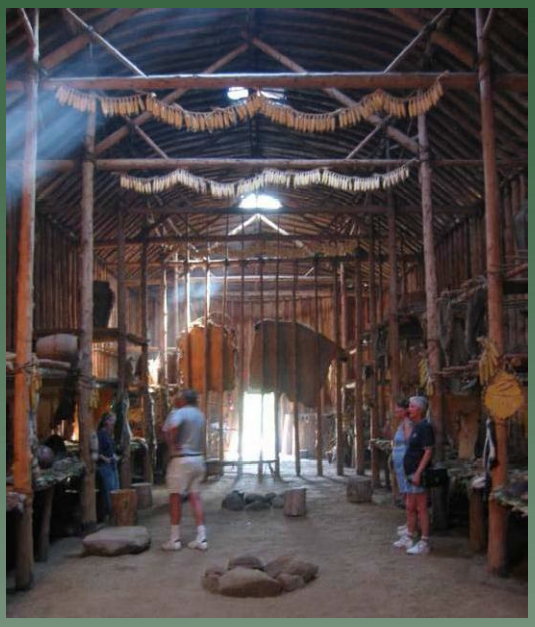
Community Workshop Stage Two: Concept Development
May 29th, 2010 1-4pm
Crawford Lake Conservation Area Visitors Centre

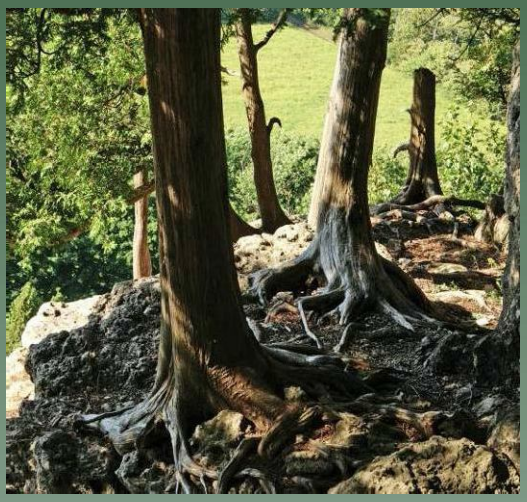
PUBLIC WORKSHOP

MASTER PLANNING FOR 4 CONSERVATION AREAS

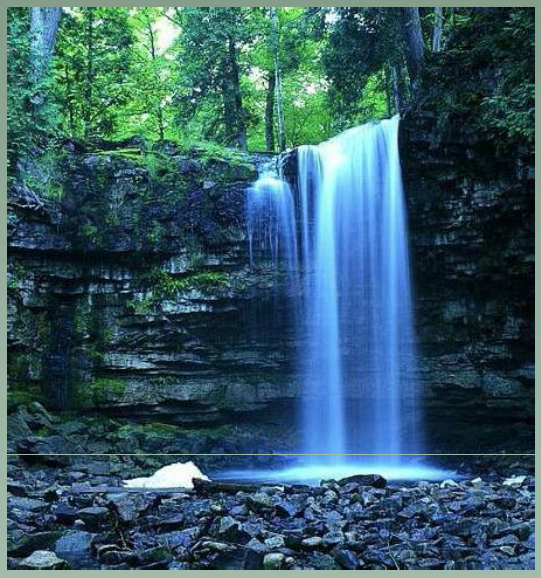


Should interpretation of the Iroquoian village and facilities at Crawford Lake be expanded to accommodate more groups? Or keep them at their current level?

Should the fragile natural environment at Mount Nemo be better protected? Or, should more trails be built to allow more people to walk on the Niagara Escarpment?



How can we manage the demands and conflicts between the various user groups at Hilton Falls?



How far should camping be expanded at Rattlesnake Point?

CONSERVATION HALTON

Saturday, May 29, 2010
1:00 - 4:00 p.m.
at Crawford Lake Conservation Area (see www.conservationhalton.ca for directions)
Meet at the Visitor Centre

Workshop Program – May 29, 2010

Time		
1:00 - 1:45	**Presentation - Portfolio and Concepts** (in Crawford Lake Theatre)	
	Stream One (in Crawford Lake Theatre)	**Stream Two** (at the Gathering Place)
1:45 - 2:15	**Rattlesnake Point** Natural Heritage System *How would you protect / enhance the Natural Heritage System? – restrict / educate / other?* Recreation and Interpretation *What recreation and interpretive programming opportunities would you support? – active, passive, schools, seniors, others?* Facilities - Trails and Other *What types of facilities and amenities should be provided? – trails, washrooms, visitor centre*	**Mount Nemo** Natural Heritage System *How would you protect / enhance the Natural Heritage System? – restrict / educate / other?* Recreation and Interpretation *What recreation and interpretive programming opportunities would you support? – active, passive, schools, seniors, others?* Facilities - Trails and Other *What types of facilities and amenities should be provided? – trails, washrooms, visitor centre*
2:15 - 2:45	**Crawford Lake** Natural Heritage System *How would you protect / enhance the Natural Heritage System? – restrict / educate / other?* Recreation and Interpretation *What recreation and interpretive programming opportunities would you support? – active, passive, schools, seniors, others?* Facilities - Trails and Other *What types of facilities and amenities should be provided? – trails, washrooms, visitor centre*	**Hilton Falls** Natural Heritage System *Same as above* Recreation and Interpretation *Same as above* Facilities - Trails and Other *Same as above*
2:45 - 3:15		**Rattlesnake Point** Natural Heritage System *Same as above* Recreation and Interpretation *Same as above* Facilities - Trails and Other *Same as above*
3:30 - 4:00	**Wrap-up** (in Crawford Lake Theatre) **Work Group Reports** *Each work group will report on their findings and recommendations for each of the conservation areas relative to natural environment, programming and facilities and how they think these requirements can best work in harmony.* **Summary of Findings and Next Steps**	

Agenda

- Presentation / Purpose
- Choice of workshops
- Workshop / Idea Sessions
- Re-convene to share ideas
- Summary and next steps

Purpose

- Master Planning process
- 4 Conservation Areas
  - Crawford Lake
  - Hilton Falls
  - Rattlesnake Point
  - Mount Nemo
- Public workshop to develop ideas

Time	**Stream One** (In Crawford Lake Theatre)	**Stream Two** (at the Gathering Place)
1:00 - 1:45	**Presentation - Portfolio and Concepts** (In Crawford Lake Theatre)	
1:45 - 2:15	**Rattlesnake Point**	**Mount Nemo**
2:15 - 2:45	**Crawford Lake**	**Hilton Falls**
2:45 - 3:15		**Rattlesnake Point**
3:30 - 4:00	**Wrap-up** (in Crawford Lake Theatre) **Work Group Reports** **Summary of Findings and Next Steps**	

Portfolio Approach

- World class system of regional parks
- Collection of diversified natural and cultural heritage assets
- Each is unique
- All offer a base level of amenity and service
- Each addresses different market interests
- Unique Development and Management Plans







EDA Collaborative Inc.

Portfolio Approach

Additive Method

- World class system of regional parks
- New enhanced level of visitor services / amenities

PLUS

- Distinct value-added service / special experience

Value-Added Experience	CL	HF	RSP	MN	K/GE	MB	GL
Proposed Base Level							
Primary Resource	Escarpment					Wildlife Centre	16 Mile Creek

At Glenorchy, the basic services will possibly be made available on municipal lands.

EDA Collaborative Inc.

