



KAWARTHA CONSERVATION ANNUAL REPORT 2016

Leaders in Integrated
Watershed Management



**KAWARTHA
CONSERVATION**

Discover • Protect • Restore

MESSAGE FROM THE CHAIR AND CAO

We are proud to share with you some of our many accomplishments over the past year and we join all of our partners and watershed residents in celebrating these successes.

At the provincial level we played an important role in influencing the Provincial Plan Review and participating in important enhancements to the Oak Ridges Moraine Conservation Plan and Greenbelt Plan. We also actively participated in the review of the Conservation Authorities Act and in the development of a new Provincial Policy Framework to more effectively control the movement of excess soil.

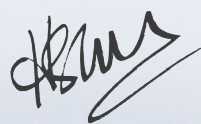
During the past year, Kawartha Conservation continued to focus on the development of lake management plans including the Pigeon Lake, Four Mile Lake and Canal and Mitchell Lake Plans which we anticipate having approved in 2017. These plans and their implementation involve monitoring of watershed health, enabling sound development and economic activity.

In 2016, we completed, and received Board approval, for Fenelon Falls North and the Omemee East Tributary Flood Plain Mapping and commenced,

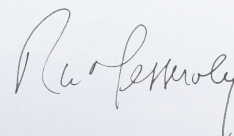
with federal and municipal funding support, the much-anticipated Burnt River Flood Plain Mapping which will be completed in 2017.

A milestone for our organization in 2016 was the completion and approval of the 2017-2021 Strategic Plan. This document will set a road map for the future and is based on dozens of one-on-one interviews with area municipal leaders, lake and cottage associations, agricultural representatives, the education and health sectors, watershed residents and more. It was a significant undertaking that cements Kawartha Conservation as a leader in watershed management and provides a clear direction for the next five years.

Another significant achievement was the approval of a Climate Change Strategy for the watershed. As we move forward into 2017, we remain committed to providing excellent customer service and delivering high-impact, high-value programs and services in a cost-effective manner.



Heather Stauble
Chair



Rob Messervey
CAO

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, supported by healthy landscapes through planning, stewardship, science and education.

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

Integrity: We strive to treat others with respect, fairness, honesty, patience, understanding, and trust. We respect diversity, are responsible and responsive, and committed to the health and safety of people and the environment. We care about the watershed, and about our staff, municipalities, clients, and partners, and making a positive difference.

Knowledge: We are a science and information-focused organization committed to achieving the best solutions. We facilitate continuous improvement and personal and professional growth. Focused on achieving results, we are committed to being leaders in integrated watershed management, ecosystem health, and community sustainability, and strive to achieve excellence through innovation.

Teamwork: We are committed to achieving common goals through teamwork; by collaborating, listening, and sharing information with our clients and partners, strengthening existing relationships, and building new partnerships. We participate in activities to benefit our clients, municipalities, colleagues, community, and watershed, and are committed to finding common solutions.

Performance Excellence: We are an accountable and financially responsible organization. We consistently present a professional image and set a good example. We communicate clearly with our staff, clients and partners.

Innovation: We are forward-thinking and visionary, while striving to develop new ways of doing business. We are committed to being leaders and innovators in watershed management, ecosystem health, and community sustainability,



2016 BOARD OF DIRECTORS

CHAIR

Heather Stauble
City of Kawartha Lakes

VICE-CHAIR

Ted Smith
Region of Durham
(Township of Brock)

Ron Hooper
Region of Durham
(Municipality of Clarington)

Don Kett
Region of Durham
(Township of Scugog)

Pat Dunn
City of Kawartha Lakes

Gord Miller
City of Kawartha Lakes

Peter Raymond
Municipality of Trent Lakes

Tom Rowett
Region of Durham
(Township of Scugog)

Jordan Landry
Township of
Cavan Monaghan

OUR CUSTOMERS ARE AT THE HEART OF EVERYTHING WE DO

Whether it is users of our programs, facilities and services, partners and stakeholders, members of the agriculture and development communities, all levels of government, First Nations communities, members of the public or members of the Board of Directors, our focus is on delivering excellent customer service.

We represent a group of municipalities across the watershed and work in partnership with many organizations, associations, landowners and volunteers to effectively and responsibly manage our watershed. We are legislated by the Provincial Conservation Authorities Act which was originally passed in 1946 in response to extensive flooding, erosion, deforestation and soil loss resulting from poor land, water and forestry management practices.

