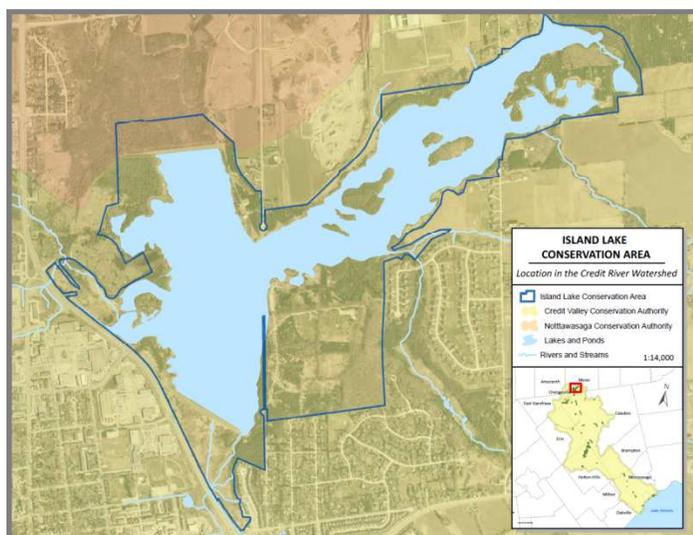


Chapter 1: Island Lake Conservation Area – Overview

Introduction

Situated in the headwaters of the Credit River in the Towns of Mono and Orangeville, Island Lake Conservation Area (ILCA) was one of CVC's first land securement projects which began in 1957. Formerly known as Orangeville Reservoir Conservation Area, ILCA's 164ha reservoir was created with the construction of two dams in 1967. The development of the reservoir aimed to better manage flow conditions and improve water quality south of the Town of Orangeville. Today this 332ha conservation area represents an important natural space that welcomed almost 150,000 visitors in 2015.



Island Lake Conservation Area

Property Management History

ILCA is composed of several individual parcels of land, the first of which was purchased by CVC in May of 1957 to facilitate the creation of the reservoir. Since that time, several additional parcels have been acquired through purchase and donation.

The idea to create a reservoir in Orangeville stemmed from CVC's 1956 Report which recognized that a reservoir in this location could help augment low flow conditions in the Credit River and at the same time, improve water quality south of Orangeville.

Created in 1967, the reservoir also provided opportunities for water based recreation in the Credit River headwaters and on June 17th 1970, the *Orangeville Reservoir Conservation Area* officially opened to the public.



Construction of ILCA's South Dam

In 1975, two nature trails were completed and the first maple syrup program was held. An education centre was constructed in 1976 and has been leased to the Upper Grand District School Board since 1992.

The first Master Plan for ILCA was developed in 1979. The recommendations in this report were intended to guide capital development and programming. A more detailed Management Plan was created in 1997 (amended in 2005), and provided updated direction for the development of ILCA. Over the past twenty years much of this plan has been accomplished including the construction of new roads, a beach, parking lots, picnic areas, washroom facilities and a significant expansion of the trail system.

Goal Statement of the 1997 Management Plan:

Island Lake is a recreation class conservation area that will be managed cooperatively as a financially self-sustaining site that protects, enhances and promotes understanding of the conservation area's natural systems; provides appropriate outdoor recreation opportunities; and adds to the local economy of the headwaters through tourism initiatives.

Partners & Friends

Many partnerships exist at ILCA, including organizations that lease or otherwise utilize portions of ILCA, such as the Island Lake Rowing Club and the School Board, as well as groups that partner on projects and events, such as the Friends of Island Lake and the Rotary Clubs. These partnerships represent important relationships and help connect the local communities and ILCA.

The Friends of Island Lake was established in 2005 as a fundraising committee under the Credit Valley Conservation Foundation. The Friends were formed to enhance community involvement and awareness of the need to expand the current trail system ILCA.

Master Planning Process

CVC will be developing a new master plan for ILCA, which will provide the framework for its future management and contain recommendations to reflect current challenges and opportunities. The master planning process will engage municipal and provincial agencies, stakeholders, partner groups and the general public to balance objectives and develop a comprehensive set of recommendations.

The master plan will include a long-term vision, goal and objectives for ILCA, and will focus on:

- Protection and stewardship of natural features and functions
- Conservation and interpretation of cultural heritage features and values
- Recreation programming and visitor facilities
- Operational infrastructure and policies

It is anticipated that the Master Plan will be developed over a 24 month period, at minimum, and is broken down into the three (3) phases of development.