Enhanced Level of Services

- Clear Corporate Branding
- Arrival and Accessibility
- Services
- Facilities and Amenities
- Quality Assurance
- Consistent Interpretive Experience

Shared Features

Significant
Natural Heritage Features

- Escarpment
- Forest
- Wetlands
- River Valley
- Open spaces
- Canyon

Services and amenities

Nature viewing and appreciation

Community health / wellness

Educational Opportunities

Concept Development

- Protect / Restore Nature – provide enhanced base level of services

- Exceed Expectations - Base level plus additional, "value added" services

- Become a Regional Destination – a “must see/must do” experience

Rattlesnake Point

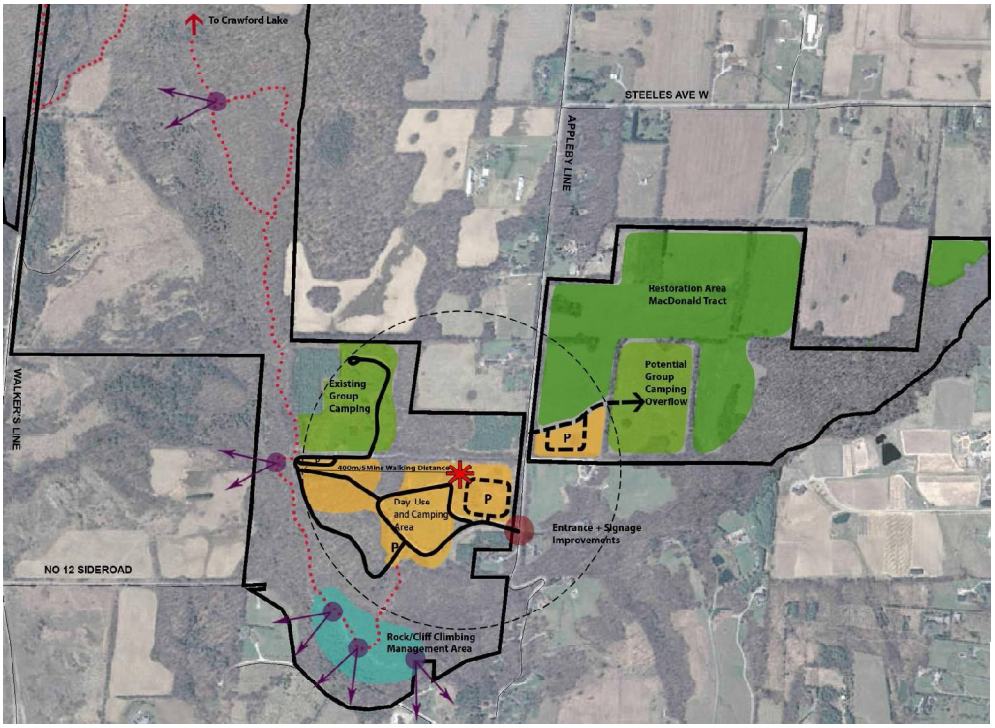
Unique Features
Exposed cliff face
Nassagaweya Canyon
Lookouts

Character
Iconic promontory
Pastoral

Existing Role
Group camping, day use, climbing
Vistas

Potential Role
Adventure recreation centre

Rattlesnake Point Opportunities



Workshop Questions

- **How would you protect / enhance the Natural Heritage System? – restrict / educate / other?**

- **What recreation and interpretive programming opportunities would you support? – active, passive, schools, seniors, others?**

- **What types of facilities and amenities should be provided? – trails, washrooms, visitor centre?**

Time	**Stream One** (In Crawford Lake Theatre)	**Stream Two** (at the Gathering Place)
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2:45 - 3:15		**Rattlesnake Point**
3:30 - 4:00	**Wrap-up** (in Crawford Lake Theatre) **Work Group Reports** **Summary of Findings and Next Steps**	

Workshop Directions

- **Report back at 3:30 to share ideas, outcomes and wrap-up**

May 29, 2010
Public Workshop Summary

Advertisement

- Advertised the open house in local papers on May 20th and 27th, 2010. The local newspapers were The Burlington Post, Milton Champion and Oakville Beaver.
- Conservation Halton Newsletter "Focus on Conservation," published information about the Open House
- Conservation Halton Electronic Newsletter which distributes to 4,500 people advertised the Open House
- Posters and handbills were in each park prior to Open House
- Posted Media Blast on May 17th, 2010
- Sent mass email to Native/Métis vision workshop participants.

The Open House was attended by 6 members of the general public.

- Generally, people were supportive of efforts to protect the natural heritage system.
- Opinions diverged on the subject of the various centres proposed in the highest-level-of development scenario for each of the parks. Some people preferred to keep facilities at a minimum, while others could see the benefit of Conservation Halton conducting training and education in various activities.
- There was some acceptance of expanded camping at Rattlesnake Point.
- Land acquisition, whether for environmental protection or recreational facilities, was supported.

CRAWFORD LAKE CONSERVATION AREA

Natural Heritage System

- Control access to lake
- Boardwalk width/ accessibility / capacity
- Delineate edges/ boundaries/ fences, boardwalks over wet areas.
- Control width
- Native plants interpretive signs; explain why people need to stay on the trails
- Educational signage / with regard to garbage
- Land acquisition

Nodal Park

- Assigned role within the Niagara Escarpment Plan
- Centre – interpretive
- Should serve as a 'Gateway' - offer information about other parks to encourage people to visit them

Recreation

- Active – approved or not approved – biking
- Land acquisition
- Trail usage
- Viewing
- Rest stops
- Interpretive signage

First Nations Cultural Interpretation

Passive Recreation
- Bird watching / Art / Painting/ Photography
- Staff guided
- Workshops – photo / art / bird watching
- Seasonality

Facilities
- Minimize footprint - LEED
- Adaptive re-use of existing facilities
- dining – support services
- required / demand?
- Gift shop – art gallery
- Village becomes the museum
- Exhibit space
- Scale / relevance
- Remote gathering place with fire pit for hiking groups

RATTLESNAKE POINT CONSERVATION AREA

Natural Heritage System
- Protect ancient cedars on cliff face
- Partner with climbing groups
- No expansion of climbing areas

Camping
- Group camping / family supervised camping should be encouraged
- MacDonald Site / former Buffalo Compound – alternative future campsites
- Hike-In experience – offer a different experience
- Minimal facilities
- Relocate five group camping sites from upper camping area to the main camp area or shift to

MacDonald Tract (conflict with day uses)
- Future campsites could be laid out now in anticipation of future use

Hiking, Viewing, etc.

Picnic shelters
- Currently booked at times for family reunions, etc.
- Consider additional shelters

Rock climbing centre
- Environmental message
- Enhanced control by Conservation Halton
- Should CH take on role of provider of rock climbing experience operations?
- Site selection – with regard to activities / adventures

Accommodate beach volleyball, flag football and Frisbee leagues in the day use area

MOUNT NEMO CONSERVATION AREA

Trails
- Trail relocation away from edge
- A loop trail through the forest would take pressure off escarpment bluff trail

- Self-guided interpretive program, perhaps re: quarrying or geological features
- Restoration
- Delineation of trails, discourage people from wandering off the trail
- Trail and Brock Harris lookout – would ideally be accessible
- Accessibility to edge for viewing

Caving – signage – “Strongly recommend that people do not enter the caves"
- Hazard / Safety risk
- Protection of cave ecosystem
- Provincial legislation may become stricter because of white nose disease among bats

Climbing – top rope ban

Interpretive programming
- History of the escarpment
- Interpret restoration of existing former quarry site – nature as self-healing or geological features

Low level of development – minimal services/ amenities
- Picnic facilities in the shade near parking area

Land acquisition – southward across Guelph Line, ANSI continues in that direction

HILTON FALLS CONSERVATION AREA

Mountain biking only makes up approximately 5000 of the annual visitors, but it is the most requested activity.

Natural heritage system protection
- Trail relocation and closure currently underway between Hilton Falls and the regional forest
- Boardwalks in wet areas
- Management issues re: trail braiding in wet areas
- Wildlife management – “Hyper-abundant species”

Expansion of lands
- Dufferin Quarry - potential for mountain biking facility
- Sheridan School – staging area

Centre
- X-country – school groups
- Conservation Halton operated training and tours
– e.g. Terracotta Conservation Area
- Mountain biking centre – education/ training, clinics, rental, storage
- Education/ training in geo-caching and orienteering, too

Visitation is currently restricted by size of parking areas

Conservation Halton:

Conservation Areas Master Planning Questionnaire Results

The questionnaire was distributed at the four parks Mount Nemo, Hilton Falls, Crawford Land and Rattlesnake Point. The survey could be filled out and dropped off at one of the four parks or mailed in. The questionnaire was also posted online and was available from May to July 2010. All were invited to participate in the survey including stakeholders, general public, and staff. In total 170 people responded to the questionnaire.