We contribute to the health, safety and success of the municipalities we serve through three distinct areas:

Environmental Protection: Kawartha Conservation protects local ecosystems and contributes to the quality of life in communities throughout our watershed.

Water Resource Managers: Kawartha Conservation is comprised of community-based environmental experts who use integrated, ecologically sound environmental practices to manage our water resources on a watershed basis, maintain secure supplies of clean water, protect communities from flooding and contribute to municipal planning processes (that protect water).

Lifelong Learning: Kawartha Conservation creates educational experiences in a natural environment that enrich the lives of people of all ages, by instilling an appreciation and enjoyment of our diverse natural heritage.

2017 • 2021 STRATEGIC PLAN

Dozens of stakeholders, municipal leaders, agency representatives, and other community leaders were engaged in the development of our 2017 - 2021 Strategic Plan. Through their valuable input, we have created both a blueprint for, and a road map to, a long-term destination for our organization and a commitment to managing the watershed, so that the natural environment thrives and, in turn, supports the well-being of people who live, work and play here.



2016 was our busiest year on record with 634 total applications received – up 29% from the 491 applications received in 2015.

- 406 Permit Applications
- 128 Planning Applications
- 73 Information Requests
- 60 Severance Applications Received
- 53 Minor Variance Applications
- 6 Official Plan Amendment Applications
- 4 Subdivision Applications
- 5 Site Plan Approvals
- 34 Information Requests
- 39 Legal Inquiries

PLANNING AND REGULATION

We recognized that permitting procedures can be difficult to navigate, so we created several new tools to guide our customers through the process. A new application guide, an application form and a list of permit information requirements and updated webpages were developed so that applicants can understand what is needed from them and why.

In an effort to measure our customer service efforts, 2016 also saw the launch of a customer service survey with each permit issuance and information request including an opportunity for a follow-up call to the customer – if requested.

Additional 2016 Highlights include:

- Streamlined permits for common applications (docks, decks, septic beds, demos) with a permit issued within 10 working days.
- Completion of Large Fill Application Protocol.
- Completion of Sediment and Erosion Control Guidelines for use by staff, consultants, municipalities, and information for customers.

FLOOD PLAIN MAPPING

Flood Plain Mapping benefits both municipalities and landowners. Knowing where flood plains exist give landowners and regulators the information to understand where to build or place structures on properties with a high degree of confidence that these structures will not become partially or completely submerged, or worse yet, destroyed during a flooding event. They also give the landowner confidence that should a flooding event occur, they have a safe evacuation route from their property and the comfort that emergency crews have safe access onto their property should the need arise. One of the key reasons why flood plains are defined is to prevent loss of life and protect property from damage resulting from this type of hazard.

The Fenelon Falls North Tributary Flood Plain and Omemee East Tributary Flood Plain Mapping Studies were completed and approved. Work on the Bobcaygeon Tributary and Dunsford Creek Flood Plain Mapping Studies began in 2016 and will be complete by the end of 2017.

On behalf of the City of Kawartha Lakes, we were successful in obtaining National Disaster Mitigation Program (NDMP) Funding for the Burnt River Flood Plain Mapping Study, which will be completed by Spring 2018.



Lake Management Planning

In 2016, we completed the Canal and Mitchell Lake Management Plan. This plan represents a collaborative approach to working with lake and cottage associations as well as other interested parties who have a shared, focused vision on protecting and enhancing lake and water quality across the watershed. Planning also continued on a number of lake management plans including Four Mile Lake, Pigeon Lake, Head Lake and Shadow Lake.

These plans provide a scientific approach to protecting the lakes with actions recommended over the short and long terms. They involve detailed field inventories of watersheds, rivers, and lakes to identify natural features and factors affecting their health. By developing these plans, we help identify actions to ensure the long-term economic viability of the lakes as a place to live on and visit, resolve competing interests amongst user groups, and protect the lakes for future generations.

Lake Management Implementation

A number of lake management plans have been completed for Lake Scugog, Sturgeon, Cameron and Balsam lakes and we work towards implementing actions with our partners and lake residents. We have also had a keen interest from the lake communities where plans are currently being developed, to begin work that they see as being beneficial to the lake and to the future success and viability of the lake's health and quality.