Three Developmental Phases of the ILCA Master Plan

Phase I: Background Studies & Reporting (2015)

- Complete background report
- Establish stakeholder advisory committee

Phase II: Strategic Directions (2016)

- Develop vision, goals and objectives
- Determine management zones;
- Develop concept plans and recommendations
- Engage public and stakeholders

Phase III: Master Plan (2017)

- Engage public and stakeholders
- Develop final management plan; obtain approvals
- Develop implementation strategies and budget

Implementation (2017-2027)

- Secure funding through grants and partnerships
- Implement Master Plan recommendations

We are Here

The final Master Plan will contain details regarding each project and policy proposed for ILCA. Every project, whether it's associated with recreation, operations or restoration and stewardship, will be prioritized. Estimated costs and implementation recommendations and strategies will also be developed.

Follow progress on the Island Lake Conservation Area Master Plan on CVC's website. Additional information, as well as Public Information Sessions, will be advertised and made available on CVC's website:

<http://www.creditvalleyca.ca/enjoy-the-outdoors/conservation-areas/island-lake-conservation-area/island-lake-management-plan/>



Island Lake Conservation Area (Kate Burgess)

Chapter 2: Cultural Heritage

Introduction

A study on the historical and cultural significance of Island Lake Conservation Area (ILCA) was completed in 2014. Developed in partnership with Toronto and Region Conservation Authority's Archaeology Research Management Services, the study utilized:

- Archival research
- Documented property alterations
- Modern heritage documents

The following is a summary of the historical context of the region, as well as the specific findings associated with ILCA.



Aerial view of Island Lake Conservation Area, 2004

Regional Historical Context

From 12,000 to 10,000 BP, approximately 100 to 200 Paleo-Indian nomads became established in southern Ontario following the retreat of the glaciers. They lived and hunted in small family groups around glacial lake shorelines as well as interior locations.

The advent of clay pots and the bow and arrow created major changes in subsistence and settlement patterns from 3000-2800 BP to AD 700. As populations grew, more permanent structures emerged where macrobands gathered in large sites. Trade increased across southern Ontario to groups as far as the Atlantic coast and Ohio valley.

The introduction of maize around A.D. 700 led to the development of horticulture, spurring a population increase and the establishment of permanent villages.

During the early years of colonial settlement (AD 1650 to 1805), Europeans and Aboriginals adopted each other's material goods and subsistence strategies until the Crown established reserves for Aboriginals in the eighteenth and early nineteenth centuries and granted properties to European settlers. During this period French explorers and fur traders began to travel along the Lake Ontario shoreline and explore inland, leading to the development of Metis culture.

Local Historical Context

The following is a historical overview of the local area based on archival research of the nineteenth century settlement of the ILCA property. Documentary evidence of twentieth and twenty-first century construction provides a summary of the landscape history and use.

Dufferin County

Dufferin County was born out of the Separation Act of 1874. Six townships were combined from Simcoe, Grey and Wellington counties to form Dufferin County on January 24, 1881. The development of a road from Melancthon Township to Toronto, sections of which are used as Highway 10 today, aimed to attract settlers to the area.

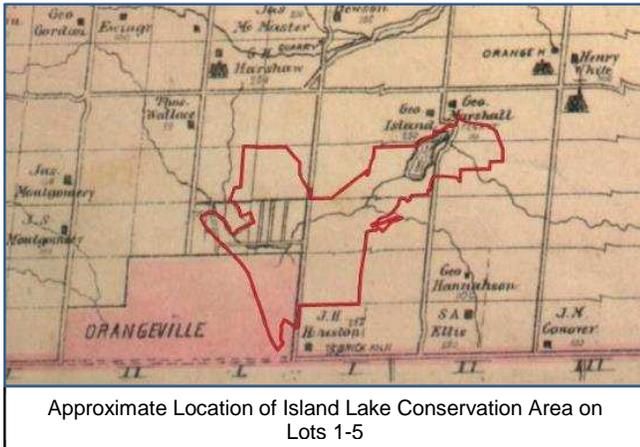
Mono Township

Mono officially became part of Dufferin County in 1881, at which time the population was approximately 4,100 people. Over the next twenty years, the population declined as residents flocked to Manitoba for better opportunities.

Village of Orangeville

The Village of Orangeville was formed in the junction where the townships of East Garafraxa, Amaranth, Mono and Caledon meet. The first known individual to settle in the area was John Corbitt, who acquired land just west of Orangeville in 1829.