Conservation Halton: Conservation Areas Master Planning Questionnaire

1. Where do you live? (Please check one only)

	Response Percent	Response Count
Brampton	2.6%	4
Burlington	9.8%	15
Halton Hills	1.3%	2
Hamilton	11.1%	17
Mississauga	11.8%	18
Oakville	7.8%	12
Milton	23.5%	36
Other (please specify)	**32.0%**	**49**
answered question		**153**
skipped question		**1**

2. What is your gender?

	Response Percent	Response Count
Female	**66.2%**	**100**
Male	33.8%	51
answered question		**151**
skipped question		**3**

3. In which age group are you? (please check one range)

	Response Percent	Response Count
9 years or younger	0.0%	0
10-19 years	5.9%	9
20-29 years	19.1%	29
30-39 years	24.3%	37
40-49 years	**28.3%**	**43**
50-59 years	13.8%	21
60-69 years	7.2%	11
70 years or older	1.3%	2
	answered question	**152**
	skipped question	**2**

4. How often do you use these conservation areas?

	Never	Daily	Weekly	Monthly	Seasonally	Annually	Response Count
Crawford Lake	19.3% (28)	2.1% (3)	5.5% (8)	16.6% (24)	**37.9% (55)**	18.6% (27)	145
Hilton Falls	24.4% (32)	0.0% (0)	6.9% (9)	19.8% (26)	**29.8% (39)**	19.1% (25)	131
Kelso / Glen Eden	23.3% (30)	0.8% (1)	10.9% (14)	17.1% (22)	**36.4% (47)**	11.6% (15)	129
Mount Nemo	26.9% (35)	0.0% (0)	4.6% (6)	13.8% (18)	**33.1% (43)**	21.5% (28)	130
Mountsberg	21.6% (30)	0.0% (0)	3.6% (5)	12.2% (17)	**46.0% (64)**	16.5% (23)	139
Rattlesnake Point	23.2% (32)	0.0% (0)	7.2% (10)	13.0% (18)	**38.4% (53)**	18.1% (25)	138
						answered question	**150**
						skipped question	**4**

5. Do you currently own an Annual Membership to our parks?

	Response Percent	Response Count
Yes	36.6%	53
No	**63.4%**	**92**
answered question		**145**
skipped question		**9**

6. How many times each year do you visit these conservation areas?

	Response Percent	Response Count
1 to 5 times	**38.9%**	**56**
5 to 10 times	25.0%	36
15 or more times	36.1%	52
answered question		**144**
skipped question		**10**

7. On average, how many people accompany you on these visits?

	Response Percent	Response Count
None	7.6%	11
1 to 2	37.2%	54
2 to 4	**40.0%**	**58**
5 or more	15.2%	22
answered question		**145**
skipped question		**9**

8. Would you be willing to pay a higher fee to enter the conservation areas to support improvements to park amenities and program offerings?

	Response Percent	Response Count
Yes	30.5%	46
No	32.5%	49
Unsure	**37.1%**	**56**
answered question		**151**
skipped question		**3**

9. Would you be willing to pay extra fees for value-added services?

	Response Percent	Response Count
Yes	**41.7%**	**63**
No	22.5%	34
Unsure	35.8%	54
Addtional Comments		38
answered question		**151**
skipped question		**3**

13. What facilities and program would you like to see MORE or LESS of at Rattlesnake Point?

	More	Less	Stay the same	Response Count
Nature Appreciation / Viewing	**59.8% (49)**	0.0% (0)	40.2% (33)	82
Picnicking	26.6% (21)	3.8% (3)	**69.6% (55)**	79
Hiking Trails	40.0% (32)	2.5% (2)	**57.5% (46)**	80
Links to Area Trail Systems	**49.3% (37)**	1.3% (1)	**49.3% (37)**	75
Cross-country Skiing	28.2% (22)	5.1% (4)	**66.7% (52)**	78
Snowshoeing	28.9% (22)	2.6% (2)	**68.4% (52)**	76
Mountain Biking / Cycling Trails	25.0% (19)	21.1% (16)	**53.9% (41)**	76
Visitors Centre	25.3% (19)	8.0% (6)	**66.7% (50)**	75
Historical / Cultural Interpretation	36.4% (28)	2.6% (2)	**61.0% (47)**	77
BBQ Rentals	18.7% (14)	16.0% (12)	**65.3% (49)**	75
Equipment Rentals (i.e. skis, snowshoes)	23.0% (17)	8.1% (6)	**68.9% (51)**	74
Vending Machines	6.6% (5)	32.9% (25)	**60.5% (46)**	76
Potable Water Available	**50.0% (38)**	5.3% (4)	44.7% (34)	76
Downloadable Interpretive Materials i.e. trail maps, podcasts, school materials, and self-guided interpretive walks (maps and some school materials are currently available)	**57.7% (45)**	2.6% (2)	39.7% (31)	78
Universal Accessibility (some trails currently are)	34.7% (26)	5.3% (4)	**60.0% (45)**	75
Identify, protect and restore rare species	**66.7% (54)**	1.2% (1)	32.1% (26)	81
Ecosystem restoration	**70.4% (57)**	1.2% (1)	28.4% (23)	81
Ecosystem monitoring	**68.8% (55)**	1.3% (1)	30.0% (24)	80
Long-term scientific research	**64.9% (50)**	1.3% (1)	33.8% (26)	77

Water quality monitoring	**64.6% (51)**	1.3% (1)	34.2% (27)	79
Invasive species program	**64.6% (51)**	2.5% (2)	32.9% (26)	79
Special Events	**52.7% (39)**	6.8% (5)	40.5% (30)	74
			answered question	**91**
			skipped question	**63**

~~14. Would you like to see these facilities and programs added at Crawford Lake?~~

-	~~Yes~~	~~No~~	~~Unsure~~	~~Response Count~~
~~Family Camping~~	~~35.5% (38)~~	~~**51.4% (55)**~~	~~13.1% (14)~~	~~107~~
~~Group Camping~~	~~28.7% (31)~~	~~**57.4% (62)**~~	~~13.9% (15)~~	~~108~~
~~Winter Camping~~	~~31.5% (34)~~	~~**47.2% (51)**~~	~~21.3% (23)~~	~~108~~
~~Yurts (tent-like structure found at Provincial parks)~~	~~35.3% (36)~~	~~**49.0% (50)**~~	~~15.7% (16)~~	~~102~~
~~Mountain Biking / Cycling Trails~~	~~**43.9% (47)**~~	~~40.2% (43)~~	~~15.9% (17)~~	~~107~~
~~BBQ Rentals~~	~~35.3% (36)~~	~~**52.9% (54)**~~	~~11.8% (12)~~	~~102~~
~~Picnic Pavilions~~	~~**59.6% (62)**~~	~~29.8% (31)~~	~~10.6% (11)~~	~~104~~
~~Weather-proof Picnic Pavilions~~	~~**56.3% (58)**~~	~~34.0% (35)~~	~~9.7% (10)~~	~~103~~
~~Educational Programs (day camps)~~	~~**73.5% (72)**~~	~~17.3% (17)~~	~~9.2% (9)~~	~~98~~
~~Café~~	~~43.0% (46)~~	~~**43.9% (47)**~~	~~13.1% (14)~~	~~107~~
~~Green Technologies Demonstrations~~	~~**66.7% (68)**~~	~~13.7% (14)~~	~~19.6% (20)~~	~~102~~
~~Downloadable Interpretive Materials~~	~~**71.1% (69)**~~	~~11.3% (11)~~	~~17.5% (17)~~	~~97~~
~~(beyond trail maps)~~	~~**59.6% (53)**~~	~~19.1% (17)~~	~~21.3% (19)~~	~~89~~
~~Built Facilities for Related Clubs~~	~~18.4% (18)~~	~~**50.0% (49)**~~	~~31.6% (31)~~	~~98~~
~~Instruction in Climbing~~	~~**46.7% (49)**~~	~~36.2% (38)~~	~~17.1% (18)~~	~~105~~
~~Instruction in Mountain Biking~~	~~34.3% (34)~~	~~**45.5% (45)**~~	~~20.2% (20)~~	~~99~~
~~Instruction in other Trail Activities~~	~~**66.7% (70)**~~	~~19.0% (20)~~	~~14.3% (15)~~	~~105~~

16. Would you like to see these facilities and programs added at Rattlesnake Point?

	Yes	No	Unsure	Response Count
Yurts (tent-like structures found in Provincial Parks)	**44.7% (34)**	40.8% (31)	14.5% (11)	76
Snowshoeing	**60.0% (45)**	21.3% (16)	18.7% (14)	75
Mountain Biking / Cycling Trails	**46.7% (35)**	36.0% (27)	17.3% (13)	75
Visitors Centre	35.6% (26)	**43.8% (32)**	20.5% (15)	73
Historical / Cultural Interpretation	**50.0% (35)**	32.9% (23)	17.1% (12)	70
Equipment Rentals (i.e., skis, snowshoes, bikes, climbing gear, etc)	**45.7% (32)**	31.4% (22)	22.9% (16)	70
Weather-proof Picnic Pavilions	**47.2% (34)**	34.7% (25)	18.1% (13)	72
Bookstore /Gift Shop	25.7% (18)	**52.9% (37)**	21.4% (15)	70
Educational Programs (schools)	**64.8% (46)**	19.7% (14)	15.5% (11)	71
Educational Programs (adult / family)	**63.4% (45)**	18.3% (13)	18.3% (13)	71
Educational Programs (day camps)	**58.3% (42)**	23.6% (17)	18.1% (13)	72
Café	27.8% (20)	**56.9% (41)**	15.3% (11)	72
Green Technologies Demonstrations	**52.9% (37)**	24.3% (17)	22.9% (16)	70
Downloadable Interpretive Materials	**67.6% (48)**	12.7% (9)	19.7% (14)	71
(beyond trail maps)	**57.4% (39)**	17.6% (12)	25.0% (17)	68
Built Facilities for Related Clubs	18.6% (13)	**58.6% (41)**	22.9% (16)	70
Instruction in Climbing	**59.2% (45)**	26.3% (20)	14.5% (11)	76
Instruction in Mountain Biking	38.0% (27)	**45.1% (32)**	16.9% (12)	71
Instruction in other Trail Activities	**64.3% (45)**	20.0% (14)	15.7% (11)	70
Rental Banquet Facilities	11.6% (8)	**68.1% (47)**	20.3% (14)	69
Conference Centre	9.0% (6)	**71.6% (48)**	19.4% (13)	67

