

# KAWARTHA CONSERVATION ANNUAL REPORT 2017

Leaders in Integrated  
Watershed Management



**KAWARTHA  
CONSERVATION**

Discover • Protect • Restore

# MESSAGE FROM THE CHAIR AND CAO

Our vision of a sustainable watershed with clean and abundant water and natural resources assured for future generations was central to guiding many of our achievements and accomplishments throughout 2017.

As the lead organization responsible for conserving, restoring and managing Ontario's natural resources across the Kawartha watershed, Kawartha Conservation staff, volunteers, municipal, agriculture, community and academic partners have worked diligently during the past year to continue to work locally to strengthen climate resiliency and best environmental practices.

Following several meetings, open houses and public consultation and engagement, staff completed the Four Mile Lake and Canal and Mitchell Lake Management Plans with our partners. We have continued to focus on the development and implementation of our watershed lake management plans to ensure healthy, clean lakes for years to come.

Education continues to play a key role at Kawartha Conservation. From helping to engage our watershed residents with the essential work

being done through our programs and services to introducing young people to the importance of protecting and spending time in nature through our school programs, day-camps and week-long summer camps, involving our communities is critical to protecting our natural environment in the future.

Collaborating with a variety of partners and stakeholders was a renewed theme in 2017, as we focused on connecting with municipal, community, and lakefront and agriculture partners to further support the important climate adaptation and environmental work being done across the watershed.

Our conservation areas continued to attract thousands of visitors, as work continued on trail improvements, accessibility and the long-awaited Marsh Lookout.

We are pleased to share with you, and highlight just some of the many achievements from the past year. We remain committed to providing to you excellent customer service and delivering high-value programs and services in a cost-effective manner.



Ted Smith  
Chair



Mark Majchrowski  
CAO



# OUR CORPORATE VALUES



Our values guide our actions, as they shape the kind of organization that we are part of. In all of our decision-making, we will:

- Act with Integrity
- Value Knowledge
- Promote Teamwork
- Achieve Performance Excellence
- Foster Innovation

## Our VISION

A sustainable watershed with clean and abundant water and natural resources assured for future generations.

## Our MISSION

To be leaders in integrated watershed management and conservation.

## Our FOCUS

Outstanding water quality and quantity management, support by healthy landscapes through planning, stewardship, science and education.

## 2017 BOARD OF DIRECTORS

### CHAIR

Ted Smith  
Region of Durham  
(Township of Brock)

### VICE-CHAIR

Peter Raymond  
Municipality of Trent Lakes

Pat Dunn  
City of Kawartha Lakes

Gord Miller  
City of Kawartha Lakes

Isaac Breadner  
City of Kawartha Lakes

Ron Hooper  
Region of Durham  
(Municipality of Clarington)

Don Kett  
Region of Durham  
(Township of Scugog)

Tom Rowett  
Region of Durham  
(Township of Scugog)

Jordan Landry  
Township of Cavan Monaghan

2017 was our busiest year on record for the number of planning and permit applications received with 739; 105 more than 2016 and 248 more than 2015.

- 536 Permit Applications received in 2017
- 42 Severance Applications Received
- 51 Minor Variance Applications
- 5 Official Plan Amendment Applications
- 7 Subdivision Applications
- 9 Site Plan Approvals
- 35 Information Requests
- 24 Legal Inquiries



## PLANNING AND REGULATION

The Planning and Regulation department provides a service to municipalities and our watershed community through the environmental review of development applications (under the Planning Act) and inquiries, and through permitting of development activities in areas prone to natural hazards, such as flooding, unstable soils, and steep slopes, and in relation to watercourses and wetlands.

In reviewing planning applications, Kawartha Conservation provides advice, recommendations, and specific conditions for development to ensure proposals have regard for public safety and the environment as well as protecting the investment of our customers.

The department generates revenue through the collection of fees from developers and property owners, including information requests, that help offset the cost of providing plan review and permit services. In 2017, the Kawartha Conservation Board endorsed an increase in the Planning Review and Permit Fee Schedules which took effect at the beginning of 2018.

There were a number of accomplishments in 2017 including:

- Completed science-based Watershed Characterization reports for Shadow, Silver, Head and Rush Lakes.
- Collected water quality and quantity data on key tributaries entering and outletting the lakes, to inform nutrient loading calculations.
- Undertook shoreline survey during summer months to examine the extent of natural versus artificial shorelines.
- Key stakeholders were engaged to develop a list of recommendations to maintain or enhance the health of the lakes and their watersheds.
- Open houses were held in Burnt River, Coboconk and Norland, as well as a number of one-on-one meetings with several Cottagers Association representatives, including attendance and presentations at various cottage association and lake annual general meetings. This public outreach and engagement supported feedback shared with a community advisory panel.
- Completed the Four Mile Lake Management Plan.