The construction of a mill by James Grigg in 1837 established a small community. In 1844, Orange Lawrence purchased 300 acres of land southeast of Orangeville, including Grigg's Mill, and proceeded to build a second mill, a general store, a tavern and the first school. The community developed steadily and was incorporated as a village in 1864.

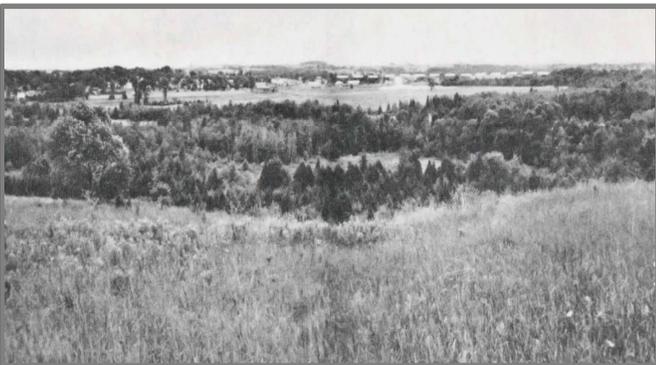


1881 Belden Map of Mono Township

The driving factor of economic expansion in Orangeville was the installment of a new line on the Toronto Grey and Bruce Railway that passed through it. Orangeville achieved town status in 1874 and was chosen as the seat for the newly formed County of Dufferin in 1881.

Island Lake Conservation Area

CVC purchased land from 31 different land owners to establish ILCA but prior to that, much of ILCA was owned by the Island family. The 1871 census indicated the lot where the current rental shop is situated was occupied by Michael Island and Joseph Island. In 1878 Michael, now 68, was recorded as a widower and residing with his 4 children with 350 acres to his name with one house and two barns. His son Joseph, a 31 year old farmer was listed as living with his wife and four children and owning 150 acres with two houses and two barns built on it. The property appears to remain in the Island family name until 1942 when the estate sold to William Jackson who sold three years later to Harold Moffatt. CVC went on to acquire the Moffatt farm in 1957.



Location of reservoir in 1956

Potential to Contain Cultural Heritage Resources

While there are no known archaeological sites registered within ILCA, there are eleven registered archaeological sites within 1km including:

- 9 EuroCanadian sites
- 1 PreContact site
- 1 Unknown site

There is potential for archaeological resources to be found at ILCA; however the potential is highest in areas in close proximity to lakes and streams, which may be buried under the ILCA reservoir.

There are records of one historic farmstead which existed on the property, originally owned by the Island family and later the Moffat family. The house was removed in 2003 due to its rapidly deteriorating condition.



Moffat Farmhouse in approximately 1972

Recommendations

- Due to the lack of urban development in and around the property and the high potential for the area to contain pre-contact and Euro-Canadian cultural heritage resources, it is recommended that archaeological assessments are conducted prior to any construction in areas that have not yet been disturbed.
- Explore and further research local knowledge of culturally significant resources such as PreContact Period landscape use and the local families who resided in the area during the nineteenth century.
- Consider education opportunities through interpretation of local and site history.

Chapter 3: Natural Heritage

Introduction

Located in the Headwaters subwatershed, Island Lake Conservation Area (ILCA) contains a diverse landscape comprised of a variety of deciduous, mixed and coniferous forest communities with pockets of cultural and wetland communities. The 164ha reservoir is a defining feature of the landscape and contains the headwaters for the Credit River.

Significant wildlife habitat and woodlands provide a diverse range of habitat types for a variety of species, including twelve species at risk. Significant regional and provincial environmental features associated with ILCA include the Orangeville Reservoir Environmentally Significant Area and a Provincially Significant Wetland which encompasses 47% of ILCA.

ILCA also acts as an important wildlife corridor and contributes to the watershed's Natural Heritage System; a network of physically and functionally linked natural areas and green space.



Island Lake Reservoir

Geology and Hydrogeology

Physical characteristics such as climate, glacial history, soils, hydrology, and geology greatly influence the distribution and composition of vegetation and wildlife that can be found in an area.

Below ILCA, are three different bedrock formations: the Queenston Formation, the Clinton-Cataract Group and the Amabel Formation. A bedrock aquifer located in the Amabel Formation provides water to several communities, including the Towns of Orangeville and Mono. Due to the reliance on groundwater in this

area, water quality and quantity are very important. ILCA acts as an important groundwater recharge source for this area.

ILCA is located in the Horseshoe Moraines physiographic region, which is characterized by a moraine of sand and silt glacial deposits. Moraines are accumulations of sediment deposited by glaciers. The soil across ILCA can be described as sandy loam.



