

Annual Report 2019



A Message from Our Chair

In 2019, record floods impacted many communities in our province. At the St. Clair Region Conservation Authority (SCRCA), 40 flood bulletins were issued during 15 separate events to inform our local municipalities on the threats associated with rising water levels. The integral role Conservation Authorities hold in flood management and floodplain regulation was highlighted in 2019, not only in our region but throughout Ontario.



As a result, it came as a shock when provincial transfer payments, which support natural hazard programs were cut by almost 50% and further, that the mandate of Conservation Authorities became a topic of debate. Regardless, the SCRCA continued to deliver important flood warning and management services to our municipalities. We also maintained initiatives such as tree planting and wetland creation, that provide additional flood control and protection, while also providing vital environmental, societal, and economic benefits to our watershed.

The past year also saw over 12,000 students participate in our conservation education programs, the release of almost 800 turtle hatchlings into the Sydenham River, and the implementation of a more streamlined process for reviewing and issuing regulatory permits.

Our accomplishments in 2019 would not have been possible without the dedication and support of our staff, Board of Directors, and partners. Together, we will continue to work towards reaching our vision of a healthy and sustainable natural environment in the St. Clair Region in 2020, and in the years that follow.

A handwritten signature in dark ink, appearing to read 'Joe Faas', written in a cursive style.

Joe Faas
Chair, Board of Directors

Our Vision

A healthy and sustainable natural environment in the St. Clair Region.

Our Mission

The St. Clair Region Conservation Authority has as its mission, to provide leadership through coordination of watershed planning, implementation of resource management programs, and promotion of conservation awareness, in cooperation with others.