Doug Erlandson, Chair of the Community Advisory Panel addresses a packed house for the half-day Stewardship Summit at the Cambay Community Centre. The Summit was an opportunity to engage the public and received feedback on lake management plan implementation.

## Flood Plain Mapping

- Continued working on the priority flood prone areas of the City of Kawartha Lakes – Dunsford (Emily Creek), Burnt River, and Bobcaygeon tributaries.
- Received federal funding for National Disaster Mitigation Program in the amount of \$46,000 for the Mariposa Brook Flood Plain Mapping Study.

## Lake Management Planning

Healthy lakes are essential to the economies of our municipal partners. The Kawartha Lakes, in their entirety, are considered to be the second largest recreational fishery in the province, as well as one of the highest ranking tourist destinations. Seasonal and year round residents located within the shoreline communities and along rural roads are attracted to the region because of the quality of our lakes which contribute to our overall quality of life.

## Lake Management Implementation

High priority recommendations identified within several lake management plans are implemented to improve shoreline conditions, near shore water quality and over all lake quality.

These recommendations are based on significant public engagement and community and stakeholder consultation held throughout the development of the lake management plans.

- Removed concrete piers from the Fenelon Falls beach, undertook beach improvement projects including shoreline stabilization and tree planting.
- Continued to work with the agricultural community to develop agriculture Best Management Practices and fund agricultural projects.
- Complete the first of a three year upstream comprehensive investigative monitoring project on waterways with high nutrient loading such as McLarens and Jennings Creek to target future stewardship activity.
- Completed the first of a three year Nearshore Citizen Science Water Quality Monitoring Project on Sturgeon Lake and Lake Scugog with approximately 45 volunteers.



Once complete the Lake Scugog Enhancement Project will enhance recreation both in and adjacent to Lake Scugog.

## Lake Scugog Enhancement Project

The Lake Scugog Enhancement Project is an environmental improvement and dredging project for Port Perry Bay that benefits the whole lake. The range of benefits is broad, including environmental, social, economic, tourism and recreation.

- Municipal Class Environmental Assessment Public Consultation held.
- Natural Heritage and Species at Risk study completed.



City of Kawartha Lakes Mayor Andy Letham, centre, joined Kawartha Conservation Foundation Chair Julia Taylor, left, and Kawartha Conservation CAO Mark Majchrowski during the Foundation-organized Canada 150 and the Environment event at Ken Reid Conservation Area.



Staff engaged with more than 1,200 people during seasonal lake stewardship activities in Trent Lakes and Durham Region in 2017.

## Blue Canoe

Throughout the summer our seasonal lake stewardship team travelled dock-to-dock via the Blue Canoe program, made possible by support from the Sitka Foundation, Municipality of Trent Lakes and Region of Durham. During the summer months, staff visited five lakes.

They engaged with almost 1,200 residences and shoreline landowners sharing information about Lake Management Planning, water quality, best land use practices and lake specific concerns. The team reached out to a wider audience taking part in 14 events and meetings.



sitka foundation



Stewardship staff review plans for a new bioretention feature demonstration site at Victoria Park in Lindsay. The project to help divert rainwater from the Victoria Park Armoury was a joint project with the City of Kawartha Lakes and Kawartha Conservation.

## Bluescaping

BlueScaping continued to be a primary Stewardship focus in 2017. Five BlueScaping workshops were held through 2017, as well as the launch of the new BlueScaping Guide, BlueScaping Our Neighbourhoods: Practical ways to slow, store, spread and soak stormwater on your property in the Kawarthas.

Stewardship staff also completed the Victoria Park Rain Garden in Lindsay, a low impact development (LID) BlueScaping demonstration site.

In addition, more than 100 rain barrels, with a total capacity of about 16,500 liters of rain event storage, distributed to landowners in the Kawartha watershed. The rain barrels help local residents harvest rain as well as prevent unnecessary runoff.



In August, two Chinese researchers from the Yellow River Conservancy Technical Institute in Kaifeng, China visited Fleming College and Kawartha Conservation. Feng Feng and Jin Xiaying have worked extensively on different hydrologic and environmental restoration projects in the Yellow River basin, and visited Kawartha Lakes to learn more about how Kawartha Conservation approaches integrated watershed management.