Kawartha Conservation works with lake residents to undertake implementation initiatives including various stewardship activities during the planning portion, leading up to the completion and implementation of the final plans.

Lake Scugog Enhancement Project

Work on the much-anticipated Lake Scugog Enhancement Project continued throughout 2016. The anticipated \$2 million project received unanimous support from the Township of Scugog and fundraising efforts were launched by the Healthy Lake Scugog Steering Committee.

Once complete the project will result in improved water quality, enhanced recreational opportunities including fishing and boating, as well as improved natural features to support fish and aquatic habitat.



Staff engaged with more than 2,500 people during seasonal lake stewardship activities in 2016

Blue Canoe

Throughout the summer we travelled dock-to-dock on 14 lakes in a Blue Canoe. During this time, our lake stewardship team engaged 2,500 residents and shoreline landowners sharing information about Lake Management Planning, water quality, best land use practices and lake specific concerns. The team also attended various events and cottage association meetings. Blue Canoe was supported by the City of Kawartha Lakes, the Municipality of Trent Lakes, and the Loblaw's Water Fund.



In cooperation with the Township of Scugog, a bioretention feature was added to a median on Old Rail Lane in Port Perry

Bluescaping

Using landscaping features and techniques to reduce urban stormwater runoff, the BlueScaping program helps recharge groundwater, reduce the likelihood of flooding, and prevent pollution from reaching our lakes. This project is supported by the City of Kawartha Lakes, Durham Region, RBC's Bluewater Fund and Environment Canada.

One of the big projects this year was the construction of a bioretention feature in Port Perry. Bioretention is the process in which contaminants and sedimentation are removed from stormwater runoff using filtration systems and natural plants. In cooperation with the Township of Scugog, this feature was added to a road median and is now absorbing and diverting water from a culvert that drains directly into Lake Scugog.



Kawartha Farmland Stewardship Fund

Agricultural land uses cover about 50% of the Kawartha watershed, and we are happy to work with the agricultural community to help them reduce nutrient runoff and improve the quality of water running off their lands. By ensuring agricultural best management practices (BMPs) are in place, we can also help sustain rural communities, maintain healthy lakes, and protect water quality, a key pillar of our local economy.

In 2016, as part of a multi-year project funded by the Ontario Ministry of Agriculture Food and Rural Affairs, we supported farmers who took action to minimize nutrient and sediment input to waterbodies within the City of Kawartha Lakes. Projects that were supported include management of manure storage runoff, limiting livestock access to streams and lakes, managing nutrient and soil loss, and farm well management.

The SCUGOG Water FUND

The Scugog WATER Fund, supported by the Region of Durham, encourages landowners to complete stewardship projects which contribute to the health of Lake Scugog and its watershed, by managing runoff, improving water quality and ensuring our groundwater resource is protected from contamination.

23 Projects Completed

- Landowner Grants - \$135,535.12
- Landowner Contributions - \$89,643.93
- Total Value of On-Farm Project - \$225,179.05
- 7 Barn eavestroughs installed that divert clean water away from sources of contamination
- 3 Fencing projects restricting livestock from water bodies
- 4 barnyard improvements
- 4 manure storage facilities
- 2 tree planting projects
- 3 water well stewardship projects

10 Projects Completed

- Landowner Grants: \$22,617
- Landowner Contributions \$54,889
- Total Project Value: \$77,506
- 2 Tree Planting Projects Completed
- 3 Well Stewardship projects
- 1 Shoreline naturalization project
- 1 Eavestrough installation project
- 1 manure storage project
- 2 nearshore septic system upgrades



Fleming College Environmental Technology students sampling fish communities through seine netting. Fish are collected from Sturgeon Lake and processed in the tent to determine important characteristics such as species and size.



Fleming College 2-week co-op field placement technician Zach Stuckey, installing a temperature data logger in Fleetwood Creek, October 2016



Fleming College Fish and Wildlife students measuring aquatic habitat characteristics (e.g., water depth, velocity, substrate, etc.) along a transect across Pigeon River.

ACADEMIC PARTNERSHIPS

Kawartha Conservation continues to be a proud partner of Fleming College, Trent University and UOIT (University of Ontario Institute of Technology), working with faculty and students in a number of programs to benefit the entire watershed and our future environmental leaders, stewards and visionaries.