Playground Equipment	34.8% (24)	**53.6% (37)**	11.6% (8)	69
			answered question	**86**
			skipped question	**68**

~~17. Would you like to see these facilities and programs added at Mount Nemo?~~

-	~~Yes~~	~~No~~	~~Unsure~~	~~Response Count~~
~~Family Camping~~	~~36.1% (26)~~	~~**50.0% (36)**~~	~~13.9% (10)~~	~~72~~
~~Group Camping~~	~~23.2% (16)~~	~~**60.9% (42)**~~	~~15.9% (11)~~	~~69~~
~~Winter Camping~~	~~35.2% (25)~~	~~**50.7% (36)**~~	~~14.1% (10)~~	~~71~~
~~Yurts (tent-like structures found in Provincial Parks)~~	~~30.4% (21)~~	~~**53.6% (37)**~~	~~15.9% (11)~~	~~69~~
~~Cross-country Skiing~~	~~**64.9% (48)**~~	~~21.6% (16)~~	~~13.5% (10)~~	~~74~~
~~Snowshoeing~~	~~**68.5% (50)**~~	~~17.8% (13)~~	~~13.7% (10)~~	~~73~~
~~Mountain Biking / Cycling Trails~~	~~**46.6% (34)**~~	~~38.4% (28)~~	~~15.1% (11)~~	~~73~~
~~Visitors Centre~~	~~36.2% (25)~~	~~**49.3% (34)**~~	~~14.5% (10)~~	~~69~~
~~Historical / Cultural Interpretation~~	~~**50.7% (35)**~~	~~30.4% (21)~~	~~18.8% (13)~~	~~69~~
~~BBQ Rentals~~	~~25.7% (18)~~	~~**57.1% (40)**~~	~~17.1% (12)~~	~~70~~
~~Equipment Rentals (i.e., skis, snowshoes, bikes, climbing gear, etc)~~	~~**43.5% (30)**~~	~~34.8% (24)~~	~~21.7% (15)~~	~~69~~
~~Picnic Pavilions~~	~~**47.8% (33)**~~	~~39.1% (27)~~	~~13.0% (9)~~	~~69~~
~~Weather-proof Picnic Pavilions~~	~~37.1% (26)~~	~~**45.7% (32)**~~	~~17.1% (12)~~	~~70~~
~~Potable Water Available~~	~~**65.3% (47)**~~	~~20.8% (15)~~	~~13.9% (10)~~	~~72~~
~~Bookstore /Gift Shop~~	~~25.7% (18)~~	~~**57.1% (40)**~~	~~17.1% (12)~~	~~70~~
~~Educational Programs (schools)~~	~~**57.7% (41)**~~	~~28.2% (20)~~	~~14.1% (10)~~	~~71~~
~~Educational Programs (adult / family)~~	~~**60.6% (43)**~~	~~26.8% (19)~~	~~12.7% (9)~~	~~71~~
~~Educational Programs (day camps)~~	~~**52.9% (37)**~~	~~31.4% (22)~~	~~15.7% (11)~~	~~70~~

Café	27.1% (19)	**62.9% (44)**	10.0% (7)	70
Green Technologies Demonstrations	**57.7% (41)**	25.4% (18)	16.9% (12)	71
Downloadable Interpretive Materials	**69.1% (47)**	16.2% (11)	14.7% (10)	68
(beyond trail maps)	**65.2% (43)**	18.2% (12)	16.7% (11)	66
Built Facilities for Related Clubs	18.8% (13)	**62.3% (43)**	18.8% (13)	69
Instruction in Climbing	**53.4% (39)**	34.2% (25)	12.3% (9)	73
Instruction in Mountain Biking	40.8% (29)	**47.9% (34)**	11.3% (8)	71
Instruction in other Trail Activities	**66.7% (46)**	21.7% (15)	11.6% (8)	69
Rental Banquet Facilities	10.1% (7)	**79.7% (55)**	10.1% (7)	69
Conference Centre	9.1% (6)	**81.8% (54)**	9.1% (6)	66
Playground Equipment	29.4% (20)	**64.7% (44)**	5.9% (4)	68
-			***answered question***	**81**
-			***skipped question***	**73**

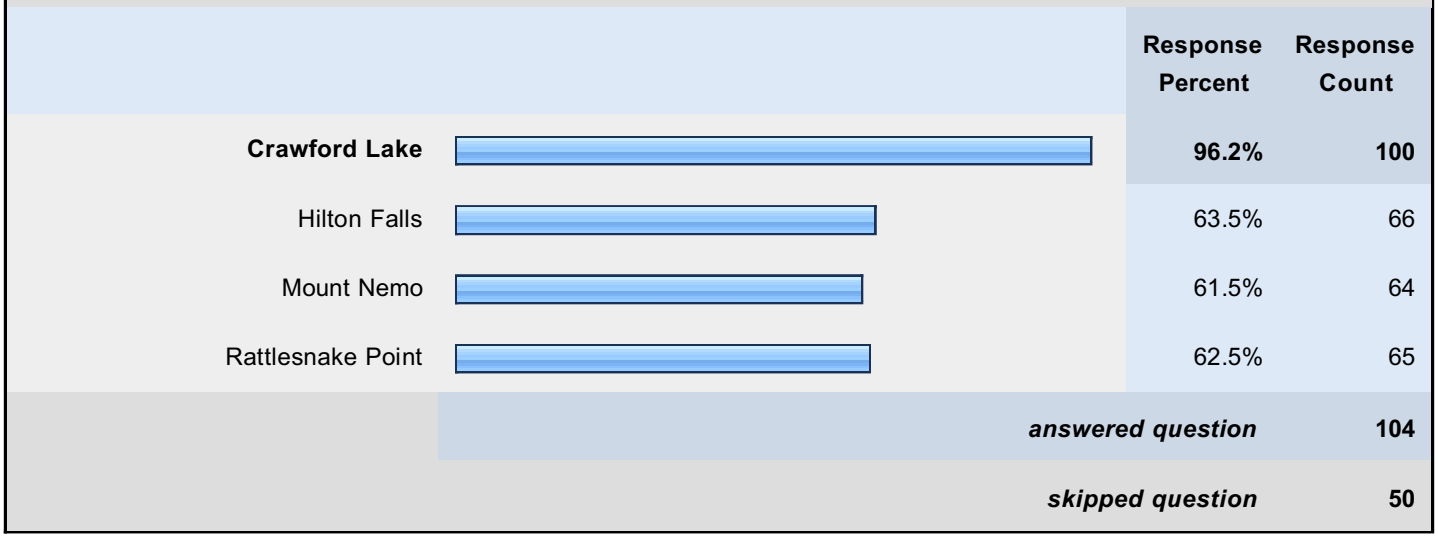
18. If Conservation Halton were to acquire land holdings adjacent to these conservation areas - lands which are of low ecological value - which, if any, of the above facilities or programs would you support accommodating on that newly acquired land? Please list using the above facilities and programs.

		Response Count
		77
	answered question	**77**
	skipped question	**77**

22. Would you be interested in expanded or added interpretive programming in the following subject areas at Rattlesnake Point?