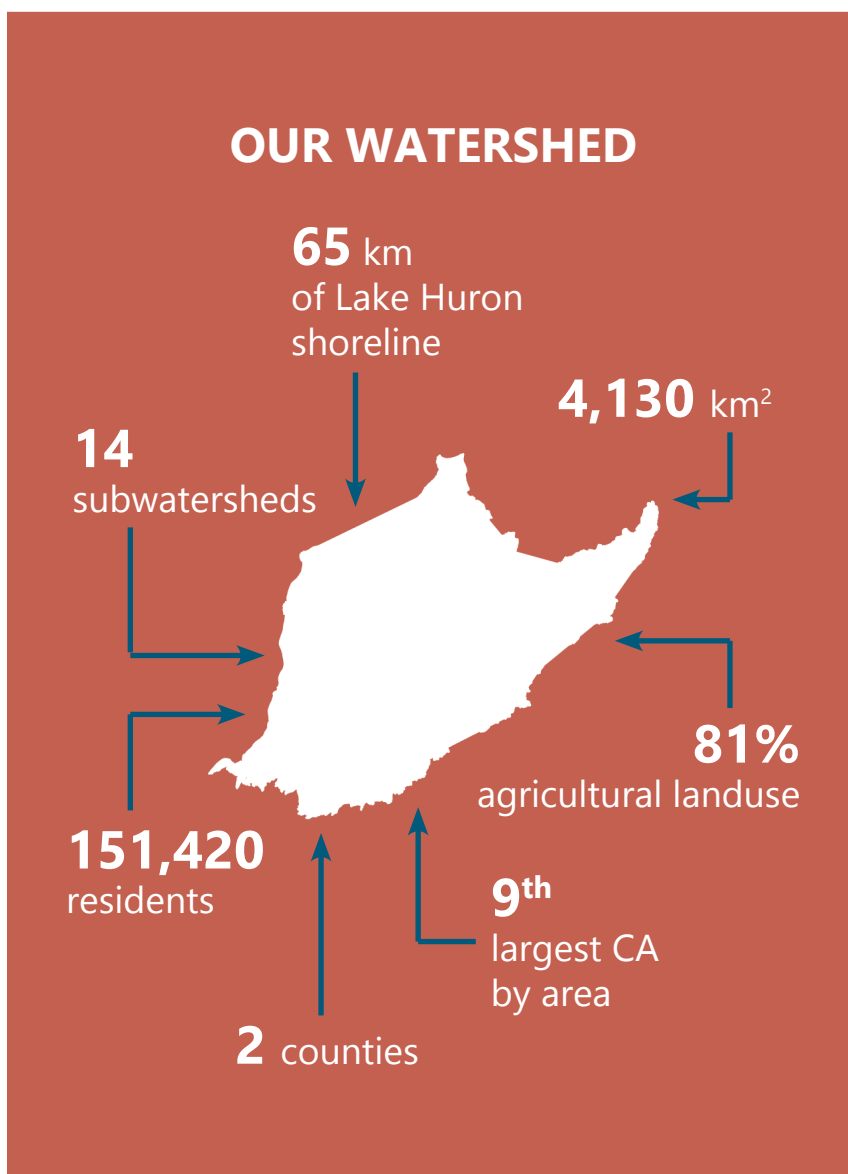
Our Goals

1. Develop and maintain programs that will protect life and property from natural hazards such as flooding and erosion.
2. Protect, manage, and restore our natural systems including woodlands, wetlands, waterways, and lakes.
3. Provide recreation and education opportunities for the public to enjoy and learn from our natural environment.
4. Build a stronger and more valued organization through business excellence.

About Us

The St. Clair Region Conservation Authority (SCRCA) is one of Ontario's 36 Conservation Authorities (CA) responsible for conservation, restoration, and management of natural resources within its watershed. The St. Clair Region includes the Sydenham River watershed and smaller watersheds that drain directly into southern Lake Huron, the St. Clair River, and northeastern Lake St. Clair.

Our programs aim to: 1) reduce the risk to life and property from flooding and erosion; 2) improve water quality; 3) promote habitat creation and stewardship; 4) provide outdoor recreation opportunities; 5) increase environmental awareness and literacy; and 6) monitor and protect our most vulnerable species. We achieve this in cooperation and partnership with our member municipalities, government agencies, Indigenous communities, community groups, local landowners, and businesses.



Board of Directors

The SCRCA is governed by a Board of Directors appointed by the 17 member municipalities we serve.

Township of Adelaide Metcalfe

Betty Ann MacKinnon

Municipality of Brooke-Alvinston

Frank Nemcek

Municipality of Chatham-Kent

Joe Faas

Carmen McGregor

Township of Dawn-Euphemia

Alan Broad

Township of Enniskillen/ Village of Oil Springs

Kevin Marriott

Municipality of Lambton Shores

Lorie Scott

Municipality of Middlesex Centre

Dan McMillan

Town of Petrolia

Brad Loosley

Town of Plympton-Wyoming

Ron Schenk

Village of Point Edward

Larry Gordon

City of Sarnia

Andy Bruziewicz

Terry Burrell

Mike Stark

Municipality of SW Middlesex/ Village of Newbury

Mark McGill

Township of St. Clair

Pat Brown

Steve Miller

Municipality of Strathroy-Caradoc

John Brennan

Frank Kennes

Township of Warwick

Jerry Westgate

Water Resources



Our water resources team oversees the SCRCA flood forecasting and warning program, and the maintenance and operation of flood control structures, including the W. Darcy McKeough Floodway. We work closely with local municipalities to protect public infrastructure through shoreline protection works. Our team also administers the Drinking Water Source Protection program for the St. Clair Region which protects municipal sources of drinking water from contamination. Lastly, our water resources department monitors and reports on Great Lake water levels and conducts groundwater sampling on behalf of the Ministry of the Environment, Conservation and Parks.



Flood Operations

11 stream gauges, **5** snow sampling sites, meteorological data, and ice conditions monitored to determine flood risk.

15 flood events in 2019 resulting in the release of **40** bulletins.

October 31, 2019

Operation of the W. Darcy McKeough Floodway to mitigate severe flooding in the Town of Wallaceburg. This was the second operation in two years.

Erosion Control Projects

\$348,000

secured through provincial Water & Erosion Control Infrastructure (WECI) fund to support maintenance of W. Darcy McKeough Floodway and shoreline protection work in the City of Sarnia.

\$8 million

granted through the federal Disaster Mitigation and Adaptation Fund to support shoreline protection projects along Lake Huron and the St. Clair River.