A four-month water quality study was conducted on Stoney Creek by students from Fleming College's Ecosystem Management Technology program, which highlighted water quality issues in the watercourse.

Another successful partnership involved Fleming College's Environmental Technology and Fish and Wildlife programs. Practical experience was gained in field classes to sample fish communities in our Conservation Areas. Students gained practical experience using common aquatic sampling techniques in lakes and streams.

We were also happy to work with Trent University on nutrient dynamics related to agricultural tiling practices, Lakehead University to study human effects on ecology in the Trent-Severn system and UOIT to evaluate seasonal changes in aquatic plant vegetation in Lake Scugog.



Fleming College faculty, in partnership with Kawartha Conservation technical staff, train students in the Environmental Techniques course on how to monitor aquatic habitat, flow, and water quality in Lindsay streams.

MONITORING WATER QUALITY

Our communities rely on good water quality, which is why lake management plans and monitoring our water quality are so important for our watershed and its residents. We monitor water quality in partnership with our lake communities through the Kawartha Water Watch, where 15 sites are sampled by volunteers, and with the Ministry of the Environment and Climate change to monitor both surface quality at 11 sites and groundwater quality at 10 sites. We augment these programs with additional monitoring to evaluate specific areas of interest in our watershed to assist with making informed planning decisions and find ways to maximize our efforts to improve water quality. To do this, we are monitoring stream dwelling bugs to determine water quality in urban areas and evaluating cold water habitats to assist municipalities identify key areas that have protection under planning legislation.

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. We worked with the Province and neighbouring regions to address a groundwater supply matter for municipal wells that overlaps our area and helped develop policies to protect this area in our local source protection plan.

Through an agreement with the City of Kawartha Lakes, we provide 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. Eleven 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 13 notices were issued to ensure that local municipal water systems are protected.



Environmental Commissioner Dianne Saxe attended a day-long session at Kawartha Conservation to learn more about the programs and services provided, as well as provide an update on work being undertaken by the Commissioner's office.

WATER LEVEL MONITORING

Climate Change Strategy

Our Climate Change Strategy was endorsed by the Board of Directors in May. Strategies and actions developed as part of the document were considered for implementation immediately following Board approval.

Actions identified in the strategy include flood plain mapping, promoting low-impact development in planning and retrofit opportunities, community outreach and education, watershed reforestation, evaluation of our existing monitoring networks to provide information, and greening our business.

Spring Flooding

Spring presented another challenging freshet season for the Gull River and Burnt River watersheds as well as for the shorelines of Balsam, Cameron, Sturgeon and Pigeon lakes. A significant rain event at the end of March and beginning of April melted the snowpack in the northern portions of the Burnt and Gull river watersheds, resulting in a significant runoff.

For approximately three weeks, water levels on the Burnt River, Gull River and Kawartha Lakes remained high as large volumes of water made its way to Lake Ontario.

Coordinated communication and information sharing among partners including the Ministry of Natural Resources and Forestry, Trent-Severn Waterway, City of Kawartha Lakes and Municipality of Trent Lakes and Kawartha Conservation allowed for advanced preparedness and effective management of the situation.

Low Water Response

Low precipitation and a very hot summer contributed to drought-like conditions that have impacted communities and ecosystems across the watershed since May 2016, resulting in dry wells for a number of residents, crop-yield challenges for many farmers, and low lake levels impacting recreational boating.

Kawartha Conservation staff monitored watershed conditions and Low Water Indicators closely and declared a Level I Low Water Condition in July. This condition was upgraded to Level II and Level III in August as the situation worsened, which remained in effect for the remainder of the year. This change was made by consensus of our Low Water Response committee who met four times during the year and is comprised of water managers, partner agencies, community groups and businesses. To help raise awareness, a public information and education campaign was launched, which included three events for landowners to explain how to deal with low-water situations and correspondence to our municipalities encouraging action.



More than 600 students from Senior Kindergarten to Grade 7 took part in the Outdoor Education Program at Ken Reid Conservation Area in 2016.