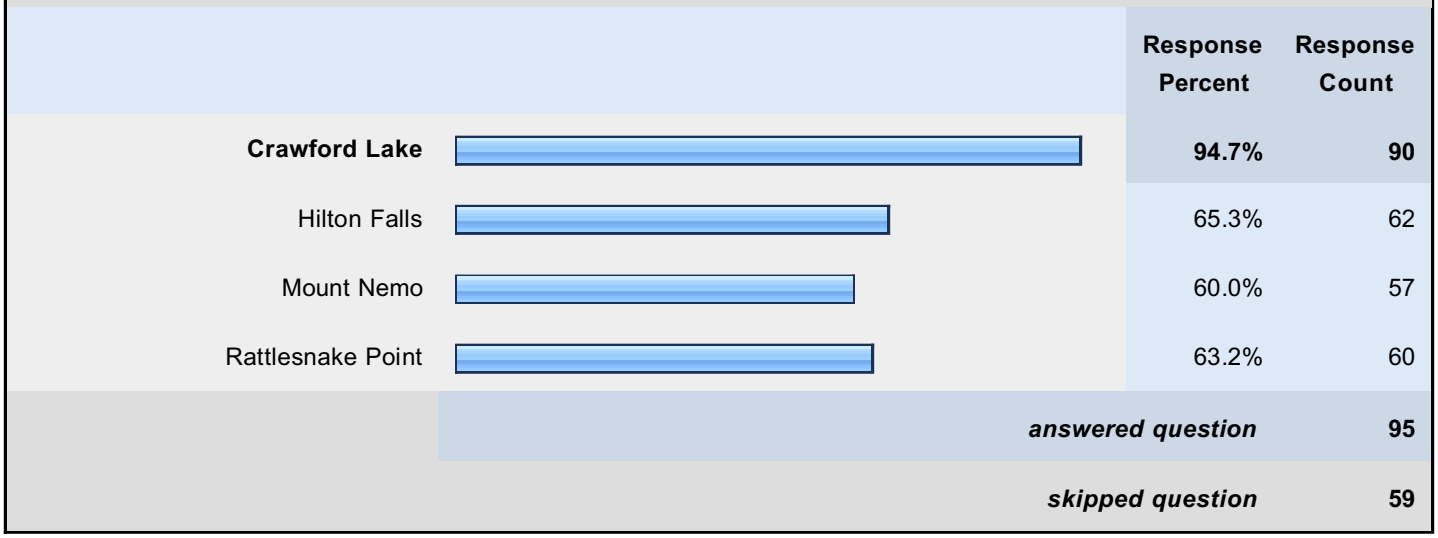
	Yes	No	Unsure	Response Count
Rare Species	**78.9% (56)**	9.9% (7)	11.3% (8)	71
Ecosystem Restoration	**70.0% (49)**	17.1% (12)	12.9% (9)	70
Watershed Management	**67.6% (46)**	16.2% (11)	16.2% (11)	68
Invasive Species	**72.2% (52)**	12.5% (9)	15.3% (11)	72
Native Flora	**78.9% (56)**	12.7% (9)	8.5% (6)	71
Native Fauna	**78.9% (56)**	12.7% (9)	8.5% (6)	71
Geology	**77.8% (56)**	9.7% (7)	12.5% (9)	72
Aggregate Extraction	**43.9% (29)**	34.8% (23)	21.2% (14)	66
Urban Growth Patterns	**45.3% (29)**	32.8% (21)	21.9% (14)	64
Forest Ecosystems	**78.6% (55)**	10.0% (7)	11.4% (8)	70
Water Quality Protection	**75.7% (53)**	11.4% (8)	12.9% (9)	70
Biodiversity	**75.0% (51)**	11.8% (8)	13.2% (9)	68
Sustainable Living	**58.5% (38)**	24.6% (16)	16.9% (11)	65
Green Development	**63.1% (41)**	18.5% (12)	18.5% (12)	65
Cliff and Cave Ecosystems	**81.7% (58)**	11.3% (8)	7.0% (5)	71
Trail Etiquette	**80.9% (55)**	10.3% (7)	8.8% (6)	68
First Canadians History (from archaeology through to European settlement period)	**63.6% (42)**	24.2% (16)	12.1% (8)	66
			answered question	**76**
			skipped question	**78**

23. What is the one thing (feature, facility or program) that you would MOST like to see happen at each conservation area?



	Response Percent	Response Count
Crawford Lake	**96.2%**	**100**
Hilton Falls	63.5%	66
Mount Nemo	61.5%	64
Rattlesnake Point	62.5%	65
answered question		**104**
skipped question		**50**

24. What is the one thing (feature, facility or program) that you would LEAST like to see happen at each conservation area?



	Response Percent	Response Count
Crawford Lake	**94.7%**	**90**
Hilton Falls	65.3%	62
Mount Nemo	60.0%	57
Rattlesnake Point	63.2%	60
answered question		**95**
skipped question		**59**

~~Better signage on the trails and a loop so one can't so easily get lost~~
~~Acquire more land protect from development~~
~~Weekend workshops~~
~~Maintain nature setting, establish education series so that each week or month is different learnings~~
~~Educational programs~~
~~Rock climbing instruction~~
~~Washrooms, extended hours~~
~~Potable Water/Camping~~
~~Dog ban~~
~~Forest/Natural area restoration, improved Bruce Trail (off road etc.) , land acquisition~~
~~Yurts~~
~~Caving instruction~~
~~Camps~~
~~I worry about safety of children there~~
~~Access to bottom from the top~~
~~Playground~~
~~Instructional classes~~
~~Environmental awareness programs~~
~~Expand hiking~~
~~Clearer marked trails~~
~~Cross-country skiing~~
~~Guided hikes for families~~
~~Cross country skiing~~
~~More picnic areas~~
~~Portable water source~~
~~More hiking trails~~
~~Serviced washrooms~~
~~Barbeques~~
~~Focus on the natural environment and Biodiversity~~
~~Water fountains washrooms~~
~~Natural green space and trails~~
~~Ecosystem preservation~~
~~More biking trails~~
~~Cross country skiing trails~~
~~Climbing area~~
~~More trails~~
~~Camping~~

23. What is the one thing (feature, facility or program) that you would MOST like to see happen at Rattlesnake Point Conservation Area?

Individual answers were recorded as follows:

A playground
More trails
Visitor centre with information about Rattlesnake Point and washrooms
Rock climbing
Family camping
Educational programs for schools
Native species protection
More educational programs

Protect nature
Special Events
Playground
More Trails
Better trail markers
Better accessibility
Education - programs for guided stewardship
Low impact Interpretive programs
Rare species education/monitoring
Disc golf
Restoration of trails
Winter Camping
Biking trails
Water available
Mountain biking
More parking areas and unlock the washrooms earlier in the season! (more washrooms would be good too)
Rock climbers to have permanent anchors (less impact on the rock/trees)
Guided hikes
Signage (interpretive)
Educational programs
Rock climbing instruction
Extended hours
Potable Water/Camping
More climbing use.
Forest/Natural area restoration, improved Bruce Trail (off-road etc.) , land acquisition
Keep the picnic people here and here only, given them the conference centre or building for related groups
Visitor centre with cafe
Camps same
Access to bottom from the top
Playground
Cross country skiing
Caving
Unsure
Allow limited mountain biking, especially if trails could be linked to Kelso/Hilton/Crawford
Clearer marked trails
Cross-country skiing
Special event for families with young children (climbing/caving)
Link to Crawford Lake Conservation Area
Forest conservation
Adventure trail involving caving and climbing
Bike trails
Climbing instruction
Serviced washrooms
Telescopes
Focus on Cliff and cave biodiversity
Water fountains shelters washrooms
Natural green space and trails
Ecosystem preservation
Expanded visitor center

Cross country skiing trails
Left as is
More trails
Yurts

~~24. What is the one thing (feature, facility or program) that you would LEAST like to see happen at Crawford Lake Conservation Area?~~

~~Individual answers were recorded as follows:~~

~~"Amusement" park attractions (e.g. "Waterworks")~~
~~A generic approach to First Peoples culture which would result from an attempt to include every First Nations group as well as Inuit and others~~
~~Aggregate Extraction~~
~~Aggregate Extraction~~
~~Aggregate Extraction~~
~~Aggregate Extraction~~
~~Aggregate Extraction~~
~~Aggregate Extraction~~
~~Any more buildings or parking lots, including camping~~
~~Any sort of conference centre/banquet facility~~
~~Anything that harms long term sustainability of the area either environmentally or fiscally~~
~~Banquet centres, buildings and construction~~
~~Banquet facilities~~
~~Banquet facilities~~
~~Banquet hall~~
~~Bikes~~
~~Biking~~
~~Biking~~
~~Building of any sort~~
~~Cafe~~
~~Cafe or anything else that is too consumerism related~~
~~Camping~~
~~Camping~~
~~Camping~~
~~Camping~~
~~Camping~~
~~Camping~~
~~Camping & mountain biking~~
~~Camping (limited number of special events excepted)~~
~~Camping of any type~~
~~Camping, conference, banquet, mountain biking~~
~~Close~~
~~Commercialization~~
~~Commercialization of Archaeology Site i.e. Iroquoian Village~~
~~Conference facilities~~
~~Conference/meeting halls~~
~~Convention center~~
~~Convention centre~~
~~Extra buildings specifically for clubs~~
~~Family Camping~~
~~Further development -buildings, etc~~

24. What is the one thing (feature, facility or program) that you would LEAST like to see happen at Rattlesnake Point Conservation Area?