## Landowner Incentive Funds

- 23 Projects Completed
- \$85,541 in landowner grants
- \$250,162 in landowner contributions
- Total value of private land stewardship projects - \$348,903

- Types of projects
  - 3 fencing and remote watering projects to restrict livestock access to water
  - 4 barnyard clean water diversion (eaves trough) projects,
  - 6 manure management projects, and
  - 6 water well stewardship projects
  - 2 shoreline septic system upgrade
  - 2 shoreline erosion control and naturalization projects

*\*Note: financial support from OMAFRA, Region of Durham and MNRF*



The Community Advisory Panel and Kawartha Conservation held a successful half-day Stewardship Summit to gather community input on lake management plan implementation on July 15. The Summit engaged area full-time and seasonal residents and solicited input on lake management plan implementation projects and priorities.



It was a capacity crowd for a special turtle release day at Ken Reid Conservation Area, when several turtle hatchlings were released into the marsh area.

## ACADEMIC PARTNERSHIPS

Kawartha Conservation works with a number of post-secondary institutions including Fleming College, Trent University and the University of Ontario Institute of Technology (UOIT), collaborating and partnering with faculty and students in a number of programs to benefit the watershed. In 2017 we also launched a partnership study with Queen’s University P.E.A.R.L (Paleoecological Environmental Assessment and Research Laboratory) and the KLSA (Kawartha Lake Stewards Association) on a multi-lake (Cameron, Stoney & Pigeon) paleolimnological study.

### Fleming College

Environmental Technician students participate in field labs collecting water samples for quality analysis at various road crossings along Mariposa Brook, as well as Credit for Product work as part of the Mariposa Brook Watershed report card.

### Environmental Techniques Field Course

- Kawartha Conservation technical staff and Environmental Technology program students conduct training on industry standard techniques to sample for water chemistry, water flow, and benthic macroinvertebrates.
- Part of an annual and long-term monitoring program is to track changes in urban streams in Lindsay.
- The academic partnership started in 2010 and includes streams in Lindsay, including Jennings Creek, Sucker Creek and the Albert Street stream.

### Freshwater Ecology Field School

- Partnership between Fleming College Fish and Wildlife program students and Technical Staff and Stewardship Services.
- Training on industry standard fish and fish habitat sampling techniques, including using Ontario Stream Assessment (OSAP) and Ontario Benthos Biomonitoring Network (OBBN) protocols.

Data collected from 10 coldwater stream sites in and around Fleetwood Creek Natural Area are some of the only aquatic community and habitat data available in the Kawartha watershed, and will provide the bases for a long-term monitoring program.

### UOIT contributes to several projects as a partner including:

- Lake Scugog water quality, vegetation, macroinvertebrate survey.
- Collecting and analyzing samples at the UOIT lab for citizen science nearshore water quality study in Lake Scugog.
- Data digitization project (digitizing historical data into comprehensive datasets).



Work continued on a number of fronts in 2017 including:

- Provincial Water Quality Monitoring Network (PWQMN) sampling.
- Provincial Groundwater Monitoring Network (PGMN) sampling
- In 2017, Kawartha Conservation launched a shallow groundwater monitoring project to develop information on the impact of soil types on shallow groundwater resources.

## MONITORING WATER QUALITY

Our staff are involved in a wide range of activities including water quality and quantity monitoring, flood services, low water response, geographic information services, natural heritage strategy development, and provides technical support for lake and watershed management plans. This information and programming is critical to our municipal partners, other resource agencies, non-governmental organizations, and the community at large to facilitate informed environmental decision-making.

Watershed planning and management requires a baseline measure for evaluating watershed health. Maintaining a core watershed monitoring network establishes benchmarks that allow us to detect emerging issues, impacts of climate change, gauge the effectiveness of current planning and development practices, and evaluates effectiveness of management practices.

### Coldwater Streams Water Temperature Monitoring

Coldwater streams are regulated features, sensitive to disturbance, and susceptible to climate change.

- Technical staff, with support from a Fleming College co-op placement, monitored 32 sites on coldwater streams. Data was collected on an hourly basis throughout the project length.

### Urban Streams Benthic Macroinvertebrate Monitoring

Urban streams are regulated features are under significant development pressure and most compromised and susceptible to cumulative effects.