Port Perry Weather Monitoring Station

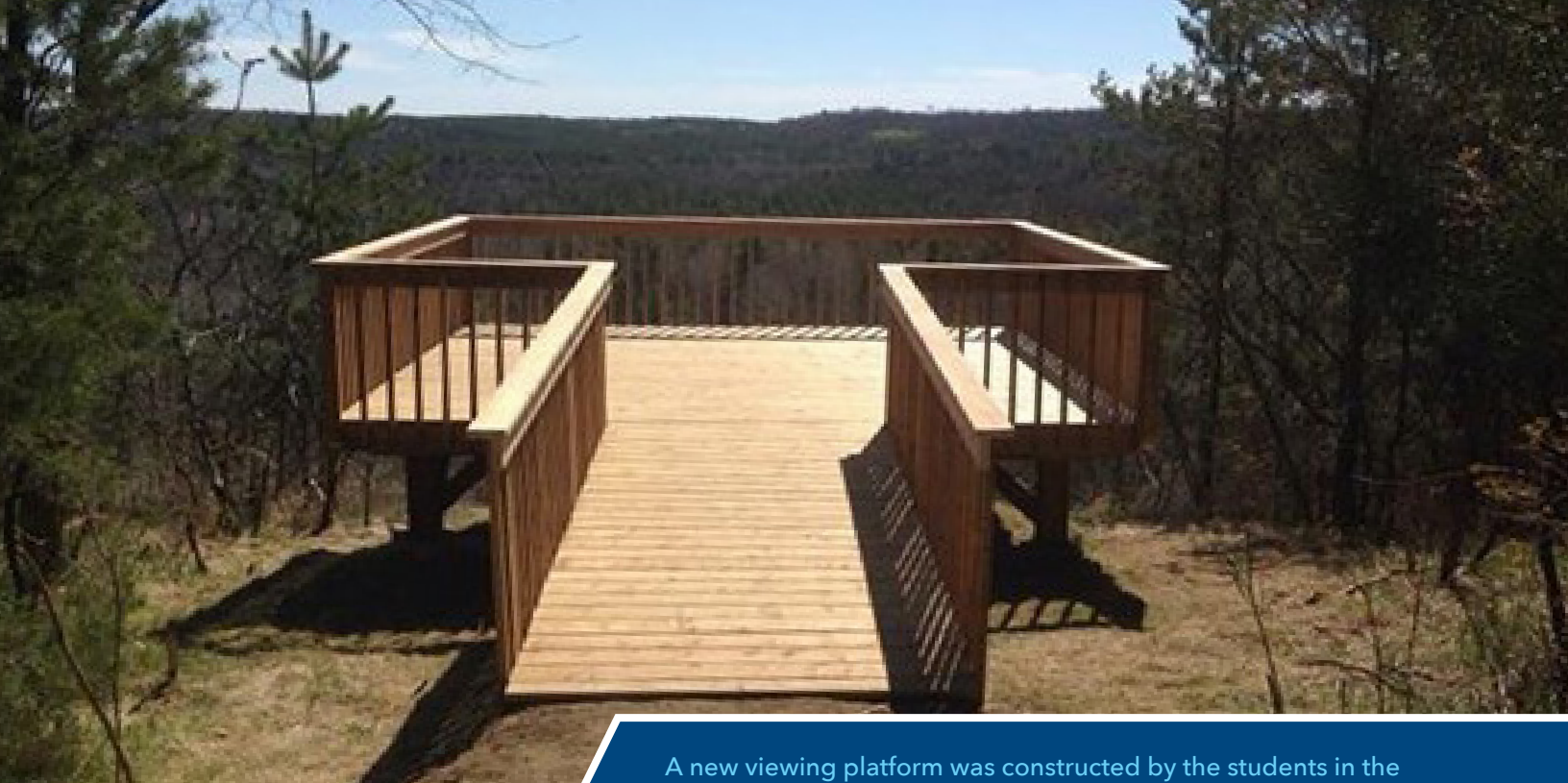
A new weather monitoring station was activated at the end of October, which provides real-time data on air temperature, rain and humidity. This station will enhance the watershed condition monitoring network and provide additional information for flood forecasting, low water conditions, and climate change.

EDUCATION

Acquiring a Clean Tech Internship from College and Institutes Canada allowed us to hire an Education Technician for six months to help develop and deliver a pilot program for outdoor education sessions to local schools. Our Education Technician along with Great Moose Adventures enhanced our programming by developing 15 brand new curriculum linked lessons to offer to local schools.