Individual answers were recorded as follows:

Visitor Centre
Conference/meeting halls
Banquet hall
Biking
Biking
Building of any sort
Camping, conference, banquet, mountain biking
Any sort of conference centre/banquet facility
Interpretive centre
Junk food vendors
More camping facilities
Significant new buildings, any other encroachment to natural space
Further development -buildings, etc
Cafe
Rental facilities or conference centre
Conference venue
Removing programs
Mountain biking
No bikes
Paving of trails to make them accessible to strollers
Sustainable living
Habitat Loss due to Human Development; i.e. Building Operational Structures that are not LEED
Too many commercial facilities
Vending machines
Banquet centres, buildings and construction
Sales of trinkets or snacks from corporations
Convention center
Nature changed in any way
Vending machines
Mountain biking
Nothing that will disturb the natural habitat
View destroyed
Cafe
Anything that harms long term sustainability of the area either environmentally or fiscally
Increased mounting biking/caving
Conference Centre
Conference facilities
Increased fees
Camping
Any more buildings or parking lots added, including camping
More climbing taking over the cliffs
More cycling and built structures
Close
Banquet facilities
Bikes
Banquet hall
Camping
Mountain biking

Convention centre
More camping with no privacy (less likely used)
No trail upgrade
Gift shop
Cafe

Community Workshop Stage Three: Master Planning
October 7th, 2010 2-4pm & 6-8pm
Administration Office Conservation Halton

Agenda

- Presentation / Purpose
- See Individual Plans.

Purpose

- Master Planning process
- 4 Conservation Areas
  - Crawford Lake
  - Hilton Falls
  - Rattlesnake Point
  - Mount Nemo
- Public engagement to review draft master plans.

Inventory and Analysis

- Comprehensive field work was done to map the existing natural and cultural heritage features
- Based on this a ranking system for Priority Protection Areas was developed.
- Based on this a system of Park Zones was developed.

Concept Development

- Three concepts were developed for each conservation area.
- The general framework was three levels of development:
  - Concept A: Meet expectations
  - Concept B: Exceed expectations
  - Concept C: become a ‘must-see’ destination

Public Consultation

- After the public meeting held on May 29th, a survey was distributed at all conservation areas and was posted to Conservation Halton’s website.
- By June 30 there were xx individual responses
- People were asked what facilities and services and interpretive programming they would like to see at each of the conservation areas.

Portfolio Approach

- World class system of regional parks
- Collection of diversified natural and cultural heritage assets
- Each is unique
- All offer a base level of amenity and service
- Each addresses different market interests
- Unique Development and Management Plans







EDA Collaborative Inc.

Portfolio Approach

Additive Method

- World class system of regional parks
- New enhanced level of visitor services / amenities

PLUS

- Distinct value-added service / special experience

Value-Added Experience	CL	HF	RSP	MN	K/GE	MB	GL
Proposed Base Level							
Primary Resource	Escarpment					Wildlife Centre	16 Mile Creek

At Glenorchy, the basic services will possibly be made available on municipal lands.

EDA Collaborative Inc.

Enhanced Level of Services

- Clear Corporate Branding
- Arrival and Accessibility
- Services
- Facilities and Amenities
- Quality Assurance
- Consistent Interpretive Experience

EDA Collaborative Inc.

Shared Features

Significant Natural Heritage Features

- Escarpment
- Forest
- Wetlands
- River Valley
- Open spaces
- Canyon

Services and amenities

Nature viewing and appreciation

Community health / wellness

Educational Opportunities

EDA Collaborative Inc.

Concept Development

- Protect / Restore Nature – provide enhanced base level of services

- Exceed Expectations - Base level plus additional, "value added" services

- Become a Regional Destination – a “must see/must do” experience

EDA Collaborative Inc.

Rattlesnake Point

Unique Features
Exposed cliff face
Nassagaweya Canyon
Lookouts

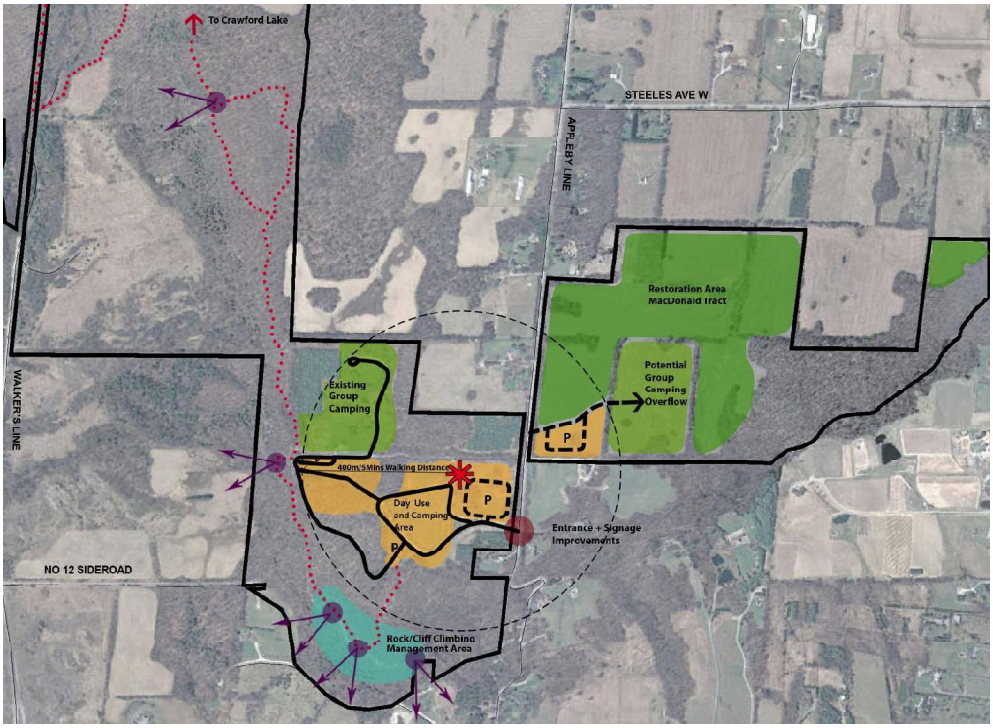
Character
Iconic promontory
Pastoral

Existing Role
Group camping, day use, climbing
Vistas

Potential Role
Adventure recreation centre

EDA Collaborative Inc.

Rattlesnake Point Opportunities



Workshop Questions

- How would you protect / enhance the Natural Heritage System? – restrict / educate / other?

- What recreation and interpretive programming opportunities would you support? – active, passive, schools, seniors, others?

- What types of facilities and amenities should be provided? – trails, washrooms, visitor centre?

Time	**Stream One** (In Crawford Lake Theatre)	**Stream Two** (at the Gathering Place)
1:00 - 1:45	**Presentation - Portfolio and Concepts** (In Crawford Lake Theatre)	
1:45 - 2:15	**Rattlesnake Point**	**Mount Nemo**
2:15 - 2:45	**Crawford Lake**	**Hilton Falls**
2:45 - 3:15		**Rattlesnake Point**
3:30 - 4:00	**Wrap-up** (in Crawford Lake Theatre) **Work Group Reports** **Summary of Findings and Next Steps**	

Workshop Directions

- **Report back at 3:30 to share ideas, outcomes and wrap-up**

Glenorchy Conservation Area Master Plan Evaluation Matrix- July 9, 2009

Environmental

10 Little to no negative impact on the environment or potential for positive impact
5 Some negative impact on the environment,
0 Significant negative impact on the environment,

Environmental	Concept A	Concept B	Concept C
a) Avoidance of impacts and encroachment on very high and high priority protection areas (PPA's) (as per figure 4.4 in stage 1, Vol 2 report) ,			
b) Avoidance of impacts on natural heritage functions such as spread of invasives, trampling, loss of natural cover, habitat fragmentation, noise and increased imperviousness			
c) Potential to restore or improve natural features and natural heritage systems, diversity and connectivity,			
d) Achieve long-term ecological function and native biodiversity			
e) Conformity to national, provincial, regional or local plans with respect to natural heritage objectives			
Total Environment (weighted)	0	0	0

Social

10 Access or provision of appropriate opportunities,
5 Moderate access or provision of opportunities,
0 Little access or provision/opportunities

Social	Concept A	Concept B	Concept C
f) Accessibility – physical, visual, transportation, affordability			
g) Provision of educational opportunities / educational facilities			
h) Provision of outdoor recreational opportunities			
i) Access to views, quiet spaces, contemplative areas			
j) Conformity to provincial, regional & local recreational plans			
Total Social			

Economic

10 Low cost or high revenue potential,
5 Moderate cost and/or revenue potential,
0 High cost and/or low revenue potential

Economic	Concept A	Concept B	Concept C
k) Capital costs (cumulative over 10 year period)			
l) Operating costs			
m) Direct revenue generation potential			
n) Sponsorship or partnership potential			
o) Potential for positive economic impact upon the community			
Total Economic	0	0	0

	Concept A	Concept B	Concept C
Total Points	**0**	**0**	**0**

Rattlesnake Point Conservation Area – Concept Development and Evaluation

EDA Collaborative Inc. was contracted to develop Master Plans for five Conservation Halton conservation areas. The new Glenorchy Conservation Area Master Plan has been completed and approved. During **Stage 1** of master planning, a thorough inventory and analysis of each site was undertaken. During **Stage 2** of the Master Planning process, three concepts were developed for each conservation area, ranging from simple upgrading of facilities to becoming a world-class attraction.