Example of Deposit at Craig Pit, North of ILCA

Terrestrial System

ILCA is largely comprised of wetland and open aquatic habitat (62%), forest (including plantations) (24%), and meadow habitats (12%). The remaining 3% of the property contains built and recreational areas. Detailed terrestrial and aquatic inventories have been carried out at ILCA in preparation for the Master Plan.



The Eastern Milksnake is one of twelve species at risk found at ILCA

Overall, a total of 107 unique vegetation communities have been identified within ILCA. These surveys have

identified hundreds of species inhabiting ILCA's diverse ecosystems. Almost 700 unique species have been recorded at ILCA, including:

- 429 Plant Species (25% of which are non-native)
- 10 Mammals
- 130 Birds
- 9 Amphibians, 5 Reptiles
- 25 Butterflies, 25 Dragonflies, 10 Damselflies
- 32 Fish

Twelve species at risk have also been identified at ILCA. Due to their vulnerability, the presence of Species at Risk increases the importance of conserving the habitats in which they are found, which consequently helps to protect the overall biodiversity within a region.

Of the almost 700 species identified at ILCA, two reptiles, eight birds, one plant and one insect are identified as species at risk in Ontario. These include the Horned Grebe which utilizes Island Lake's reservoir during spring migration, the Bald Eagle which has been observed foraging over the water and the Eastern Snapping Turtle which resides at ILCA year round.

Eastern Snapping Turtle (Lisa Riederer)

Aquatic System

The main water feature within ILCA is the reservoir, which is classified as a large, warmwater habitat. It collects the flows of Upper Monora Creek, Middle Monora Creek, Lower Monora Creek and two small tributaries which drain into it. Approximately 2km of watercourses are located within ILCA with most of that length being part of Upper Monora Creek and the Credit River downstream of the south dam.

ILCA has a mixture of fish habitats due to the presence of inflowing and outflowing tributaries in addition to the reservoir itself. The reservoir is the most important recreational fishery in the watershed and is considered very productive.

Thirty-two fish species are found within ILCA, including:

- Largemouth Bass
- Northern Pike

- Black Crappie
- Pumpkinseed
- Yellow Perch
- Rock Bass



Largemouth Bass (Bob Morris)

Recommendations

A wide range of opportunities and challenges exist for the future management of ILCA's natural heritage features and functions. While specific recommendations are not identified here, general themes include:

- ILCA Master Planning (General): *Sustainable management practices extend to all aspects of ILCA's natural resources, including biotic and abiotic factors as well as scenery*
- Invasive Species Management: *Prioritize and manage invasive, non-native species*
- Surface Water Management: *Identify opportunities to improve water quality and manage water quantity, including outflows*
- Fisheries Management: *Review fisheries policies, identify opportunities for restoration and promote best practices for fisheries management*
- Restoration and Stewardship: *Identify and prioritize restoration activities to benefit terrestrial, aquatic and riparian habitats*
- Education and Interpretation: *Provide opportunities for the public to learn and appreciate ILCA's natural heritage*
- Land Securement: *Identify priority properties for future acquisition*
- Ongoing Monitoring and Adaptive Management: *Continue to monitor ILCA's various natural features and functions to ensure their future protection*

Chapters 4 & 5: Infrastructure & Programming

Introduction

As a *Recreation Class* Conservation Area, approximately 3% of ILCA's total area is considered 'developed'. This includes service roads, manicured open space, docks, parking lots and buildings. These assets support recreation, educational programming and conservation area operations.

Year-round programming is also offered at ILCA. Popular recreational activities include fishing, hiking, picnicking, boating, cross-country skiing and skating.

Infrastructure & Assets

ILCA's infrastructure can be organized into three general categories:

- Infrastructure and assets constructed by CVC to support visitors and recreation at ILCA. This includes items such as parking lots, signage, rental shop, pavilions, washrooms and the trail system
- Structures developed to support Conservation Authority operations. This includes the north and south dam and related infrastructure.
- Structures and ancillary features that are managed in association with a partner group or leased to a partner organization. This includes structures associated with the Island Lake Rowing Club, Memorial Forest and School Board.