Trillium Lakelands District School Board (TLDSB) generously provided us with 60 pairs of primary grade snowshoes to help with winter programming. In June, we hosted and participated in a teacher's educator event, where local teachers learned about outdoor programming while engaging in several different activities. We also participated in the Eco-summit event for environmentally keen public-school students in April and the Kawartha Haliburton Children's Water Festival in September.

- 8 Participating Schools
- 23 Outdoor Education Sessions
- 36 Different Classes participated
- 642 Senior Kindergarten to Grade 8 students took part in sessions at Ken Reid Conservation Area
- 15 Ontario curriculum linked lessons developed
- \$7,000 Grant from TD Friends of the Environment
- \$6,681 Revenue Generated



A new viewing platform was constructed by the students in the LCVI GoldStar Program at Fleetwood Creek Conservation Area.

CONSERVATION LANDS

Our conservation lands provide an opportunity for our community to enjoy public spaces in a recreationally low-impact setting. There are many studies emerging that demonstrate the value of enjoying natural environments for personal well-being. These properties also help protect significant features on our landscape, such as wetlands, significant forests and the Oak Ridges Moraine.

In 2016 Ken Reid Conservation Area had an estimated 25,000 visitors and was host to a number of events including the Trillium Lakelands District School Board public school Cross Country Run, the provincial Envirothon field competition, and numerous education sessions. New signage and mapping were created and installed along the Ken Reid trail system and Howlers Corners Dog Park continued to be a popular destination for Lindsay-area residents who bring their pets to enjoy the fenced recreational area in a natural setting.

In early May 2016, the GoldStar construction program from Lindsay Collegiate Vocational Institute completed the reconstruction of a viewing platform at Fleetwood Creek Natural Area, which has been the main visitor feature of this conservation area. This project would not have been possible without the in kind donation provided by the school and students.

Durham East Cross Forest continued to grow in popularity among a variety of trail users. Our most southern conservation area property is integral to protecting and showcasing the Oak Ridges Moraine and provides visitors with a unique nature experience in a geographic landscape of significant provincial importance.

While still in the concept stage, the community-based Nogies Creek Waterway project continued in 2016. The project involves identifying and mapping a canoe route, recognizing significant cultural and natural features in the watershed and undertaking studies of natural and cultural features such as fish, amphibians, plants, geological and archaeological features and the history of the area. Thanks to a generous land donation from Fleming College, we have acquired a large parcel of property in the Nogies Creek Waterway area which will help to protect and maintain vital habitat and ecosystems in the northern part of our watershed.

STEWARDSHIP

Tree Seedling and Native Plant Distribution Program

Kawartha Conservation partnered with the Kawartha Chapter of the Ontario Woodlot Association to sell more than 12,000 tree seedlings and shrubs to landowners across the watershed. New in 2016, we partnered with Willowtree Farm, to provide an alternate pickup location at their farm market in Port Perry, making it easier for Durham landowners to access the low-cost seedlings. We also provided a native plant distribution program to help provide landowners access to low-cost native perennials, grasses and shrubs to help them with shoreline naturalization projects. Over 1,000 native plants were distributed.



Kawartha Conservation partnered with the Kawartha Chapter of the Ontario Woodlot Association to sell more than 12,000 tree seedlings and shrubs to landowners across the watershed.

TD Tree Day

In September and October Kawartha Conservation participated in TD Tree Day events at Lions Riverview Park in Lindsay and at the Scugog Community Centre.

- 85 Community Volunteers
- 300 native trees and shrubs planted



More than 300 native trees were planted in Lindsay and Port Perry as part of the TD Tree Day events.

Kawarthas Naturally Connected

Across Peterborough and the Kawarthas, we worked together with a number of municipal and organization partners to create a Natural Heritage System made up of connected areas that maintain our ecological, social, and economic values.

A Natural Heritage System is a network of connected natural features and areas such as wetlands, forests, river corridors, lakes, and meadows.

Kawarthas Naturally Connected had its official launch on October 19, 2016, which involved the presentation of the final mapped natural heritage system and mapping products. Implementation of the Kawarthas Naturally tool will continue throughout 2017.

