

Executive Summary

Vision Statement

Conservation Halton's Crawford Lake Conservation Area aspires to be the premier Niagara Escarpment Nodal Park that functions as a significant, regional educational and tourist destination, presents interpretation of natural and cultural heritage, offers recreational opportunities, and protects and enhances the unique escarpment environment.

Significant Site Attributes of Crawford Lake Conservation Area

The Crawford Lake Conservation Area features spectacular natural and cultural heritage. As part of the UNESCO World Biosphere Reserve designated Niagara Escarpment, Crawford Lake Conservation Area features a rare meromictic lake, a 500 year-old Ontario Heritage-designated Iroquoian village site, innovative programming, high customer service delivery standards, and efficient operations management. Crawford Lake Conservation Area possesses an impressive array of natural and cultural heritage features including:

- The richest and most unique combination of natural and cultural features of any conservation area within the Conservation Halton conservation area system;
- A unique meromictic lake;
- In combination with the Crawford Tract II Resource Management Area, which consists of 335 hectares of forests. Comprising 50 different habitat types, expansive valley wetlands and prominent escarpment cliff and rim features;
- An accurately dated First Nations archaeological site with three Iroquoian longhouses reconstructed on the exact footprint of the archaeological findings;
- A network of 18 kilometres of hiking and snow shoeing trails, featuring the Crawford Lake boardwalk, scenic canyon lookouts and trail connections to adjacent natural areas and the Bruce Trail;
- Designation as part of a World Biosphere Reserve by UNESCO 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 Area of Natural and Scientific Interest (ANSI) representing the Crawford Lake/Milton Outlier Valley Life Science ANSI and Lowville Re-entrant Valley Earth Science ANSI features;
- Identification as Provincially Significant Wetlands for the Nassagaweya Canyon Wetland and Crawford Lake and Calcium Pits Wetland Complex;
- Over 612 plant species (47 rare, 103 uncommon), 123 bird species (16 rare, 26 uncommon), 33 mammal species (5 rare, 2 uncommon), 13 reptiles (4 rare, 1 uncommon), and 9 amphibians (2 rare, 5 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 20 ancient Eastern White Cedars;
- Modest visitor centre and educational facility offering a variety of natural and cultural interpretive programs and exhibits with over 89,000 visitors in 2010;

- Major interpretive and educational facility offering a variety of natural and cultural programs and exhibits with over 40,000 students attending last year;
- Existing natural heritage features provides the equivalent of \$2.2 million in ecosystem services annually.

Existing Policy Framework

The *Master Plan for Crawford Lake Conservation Area* builds on and supports existing Conservation Halton and provincial policy documents including the *Conservation Halton Strategic Plan (2009)*, *Halton Escarpment Parks – A Limestone Legacy* plan (2007) and the *Niagara Escarpment Plan (2005)*.

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

Within the provincial *Niagara Escarpment Plan (2005)*, Crawford Lake Conservation Area is recognized as a key component of the Niagara Escarpment Parks and Open Space System and has been identified as an Escarpment Nodal Park. As such, it is expected to provide visitor information services on Escarpment parks and open space activities, points of interest and attractions for the larger parks system and surrounding community.

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. Therefore, Conservation Halton has been primarily using park 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

Crawford Lake Conservation Area, along with the other Conservation Halton conservation areas, suffers from 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 conservation area 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 conservation areas have experienced 9.4 percent annual increase in visitation, while the regional population has grown at a rate of 4.5 percent 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 in healthy-lifestyle pursuits and interest in First Nation's culture, 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: Crawford Lake Conservation Area's unique and diverse natural heritage system, as documented under this master plan, is generally well protected and secure. However, some deterioration was identified at certain heavily used locations along the trails system,

highlighting the need for stronger monitoring and protection measures, especially in light of the population and visitation projections.

Facilities and Amenities: Central to Crawford Lake Conservation Area's vision will be a new state-of-the-art 'green and accessible' visitor interpretive centre to house cultural artefacts and interpretive displays, host programs and educate visitors about the park's unique features, including a reconstructed 15th century Iroquoian village, the meromictic lake, natural heritage trails and scenery, and sensitive escarpment ecosystems. To fulfill Crawford Lake Conservation Area's vision, a 1300 square metre interpretive and educational centre (new visitors center) is proposed. The proposed centre will meet the current and future demand for educational visits, provide space to house archeological artifacts found on-site, provide interpretive presentation space and displays, provide tourist attraction facilities, meet Ontario accessibility requirements and standards and model an environmentally sustainable building.

Cultural Heritage Protection: There are five registered archaeological sites within the Crawford Lake Conservation Area, with the two largest and most significant located at the Middle Iroquoian village site. The authentically reconstructed village on the exact footprint of the original longhouses represents an extremely rare interpretive and educational resource. Through the master plan's outreach and consultative process with First Nations of Ontario and others, it is evident that there is potential to explore partnership opportunities that further develop the interpretive and educational values associated with these cultural spaces.