Main buildings at ILCA include:

- Rental shop
- Workshop building
- Three washroom buildings
- Education Centre
- Rowing Club building
- Gatehouse
- Two office trailers
- Two pavilions
- Sugar Shack
- Dam Control House



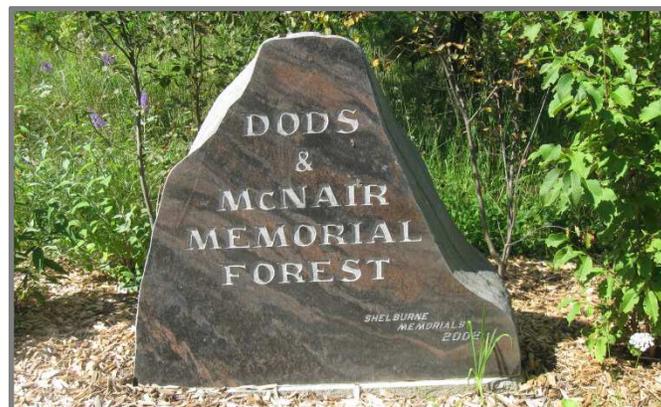
Construction of Bob's Bridges in 2013

Several additional features and ancillary assets are also located in ILCA, including:

- 13km of trail (including 2.2km of which is boardwalk)
- 268 unique signs
- Art installations associated with the Memorial Forest
- 28 benches
- 5 ha of lawn (approx.)
- Amphitheatre
- 1.9 km of road



Rental Shop at ILCA



Dods & McNair Memorial Forest is located at ILCA

ILCA has 6 sanctioned access locations with parking areas available at 3 locations. Overall, ILCA parking lots have capacity for approximately 280 vehicles. A grassed overflow area can accommodate an additional 500 vehicles during special events.

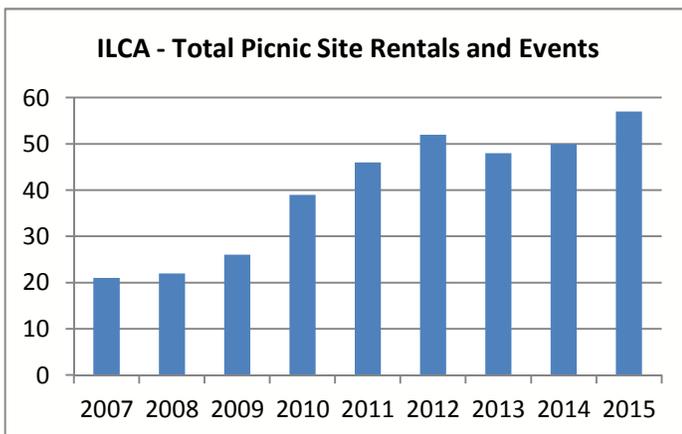
Recreational Programming

The development of ILCA's existing recreation and appreciation programs is strongly influenced by the reservoir. While a variety of recreation activities take place at ILCA, fishing and boating are amongst the most popular. With the completion of the Vicki Barron Lakeside Trail, the number of trail users in recent years has doubled.

Visitors partake in a variety of recreational pursuits at ILCA, including:

- Fishing
- Boating
- Windsurfing
- Hiking
- Photography
- Snowshoeing
- Paddle Boarding
- Biking
- Picnicking
- Canoeing
- Kayaking
- Nature Appreciation
- Ice Fishing
- Cross-country skiing
- Skating
- Self-guided interpretive hikes

Reservations for private events are recorded for ILCA on an annual basis. Tracking statistics for weddings, professional photography sessions and large picnics can help to identify visitor trends and allocations for future resources. The graph below contains the data for reservations from 2007 to 2015. ILCA averages 1 wedding per year and 40 reserved picnics.



Special Events

ILCA hosts several special events throughout the year. These include the Bass Derby in summer and Ice Fishing Derby in winter as well as partner events such as charity runs and the Dods & McNair Memorial Forest service.

Smaller affairs such as yoga and art in the park are scheduled in the summer months. The Friends of Island Lake also organize collection days to support trail development and other projects.



Yoga at ILCA

Recommendations

While ILCA's infrastructure and assets are essential to its current operations, they are also the limiting factor when it comes to identifying new recreational and programming opportunities. As part of the master planning process, a complete review of the current infrastructure – everything from buildings to signage, will be undertaken to determine needs and identify opportunities. Recommendations include:

- Determine operational requirements and strategic directions for ILCA and determine if the current infrastructure meets these needs
- Develop a maintenance schedule for the repair and replacement of ILCA's infrastructure and assets
- Review current programming and identify additional opportunities
- Review events that currently take place at ILCA and identify additional opportunities



Chapter 6: Conservation Area Visitors

Introduction

Island Lake Conservation Area (ILCA) attracts a wide range of visitors pursuing a variety of activities and holding various values and opinions on ILCA's facilities, challenges and opportunities.