- Technical staff sampled 11 sites.
- The 5 year program, began in 2015, focusing on streams in Lindsay, Port Perry, Bobcaygeon, Omemee and Fenelon Falls.

## SOURCE WATER PROTECTION

The Source Water Protection program helps to implement a multi-barrier approach to strengthen the protection of municipal drinking water sources by educating and informing residents about these systems and helping to assist municipalities in their efforts to implement source protection plans. Staff also attended multiple events to provide educational materials to the public on how to protect their sources of drinking water.

Through an agreement with the City of Kawartha Lakes, Kawartha Conservation provides services to the community which focus on the development of plans with landowners to ensure their activities will not have an impact on water supplies. Thirteen activities that could have an impact on water supply are now managed through these plans. A number of development applications that have been proposed adjacent to municipal water supply locations have been reviewed and 30 notices were issued to ensure that local municipal water systems are protected.

- Watershed Conditions Statement - Flood Outlook: 1
- Watershed Conditions Statement - Water Safety: 7
- Flood Watch: 3
- Flood Warning: 7

- Agricultural Water Workshop: Dealing with drought: What did we learn from a dry 2016?
- Water Well Workshop: Managing Your Well during Drought
- Presentation to the Trent Lakes Municipal Council: Low Water Conditions 2016
- Presentation to the North Pigeon Lake Cottagers Association: Managing Your Well during Drought
- Presentation at the Mississauga First Nation Open House

- The Kawarthas Naturally Connected study area is 808,794 hectares
- Natural areas such as Provincially Significant Wetlands, Species at Risk Habitat, Forests etc. identified through LIO.
- Cultural areas such as publically owned lands, areas important to indigenous populations (wild rice beds), were included.
- Natural Heritage System targeted difference physiographic regions, variation in what was included depending on the physiographic region, most of the landscape features were targeted at 50% in the Canadian Shield and The Land Between zones, and at 70% in the South-of-Shield zone.
- Identified certain features that contribute to the unique character of Kawarthas. Features were classified from ANSI Earth Science, and the Physiography of Southern Ontario.

## Flooding

We monitoring watershed conditions throughout the year, advising municipal partners and the public of the threat of flooding. Overall, 18 flood messages were issued in 2017. The Flood Warning messages were issued in response to a high water situation in Balsam, Cameron, Sturgeon and Pigeon lakes as large volumes of water was moving through the system toward Lake Ontario, as a result of a significant precipitation event in May.

## Monitoring Climate Change

We have continued working on enhancement of our climate monitoring network. In 2017 monitoring equipment, worth more than \$17,500 was received from the Ministry of the Natural Resources and Forestry. It allows for establishing a new climate monitoring station at Emily Provincial Park. Once completed, it will monitor the amount of rain, air temperature and humidity, wind speed and snow cover. Other equipment received from the MNRF includes water and air temperature sensors, and soil moisture sensors.

## Low Water Response

We monitor the Kawartha watershed for low water and drought conditions. As precipitation conditions were favourable in 2017, the low water status, identified in 2016, was lifted in January. Public education events and presentations were held in order to increase community understanding of low water conditions and ways to manage them.

# KAWARTHAS NATURALLY CONNECTED

A natural heritage system is an ecologically based delineation of nature and natural function – a system of connected or to be connected green and natural areas that provide ecological functions over a longer period of time and enable movement of species.

In partnership with several community organizations we held a workshop to gain further traction on the implementation of the National Heritage System locally.



Kawartha Conservation's education program and summer camps continued to grow in 2017. Through more than 30 hours of education sessions for elementary students and one day and week long summer camps, young people learned about nature and the environment through fun, interactive, hands-on experiences.

## EDUCATION PROGRAM

As more and more studies show that spending time in nature has a range of physical and mental health benefits, we have continued to focus on engaging parents, caregivers and youth through a variety of educational programming.

The Parent and Tot pilot program was well received as more than 35 moms, dads, grandparents and toddlers visited Ken Reid Conservation area for the morning sharing time in nature.

In 2017, we began a pilot project to introduce an integrated educational program that could be utilized by local schools to contribute to their environmental education programs. This program also piloted week long camp programs in partnership with Sir Sandford Fleming College, providing an environmentally focused summer camp to area families.

Kawartha Conservation joined the Sustainability Education Network and has received the Regional Centre of Expertise for sustainability education designation (RCE). This International designation recognized our exceptional programming levels within Peterborough, Kawartha, and Haliburton. This self-sustaining project has become a highly regarded and respected educational program within the Trillium-Lakelands School Board.