Framework for Concept Development: given a 'portfolio' of conservation areas, each with a unique special feature.

	Crawford Lake	Hilton Falls	Rattlesnake Point	Mount Nemo	Kelso/Glen Eden	Mountsberg	Glenorchy
Value-Added Experience	Village	Multi-use Trail Network	Escarpment Climbing	Escarpment Views	Active Recreation	Bird of Prey Centre	Nature Reserve
Proposed Base Level	✓	✓	✓	✓	✓	✓	*

**At Glenorchy Conservation Area the basic services will possibly be made available on municipal lands.*

The concepts for Rattlesnake Point Conservation Area were as follows.

Concept A: Upgraded status quo: provide proposed base level of Conservation Halton conservation area services: meet expectations;
An emphasis on conserving and protecting the natural environment while offering some opportunities for recreation and education.

The facilities and features of Concept A include the following:

- Site identification and directional signage
- Improved existing access roads
- Improved, sustainable 50-car parking area (lower camping area)
- Improved, sustainable 100-car parking area (upper camping and day use area)
- Improved, sustainable 10-car parking area x2 (group campsites)
- New small picnic area
- Upgraded toilets: new standard units (6 units)
- Automated gate with payment
- Bike rack
- New hiking trails
- Decommission unauthorized trails (i.e., block entrances)
- Upgrade existing trail system to avoid ponding and braiding
- Upgrade existing trail signage, blazing and mapping
- Boardwalks or bridges
- Fencing or trail delineation along sensitive trail areas

Concept B: Base level plus additional "value added" services: exceed expectations;
A balanced approach between environmental preservation and public enjoyment.

ADD:

- Additional interpretive signage, minimum 5 new signs: views, ancient cedars impacts / management, climbing impacts / management
- Recreational Climbing Centre: Conservation Halton to undertake training and supervision of climbing rather than outside tour operator
- Additional upper comfort station / pavilion – 175 square metres
- Enhancements to picnic / day use areas
- Walk-in camping on the east side of Appleby Line (un-serviced)

Concept C: Become a regional destination: a "must see/must do" experience with enhanced opportunity for revenue generation: greatly exceed expectations;
Promote the site to regional destination status while still protecting the environment to the maximum extent possible and offering a strong educational and recreational component for the community.

ADD:

- Expand walk-in camping east of Appleby Line (un-serviced)
- Expand visitor centre with climbers activity focus: add 700 square metres
- Site services upgrades: water, sewage disposal, electrical
- Additional land acquisition (as and where available)

Evaluation: Each concept was evaluated according to the criteria listed in the table below. The concept that scored the highest and best satisfied public desires, as determined through a comprehensive public consultation program, is being recommended to be carried over to **Stage 3** – refinement of the master plan.

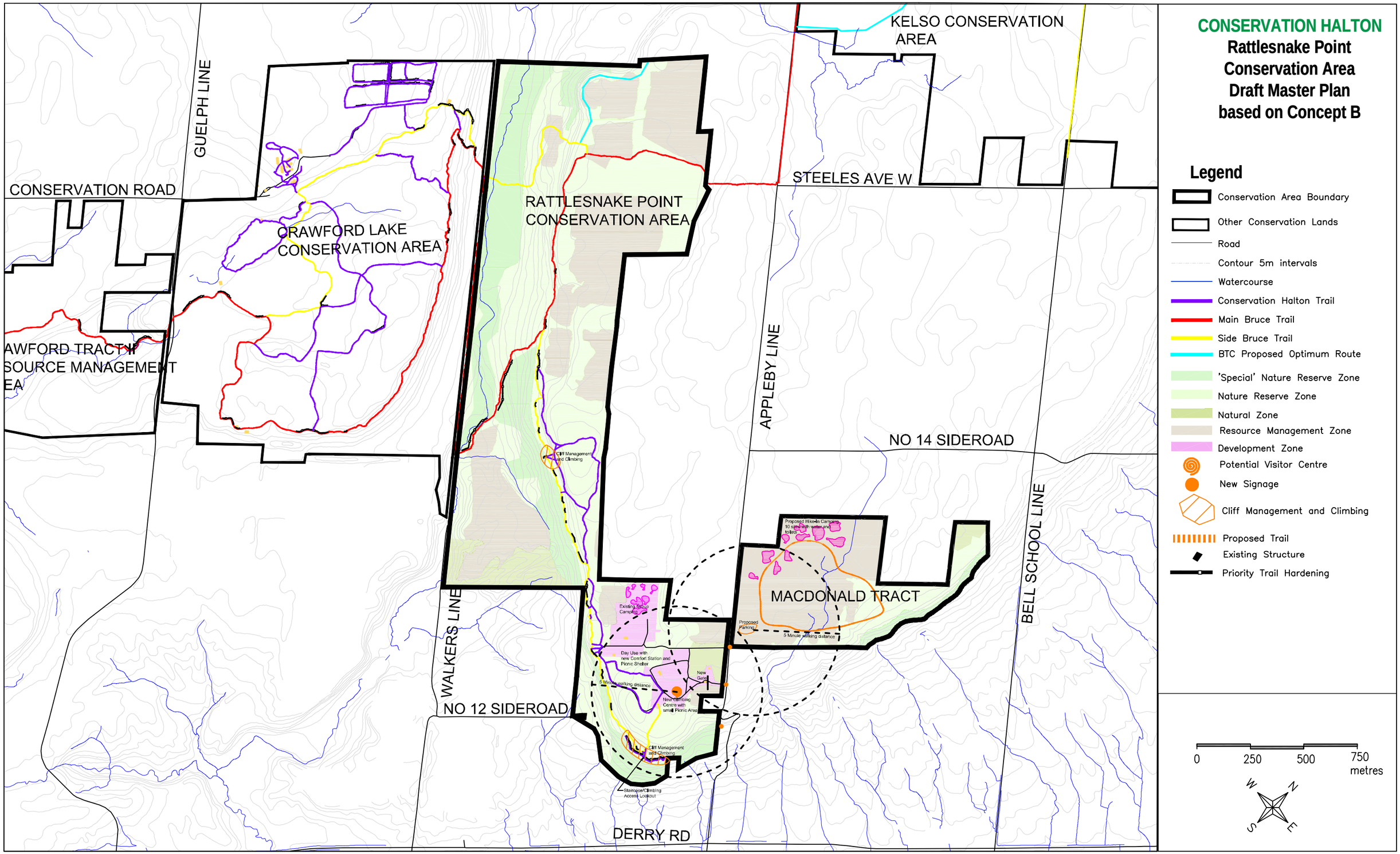
Criteria on which Concepts were Evaluated

- Environmental Sustainability (weighted x2)
  - Intrusion into high priority protection zones, impacts on natural heritage features, conformity to plans.
- Social Sustainability
  - Access, recreational and educational opportunities, conformity to plans.
- Economic Sustainability
  - Revenue generation, partnership potential, capital costs, operating costs, potential for positive economic impact on the community.

Attendance Estimates (attendance over the 5-year period 2005 – 2009 averaged just over 59,000 per year)

Development Scenario	Attendance Implications, 2021 (rounded)	Rationale
Concept A	105,000	Development scenario enables the park to accommodate growth in attendance that will occur as a result of the population increase from the surrounding area, plus the more intense promotion of Conservation Halton itself as a tourist attraction.
Concept B	126,000	Utilization will increase by 20% as a result some improved facilities over Concept A (primarily more extensive trail development and the recreational adventure climbing sports centre).
Concept C	210,000	Utilization will increase by 50% as a result of the new visitor interpretation centre.