Visitor information is collected through CVC's Lands Monitoring Program. Methods for collecting visitor data include surveys, automated trail counters, postal code analysis and formalized visitor observations.

Comprehensive Visitor Information Surveys were completed over the summer of 1991, 2002, 2006 and 2014 and over the winter of 2003 and 2012. In addition, Trail User Surveys were conducted in 2011 and 2012 to gather visitor data specific to the use of the Vicki Barron Lakeside Trail. The information in the following *Visitor Profile* section is based on the most current winter (2012) and summer (2014) Visitor Information Surveys, which together provide a comprehensive understanding of typical visitors to ILCA.



Visitors hiking along the Vicki Barron Lakeside Trail

Visitor Profile

Visitor Information Surveys are designed to capture information on visitor demographics, visitor attributes and site attributes. Demographics can be described as the statistical characteristics of a population, such as origin, age and gender. Visitor attribute data identifies how visitors use a conservation area and the characteristics of their visit. Site attributes refers to how visitors perceive a conservation area, including what they like, what changes they'd like to see, and how the conservation area meets their needs and expectations.

Analysis of survey data indicates that ILCA has three distinct visitor groups:

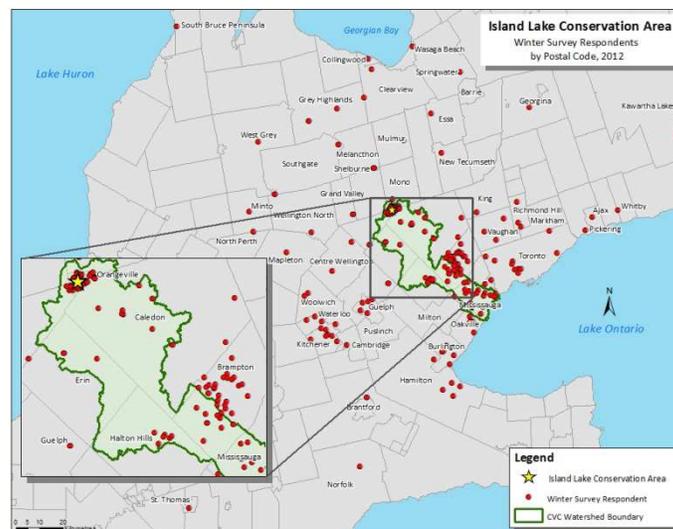
- winter day-use visitors,
- summer day-use visitors and;
- routine trail-based visitors

Winter and summer day-use visitors tend to enter ILCA through the main gate and pay an entrance fee for leisure pursuits and to access facilities. Routine trail-based visitors enter through un-manned secondary accesses to pursue on-trail recreational activities. Though we can summarize this data to provide a generalized visitor profile, it is important to also recognize each group individually for their unique characteristics and values.

Winter Day-use Visitors

The typical winter day-use visitor has the following characteristics:

- Male (89%), aged 35-49 (33%)
- Visits with family in a group of two (34%) or alone (27%), likely to visit with children aged 5-19
- Visits 2 to 5 times in the winter and also likely to visit 2 to 5 times in the summer
- Travelling primarily from urban centers (Orangeville (25%), Brampton (15%), Mississauga (10%)); however 32% of winter visitors travelled over 50 km to ILCA
- Primary activity is ice fishing (88%)
- Typically spends over 5 hours at ILCA per visit (50%)
- Satisfied with all facilities and services, doesn't want to see changes made at ILCA



Distribution of 2012 Winter Visitors by Postal Code

Summer Day-use Visitors

The typical summer day-use visitor can be characterized in the following way:

- Male (54%); aged 30-44 (30%)
- Visits with family in a group of two (42%) or three (17%), likely to visit with young children
- Tends to visit once in the summer and does not visit in other seasons
- Travelling primarily from Orangeville (26%), Brampton (19%) or Mississauga (14%)
- Primary activity is fishing (37%) or hiking (26%)
- Typically spends over 5 hours at ILCA per visit (25%)
- Generally satisfied with all facilities and services, however would like to see additional infrastructure

Routine Trail-based Visitors

The typical routine trail-based visitor can be described as:

- Female (58%); aged 45-59 (34%)
- Visits with family in groups of two (48%) or alone (33%), least likely to visit with children
- Visits 31+ times per season
- Travelling from the surrounding area, (Orangeville (58%), Mono (19%), or Shelburne (4%))
- Primary activity is hiking (56%) or exercising (17%)
- Typically spends 1 to 2 hours at ILCA per visit (51%)
- Satisfied with facilities and services but would like to see longer trails and more trail connections, as well as more washroom facilities.