Kawartha Conservation offered more than 30 hours of education sessions to elementary school students in 2017 from both the Trillium Lakelands District School Board and the Peterborough, Victoria, Northumberland and Clarington Catholic District School Board.

The Nature Explorer Summer Camps proved popular with more than 110 children participating in five, one-week themed camps.

The one-day specialty camps for children were also a big hit with more than 40 area youth taking part in the 'Amazing Animals', 'Nature Art', 'Wonders of Water' and 'Bug Hunt' day camps.



Conservations lands staff had a busy 2017 creating an accessible trail to the new marsh viewing platform as well as clearing and maintaining trails throughout five conservation areas.

## CONSERVATION AREAS

Kawartha Conservation owns over 800 hectares of natural areas including valley lands, headwater tributaries, provincially significant wetlands, rare habitats, and forests with sensitive interior habitat. We manage another 440 hectares through agreements with the Ontario Heritage Trust and the Nature Conservancy of Canada. Our conservation areas provide over 35km of locally significant trails that provide opportunities for hiking, nature appreciation, horseback riding, nature photography, and more.

### Network and Partners Relationship Strengthening

- Participated in Fleming College Eco Health Summit.
- Updated Durham East Cross Forest Emergency Management Plan and met with local police, fire, and ambulance to discuss plan, property challenges, and to obtain recommendations to increase safety on the property.
- Hosted Durham Police Services Search and Rescue training exercise at Durham East Cross Forest.
- Hosted a number of large events with our community partners including the Trillium Lakelands District School Board, Peterborough Victoria Northumberland and Clarington Catholic District School Board and others.

### Trail Maintenance and Improvements

- Over 25 km of trail maintained for visitor safety and enjoyment.
- Created an accessible trail leading to the new Ken Reid Observation platform.
- Received Enabling Accessibility grant of \$44,500 for the construction of a wheelchair accessible privy washroom at the beach area of Ken Reid.
- Received Biodiversity Education and Awareness Network grant from OFAH of \$500.

### Building Projects and Upgrades

- Drinking water treatment system installed as required by O.reg. 319.
- Wheel chair lift for administrative building installed.
- Dock for education program installed.
- Beach Picnic Shelter removed.
- Received Enabling Accessibility grant of \$30,000 for a new accessible elevator in the Kawartha Conservation administrative building.



Kawartha Conservation partnered with the Kawartha Chapter of the Ontario Woodlot Association to sell more than 17,000 tree seedlings and shrubs to landowners across the watershed.

## STEWARDSHIP

### Tree Seedling and Native Plant Distribution Program

In 2017, 17,200 native tree and shrub seedlings were sold to more than 100 private landowners across the Kawartha watershed.

Through the Native Plant Distribution Program, nearly 700 plants were purchased by 42 private landowners.

### TD Tree Day

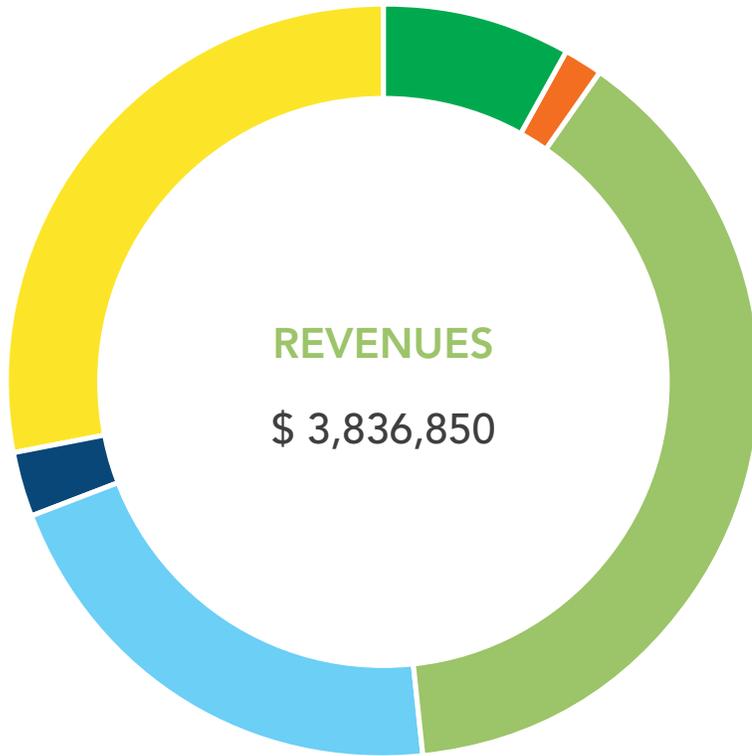
In September and October we participated in two TD Tree Day events at Springdale Gardens Park in Lindsay and at Carolyn Best Park in Port Perry. Planting 450 native trees and shrubs was quick work with help of 77 community volunteers.