Conclusion: Concept B shall be carried as the basis for the draft master plan.


CONSERVATION HALTON
Rattlesnake Point
Conservation Area
Draft Master Plan
based on Concept B
Legend
Conservation Area Boundary
Other Conservation Lands
Road
Contour 5m intervals
Watercourse
Conservation Halton Trail
Main Bruce Trail
Side Bruce Trail
BTC Proposed Optimum Route
'Special' Nature Reserve Zone
Nature Reserve Zone
Natural Zone
Resource Management Zone
Development Zone
Potential Visitor Centre
New Signage
Cliff Management and Climbing
Proposed Trail
Existing Structure
Priority Trail Hardening
0
250
500
750
metres
W
N
S
E
GUELPH LINE
CONSERVATION ROAD
CRAWFORD LAKE
CONSERVATION AREA
AWFORD TRACT
SOURCE MANAGEMENT
EA
RATTLESNAKE POINT
CONSERVATION AREA
KELSO CONSERVATION
AREA
STEELES AVE W
APPLEBY LINE
NO 14 SIDEROAD
BELL SCHOOL LINE
MACDONALD TRACT
WALKERS LINE
NO 12 SIDEROAD
DERRY RD
Cliff Management and Climbing
Proposed Hike-In Campsite 10 sites with water and toilet
Existing Group Campsite
Proposed Parking
5 Minute walking distance
Day Use with new Comfort Station and Picnic Shelter
5 Minute walking distance
New Gate
New Climbing Centre with small Picnic Area
Cliff Management and Climbing
Staircase/Climbing Access Lookout

Summary of October 10th Open House
Issues and Agency Response to Stage Two Reports
And Working Team Reponses to Both

2010-10-07 Public Open House: Comments Received and Issues Discussed

The Open house was advertised on September 23, 2010 in the Burlington Post, Milton Champion and Oakville Beaver. There was a Media Release on September 27ths on Conservation Haltons website. On September 1st, 2010 letters were distributed to neighbours within 120 meters from each of the four parks. In the letters it was promoting the neighbours to come out and be part of the plan.

The Open houses were held in the afternoon and the evening of October 7th at Conservation Haltons Administration Office. Approximately 10 members of the public attended the afternoon session including: residents, someone from a naturalists club, a representative of the Toronto Caving group and some Bruce Trail members. In the evening 12 people attended including a member of Adventureworks and a Bruce Trail member.

Bruce Trail members and neighbours were upset that they had to pay to walk in the conservation areas. Conservation Halton staff explained that the conservation areas need the revenue to upkeep the areas and reduce environmental damage. Prior to the implementation of the policy requiring Bruce Trail members to pay for entrance to Conservation Halton conservation areas, Conservation Halton was also the only conservation authority on the escarpment that did not charge Bruce Trail members for admission.

Neighbors were concerned about the potential impacts that developments on conservation lands would have on their own lands. Most were satisfied to see that developments were minimal and would have little to no impact on adjoining properties. However, on neighbour requested that the development zone in Mount Nemo be adjusted such that there would never be an opportunity for development in the northwest corner of that zone as his property is across the road from there. That section of the conservation area has been rezoned to Natural Zone.

A climbing school operator was upset by the perceived slight to school operators by calling them tour operators and implying that their activities were damaging to the environment. Ron Kindt explained in more detail the relationship the conservation authority would have with climbing groups.

Written comments;

Concern about gate fees. [There should be] municipal funding for parks. Designation of "Park" not common knowledge.

The "Parks" in general should be marketed for their natural features, not just an area to picnic. They are so much more than a park they are conservation areas with lots of natural value and natural attractions that could be promoted and need to be protected, too.

Mention equestrian uses as traditional use (pg. 43)

Great job! Interested in the future of some of the initiatives – Visitor Impact Monitoring! Great to have the opportunity to view the upcoming Master Plans for four conservation areas at once.

Field restoration at Mount Nemo Conservation Area is an opportunity for teaching.

Rattlesnake Point: Recommend tendering out training and supervision of climbing with appropriate charges / rent. Strongly support no cycling.

Dufferin aggregate has offered to supply permeable concrete for paving proposed under these master plans.

Issues and Agency Response to Stage Two Reports
Mount Nemo Conservation Area

Public Open House

- Community impacts due to development and increased visitation
    - Buffers provided to screen views; major traffic increase not expected
- Conservation Halton's Bruce Trail policy re: free member access
    - Revenue to maintain area and control environmental damage.

Niagara Escarpment Commission

- Management plans required to mitigate visitor impacts on cliff face ecosystem
    - Visitor Impact Management program is being recommended.
- Inquired about strategic trail closures
    - Trail closures will be reviewed on a case-by-case basis

Conservation Halton Staff Member Concerns

- Field restoration and other Natural zones – need to look at maintaining pollinator habitat. My inventories in these fields indicate that they are currently some of the most active and biodiverse areas for insects (pollinators and predators). Natural meadow habitat can also provide a good buffer or forest communities. Resource management zones doesn't always need to be planted with trees.

Rattlesnake Point Conservation Area

Public Open House

- Concern about Conservation Halton taking more control of climbing activities
    - Conservation Halton will work with climbing tour operators and education suppliers to develop appropriate strategy for use of climbing facilities.
- Concern on the proposed trail in MacDonald Tract as it may give access to escarpment forest. It may not be a good idea because people will continue along the escarpment edge.

Niagara Escarpment Commission

- Concern that public does not support development

        - Recommendations will be derived from community engagement inputs as well as environmental, social and economic sustainability analysis
- Preferred concept consistency with sustainability evaluation results.
    - Preferred concept seeks balance with environmental, social, economic needs.
- Interpretive signage relative to ancient cedars and climbers' impacts
    - Will be posted as part of interpretive / education program.

Conservation Halton Staff Member Concerns

- Proposed trail in MacDonald Tract may give access to escarpment forest. May not be a good idea because people will continue along the escarpment edge.
- Some of the fields currently under agricultural production can be maintained as meadow habitat and have a high potential for pollinators. There is currently a huge lack of pollinators/meadow habitat in this park.
- The idea of spreading the campsites out so much – into the MacDonald Tract is disliked. This increases our footprint and may be hard to maintain and monitor. It is also a good area to maintain meadows.

Hilton Falls Conservation Area

Public Open House

- Concern about intrusion into pollinator habitat
    - A policy on pollinator habitat will be included in the master plan.

Niagara Escarpment Commission

- Concern about impact of mountain biking
    - A sustainable trail Visitor Impact Management program is being recommended

Conservation Halton Staff Member Concerns

- Area marked as "Proposed Day Use"; some of this natural zone was suppose to be a butterfly garden, (a in memory for a Bruce trail member.) This is currently another of the good pollinator habitats and would be good to keep it as such(under hydro corridor). Maintain Natural zone on west side of conservation area as meadow
- At the intersection of two Conservation Halton trails northwest of the reservoir is currently a great meadow with much activity- small but active.

Crawford Lake Conservation Area

Public Open House

- Concern about increased impacts on ecological features
    - Development is focused in development zone / least sensitive
    - Visitor Impact Management program is being recommended
- Conservation Halton staff member suggests that the trail which includes a section to be decommissioned should be entirely decommissioned. It has been decided ot close this trail.
- Also notes presence of vernal pool south of entrance road. If possible new entrance road will be routed away from this ecologically sensitive area.

Niagara Escarpment Commission

- Concern about proposed visitor centre footprint / increased visitation
    - Detailed program being prepared to support education programs
    - Visitation will be fairly balanced between hikers on weekends in the summer and school children on weekdays in the off-season.
    - Visitor Impact Management program is being recommended
- Can some proposed uses be housed in re-purposed existing buildings.
    - Being studied as part of overall facility program

Conservation Halton Staff Member Concerns

- When constructin new parking lots, permeability should be considered.
- When constructing trails, do not use the divits in the gravel. Instead, install small culverts so the water does not was all the gravel away.
- An area designated as Nature Reserve south of the entrance road adjacent to Guelph line should be Special Protection area due to the presence of a significant vernal pool by the lane way. Suggest moving the lane northward.
- Prefers northern site for visitors centre
- Maintain pollinator habitat(Natural zone at north end of conservation area)
- Trail marked decommission – the whole trail should be decommissioned as discussed with former park manager in exchange for a trail that went in. There is not benefit to keeping this trail, especially if it is rerouted. It leads to too much confusion to the hikers out there. Adds no benefit to the trail system as a whole. People taking the red and yellow trails usually want to go to the valley . Having this trail as a short cut also add s no value. Taking the red/yellow trail adds at tops 10m longer- not significant.