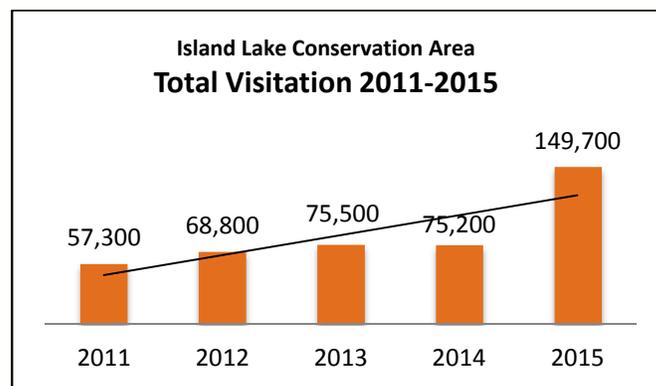
Visitor Numbers

Automated trail counters are used as a tool to understand the spatial and temporal distribution of visitors at CVC's conservation areas. Automated trail counters were installed at ILCA in 2009, 2010, 2013 and 2015. Visitor numbers include data derived from gatehouse tallies as well as trail counters located at secondary access points.



Automated trail counter mounted in electrical box

ILCA has seen a steady increase of visitors since 2011. Residents from neighbouring communities visit ILCA consistently, year-round. As can be seen in the figure below, 2015 saw a dramatic increase in visitation, which can be attributed to infrastructure additions. The recent expansion of the trail network and addition of a new parking lot has changed the overall visitor dynamic and how users experience the property.



Total visitor numbers from gatehouse and trail counter tallies

Recommendations

A wide range of opportunities and challenges exist for the future management of visitor experiences at ILCA. Recommendations include:

- *Improvements to infrastructure:* create engaging staging areas, add more fishing piers/spots, provide better trolling motors, provide food services, upgrade facilities within main day-use area, relocate beach, and expand programming/facilities to under-utilized areas such as the pavilion and sugarbush areas
- *Maximize marketing opportunities:* improve directional road signage, seek opportunities for cross-promotions with outdoor groups/businesses, increase advertising on the internet and provide more information on signage at secondary access points in order attract non-paying trail users to purchase memberships and utilize facilities and services
- *Special events and activities:* visitors expressed interest in self-guided canoe trails, outdoor entertainment, camping, an interpretive center, educational programming, rental equipment for winter activities, "learn to" events, and experience packages

Chapter 7: Economic & Social Benefits

Introduction

Current visitor trends suggest that Island Lake Conservation Area (ILCA) provides the dual function of both a community park, used regularly by local residents, as well as a destination park attracting visitors from throughout the watershed and beyond.

The diverse user groups attracted to ILCA both directly and indirectly inject income into the local economy, while receiving a range of health and social benefits.

The economic and social value of ILCA is difficult to quantify as it includes everything from revenue generation, ecological goods and services and health and well-being. For the purposes of the master plan, economic and social values are looked at from a *Total Economic Value* perspective.

Total Economic Value considers the value of a natural resource, such as ILCA, and its total value based on a variety of market and non-market benefits.

Economic and Social Benefits

The economic gains for ILCA are made from the entrance fees of visitors, rentals, merchandise sales and special events. ILCA generated nearly \$325,000 in revenue in 2014. CVC employs 7 full-time staff to support ILCA operations, as well as 9 additional part-time staff in the summer and 6 additional part-time staff in the winter.



Canoe Rentals at ILCA

Additional economic benefits of ILCA, which are difficult to quantify, are also important considerations.

Examples of these benefits include:

- ILCA is connected to local businesses, such as restaurants and recreation shops, as they may share the same customer base
- While not specific to ILCA, recreation in general supports the local economy: hiking led to an overall economic benefit of \$1.365 billion to Ontario in 2014¹
- While not specific to ILCA, the Credit River receives approximately 30,000 angling days each year, and an estimated \$1.2 million is spent by anglers annually²
- A 2009 study concluded that proximity to a natural feature or area increased property values by \$8,000 - \$10,000.³

Ecological goods and services (EG&S) are the benefits arising from the ecological functions of healthy ecosystems and include climate regulation, pollination, recreation flood storage capacity and provision of clean water. The credit river watershed provides a minimum of \$371 million in EG&S annually.