More than 450 native trees were planted in Lindsay and Port Perry as part of the TD Tree Day events.

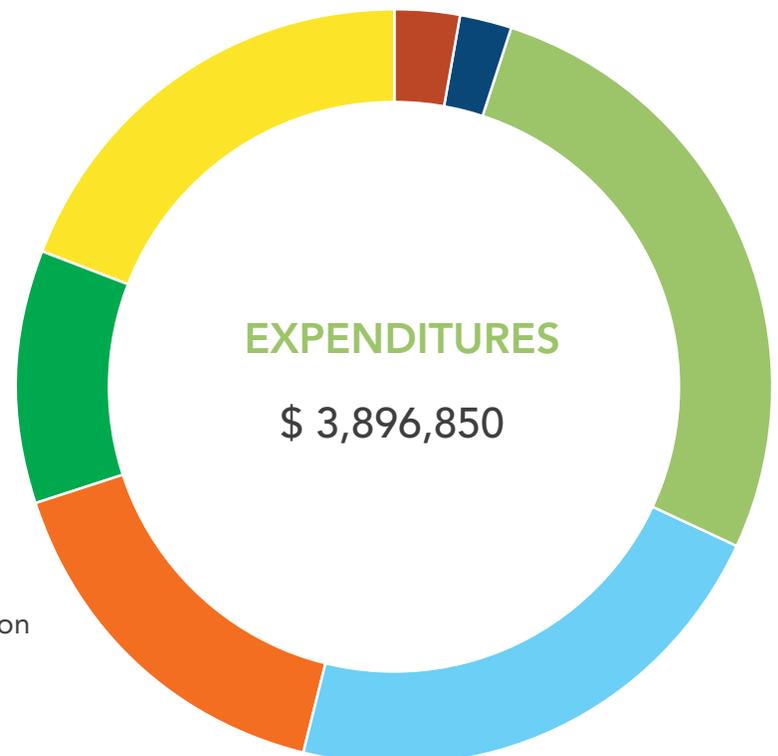
# FINANCES

This financial information is condensed from the Board of Directors' Approved 2017 Budget Summary. The complete auditor's report for the year ended December 31, 2017 is anticipated to be available in April 2018, copies of which will be available upon request.



-  8% Projects Grants
-  2% Government Grants
-  39% Municipal Operating Levy
-  21% Municipal Special Benefiting Levy
-  3% Municipal Agreement
-  28% Program Generated Fees
- \*0.2% Reserves (not shown on graph)

-  3% Municipal Agreement
-  2% General Benefiting Projects
-  27% Special Benefiting Projects
-  22% Planning & Regulation
-  16% Environmental & Technical Services
-  11% Environmental Protection & Restoration
-  19% Corporate Services



Work continued on updating the Burnt River Flood Plain mapping

City of Kawartha Lakes

Municipality of Trent Lakes

Removed concrete piers and rehabilitated shoreline at Garnet Graham Park

Blue Canoe team met with hundreds of waterfront property owners visiting dock-to-dock

Work began on the Mariposa Brook Flood Plain mapping Study.

Kawartha Conservation technical staff and Environmental Technology program students conduct training on industry standard techniques to sample for water chemistry, water flow, and benthic macroinvertebrates. Part of an annual and long-term monitoring program is to track changes in urban streams in Lindsay. The academic partnership started in 2010 and includes streams in Lindsay, including Jennings Creek, Sucker Creek and the Albert Street stream.

Township of Brock

Township of Scugog

Township of Cavan Monaghan

The Lake Scugog Enhancement Project (LSEP) is an environmental improvement and dredging project for Port Perry Bay that benefits the whole lake. The range of benefits is broad, including environmental, social, economic, tourism and recreation.

Fleming College Fish and Wildlife program students and Kawartha Conservation technical staff and stewardship services collected data from 10 coldwater stream sites in and around Fleetwood Creek Natural Area - some of the only aquatic community and habitat data available in the Kawartha watershed, and will provide the bases for a long-term monitoring program

Municipality of Clarington

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Member of



Conservation ONTARIO  
Natural Champions