Visitor Experience: While the natural and cultural features of the Crawford Lake Conservation Area are spectacular and unique, the present built amenities, facilities and infrastructure are inadequate to serve the projected growth in visitation. While visitors currently enjoy their experience at Crawford Lake Conservation Area, continued growth will put facilities beyond the capacity they were built for, which will detract from the quality of the visitor experience.

Education and Programming: The educational programming at the Crawford Lake Conservation Area is a strong and important component compared to the other escarpment conservation areas. Crawford Lake Conservation Area programs support school curricula and offer hands on First Nation cultural experience that is not offered anywhere else in the region. Current school group program attendance is close to maximum capacity for most of the school year and limited facility space restricts the expansion of programs and ability to meet current and projected increased demand.

Recommended Policies:

The master plan that has been developed to support the Crawford Lake 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 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 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. The main elements of the master plan are summarized as follows:

- A major new investment in a state-of-the-art interpretive and educational centre (new visitor centre) of approximately 1300 square metres that provides visitor orientation and information, interpretive exhibits and educational facilities. It is recommended that the costs be identified for budgeting purposes and the building program and space allocations be further refined as part of a detailed feasibility study with final approval through the Niagara Escarpment Development Permit process.
- 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.
- An enhanced, realigned sustainably-designed system of small-scale roads and parking areas that promotes safety and security for visitors and a positive sense of arrival, and which is tastefully designed to harmonize with the natural setting of the conservation area.
- Repurpose existing parking lot by Gathering place to become Special events area
- A new 250 car sustainable parking lot north west of village
- Upgrade overflow parking area with grass paver system
- Upgrade existing parking lot by gatehouse
- Upgrading Iroquoian village features to include constructing two fully functional longhouses, and one partial longhouse. Refurbish existing longhouse and reconstruct palisade. This will provide additional educational and interpretive facilities and to meet heritage designation standards and building code requirements.
- Renovate and upgrade existing gatehouse
- Reconstruct palisade
- Re-purposing the existing Visitor Centre and Gathering Place buildings to complement proposed new interpretive and educational centre.
- Site technology upgrades including telephone and video surveillance.
- Accessibility upgrades for all buildings and pathways to meet forthcoming *Accessibility for Ontarians for Disabilities Act (AODA)* built environment standards.
- Trail system improvements to ensure protection and enhancement of the natural heritage features.
- Upgrading the existing boardwalk and related interpretive lookouts around the lake to meet anticipated user needs.

- An upgraded standardized palette of day-use passive recreation amenities such as picnic shelter, comfort station, site furniture, etc.
- New maintenance building and works yard.
- Site services upgrades including potable water, electrical service and wastewater treatment that use sustainable technologies that demonstrate respect for 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 Crawford Lake Conservation Area amounts to approximately **\$17.5 million** over a ten-year period. A generalized breakdown of this amount is summarized below.

Interpretive and Educational Centre including: \$ 10,000,000

- Building
- Site development
- Exhibits
- Roadway/Parking Lot
- Contingencies

Site Works:

Signage	\$ 132,000
Roads and parking	\$ 1,600,700
Picnic and site furnishings	\$ 170,000
Site upgrades, longhouses and infrastructures	\$ 2,121,525
Trails	\$ 572,000
Restoration of natural features	\$ 1,035,000
Visitors Impact Management Plan (\$15,000/yr.)	\$ 150,000
<u>Subtotal</u>	<u>\$ 5,780,125</u>
Soft costs, fees, contingency (30%)	\$ 1,734,038
Total (excluding educational centre)	\$ 7,514,163

Grand Total \$17,515,163

Site Works

Overview of Financial Parameters

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

- The cost of the development plan for the Crawford Lake Conservation Area over the 10-year development timeframe is just over \$17.5 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 Crawford Lake Conservation Area is expected to grow significantly to just over 230,000 by the year 2020.
- While more visitors will generate increased revenues, the financial analysis in this report demonstrates that this by itself will not be sufficient to offset the higher costs of operation; however, despite increased operating costs, Crawford Lake Conservation Area can operate on a break even basis or even generate a small surplus, through a variety of strategies.
- To provide for 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 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 Halton 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.

In addition to the 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 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 conservation areas 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 serving local residents, as significant regional destinations, the conservation areas also serve to attract tourists to Halton Region.

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 Conservation Halton's conservation areas 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 program 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.;

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 quite significant population growth occurring in the region, which will by itself place a heavier demand upon the 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 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 individual 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.

Conservation Halton creates valuable environmental, social and economic benefits, and provides significant value-added services to Halton Region. In order to enable Conservation Halton to continue to provide these benefits, ongoing investment in Conservation Halton's conservation area facilities and programs will be required.