Kawartha Conservation Foundation

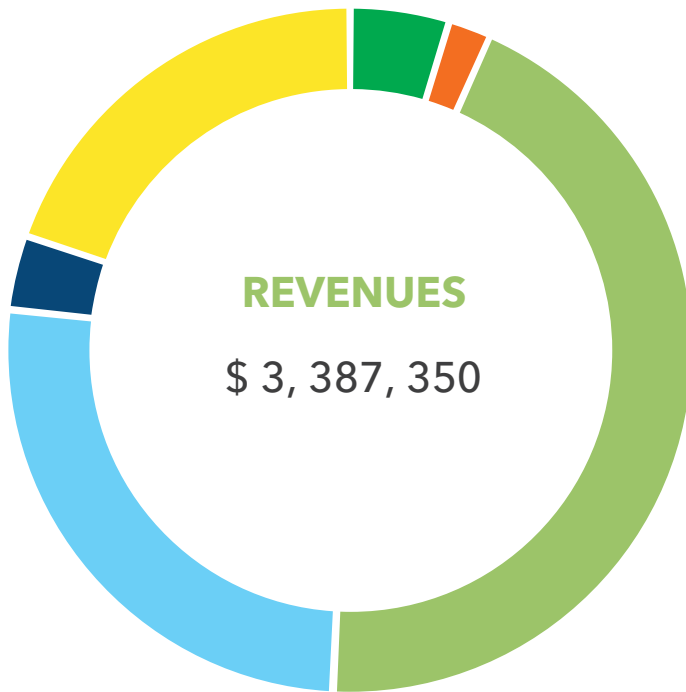
Strong leadership and community outreach by members of the Kawartha Conservation Foundation helped realize significant private investment in the redevelopment of a multi-tier, accessible Viewing Platform at Ken Reid Conservation Area. The much-anticipated project is expected to be completed before the end of 2017.



The Kawartha Conservation Foundation helped to attract a large investment for the redeveloped Ken Reid Conservation Area Osprey Viewing Platform which will be completed in 2017.

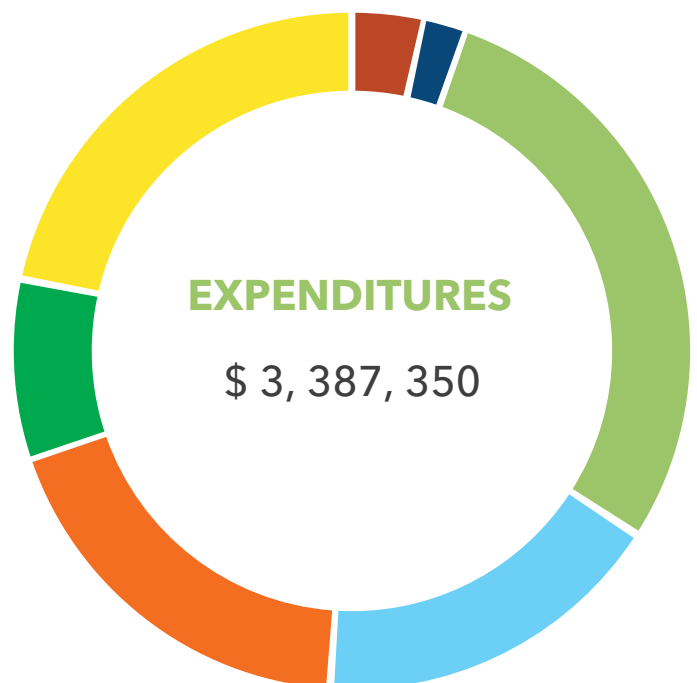
FINANCES

This financial information is condensed from the Board of Directors' Approved 2016 Budget Summary. The complete auditor's report for the year ended December 31, 2016 is anticipated to be available in April 2017, copies of which will be available upon request.



- 7% Capital Project Grants
- 4% Government Grants
- 42% Municipal Operating Levy
- 24% Municipal Special Benefiting Levy
- 3% Municipal Agreement
- 21% Program Generated Fees
- *.09% Reserves (not shown on graph)

- 3% Municipal Agreement
- 2% General Benefiting Projects
- 30% Special Benefiting Projects
- 16% Planning & Regulation
- 18% Environmental & Technical Services
- 10% Environmental Protection & Restoration
- 21% Corporate Services





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