ILCA's natural systems, including its wetlands, forests and reservoir, provide an estimated minimum of \$4 million in EG&S annually.

Ecological Goods and Services at ILCA⁴

Complex natural resource systems such as ILCA provide multiple sources of economic benefits. In addition to economic gains, non-use values are also considered in the Total Economic Value. Non-use values include:

- *The Option Value*: The value of maintaining the option for future personal use of the protected area
- *The Bequest Value*: The ability and need to conserve protected areas for future generations

¹ Ontario Trail User Survey 2014 (2014) Ontario Ministry of Tourism, Culture and Sport

² Valuation of Angling (2008) Prepared by DSS Management Consultants Inc. for Credit Valley Conservation

³ Property Value Appreciation: Impacts of Natural Features (2009) Prepared by DSS Management Consultants Inc. for Credit Valley Conservation

⁴ Estimating the Value of Natural Capital in the Credit River Watershed (2009) Pembina Institute and Credit Valley Conservation

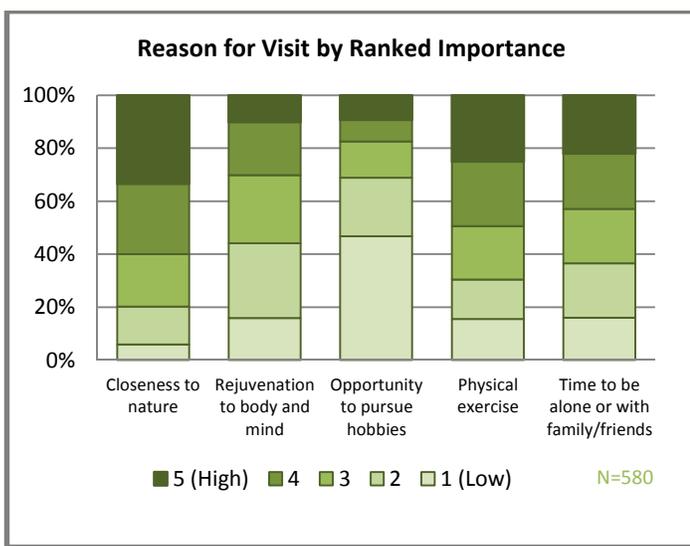
- *The Existence Value*: The satisfaction of knowing that protected areas exist, even if they are not personally used
- *The Moral Value*: The satisfaction of knowing that moral and legal obligations are fulfilled upon the conservation of a protected area



Bee on Purple Coneflower (Jon Clayton)

Health & Well-being

There are many direct and indirect benefits for visitors who choose to use ILCA. Visitors may take part in recreation activities and natural heritage appreciation. Visitor surveys conducted in 2014 identify intrinsic values placed upon ILCA by visitors. Closeness to nature, physical exercise and spending time alone or with family and friends were ranked as important aspects of the visitor experience.



Proximity to nature also provides a variety of indirect benefits, such as improved physical, social and mental

functioning and well-being⁵. A 2011 survey administered to watershed residents indicated that contact with natural areas is important for:

- Relieving stress (79.4% of respondents);
- Aiding in physical fitness (76.2%);
- Restoring productivity and concentration (67.4%)
- Recovering from illness (67%)

A few of the documented benefits of exposure to natural areas include:

- improvements to heart rate and blood pressure
- speeds recovery in hospital patients
- reduces ADHD symptoms in children
- alleviates stress and anxiety
- increases community bonds and social integration

Scientific and Educational Benefits

Protected areas provide a wide range of research opportunities while offering security for long-term studies and trend analysis. CVC conducts ongoing environmental monitoring through its *Integrated Watershed Monitoring Program*, which aims to help CVC understand the overall health of the watershed. Non-government Organizations and Universities have also conducted research at ILCA in the past, looking at soil, vegetation and water quality.

ILCA is used by the Upper Grand District School Board for educational programming throughout the school year. Environmental camps are offered by a third-party provider during the summer months. Occasionally, CVC will offer programs and workshops onsite.

Recommendations

Understanding ILCA's Total Economic Value is essential for appreciating its impacts at the local and regional scale. Recommendations related to its social and economic values include:

- Gain a better understanding of ILCA's Total Economic Value
- Continue to develop and strengthen partnerships with local agencies, businesses and residents
- Promote ILCA's many benefits and services to the watershed and local communities

⁵ The Importance of Ecosystem Services to Human Well-Being in the Credit River Watershed (2011) Green Metrics