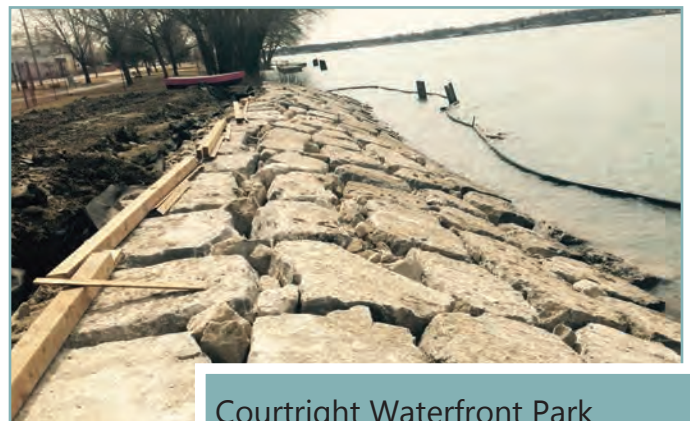
Drinking Water Source Protection

Over **125,000** residents living in the SCRCA watershed receive their drinking water from Lake Huron and the St. Clair River and are protected from significant drinking water threats through the administration of the Thames-Sydenham and Region Source Water Protection Plan, developed in partnership with the Upper Thames River and Lower Thames Valley Conservation Authorities.

Groundwater Monitoring

9 wells monitored for water levels.

8 wells monitored for water quality.



Courtright Waterfront Park
Shoreline Improvement - Phase 2

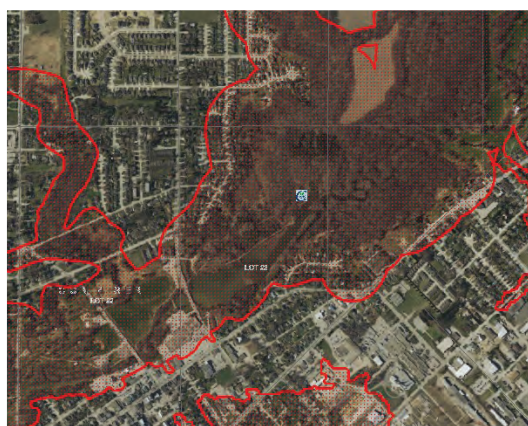
Floodplain Mapping

With support from our member municipalities and through federal funding provided by the National Disaster Mitigation Program, the SCRCA initiated a floodplain mapping project in the spring of 2019. Once complete, the new data will improve the accuracy of floodplain maps currently used in flood risk management, planning, and regulations. Staff conducted intensive survey work throughout 2019 to collect elevation data near drains, creeks, and rivers. This information will be used to validate the floodplain model output. Survey work is expected to be completed in early 2020.

Planning and Regulations

A person wearing a bright blue hooded raincoat stands in a wooded area, looking towards a stream. The trees are bare, suggesting a late autumn or winter setting. The stream flows through the forest, and the ground is covered with fallen leaves and branches.

As a watershed management agency acting under the *Conservation Authorities Act*, the SCRCa is responsible for ensuring development is constructed outside of areas prone to flooding and erosion. Our planning and regulations team reviews, comments, and issues permits under Ontario Regulation 171/06 – *Development, Interference with Wetlands and Alterations to Shorelines and Watercourses*. In addition, the SCRCa assists local municipalities in adhering to natural hazard and natural heritage policies identified under the *Planning Act* and the Provincial Policy Statement.



Planning Activity 2019

Inquiries	83
Active Files	164
Application Types (Note: Active files may have multiple applications)	195
Minor Variances	49
Severances	42
Site Plan	11
Subdivision/Condominium	30
Zoning By-law	46
Official Plan	17
Files with Natural Heritage	31%

Regulations Activity 2019

Legal Inquiries	69
Permits Issued under Ontario Regulation 171/06	167
Inquiries under Ontario Regulation 171/06	366
Compliance/Enforcement Matters under Ontario Regulation 171/06	74
Hearings	2

Drainage Act and Section 28 Regulations Team (DART) Protocol Activity 2019

Total Drainage Projects Reviewed	187
Standard Compliance Requirements (SCRs) Issued	80

In 2019, the SCRCA, in cooperation with Conservation Ontario and our stakeholders, implemented changes to streamline our regulatory process to meet the provincial commitment of increasing housing supply in Ontario while decreasing Authority permit approval timelines. These changes have allowed staff to more effectively serve our clients and improve permit approval efficiencies.



Biology



The Sydenham River contained within the St. Clair Region, is recognized provincially, nationally, and even internationally for its biodiversity. SCRCA biologists work with numerous government agencies and non-profit organizations to monitor populations of local aquatic and terrestrial species (including Species at Risk) throughout the Sydenham River watershed and the smaller watersheds that make up the St. Clair Region. Staff also collect valuable data (e.g., water quality, benthic invertebrates) to assess the health of important local habitats and overall watershed health. This data is used by both the SCRCA and our partners to help guide policy development, prioritize research efforts, and implement rehabilitation and protection measures.



Water Quality Monitoring

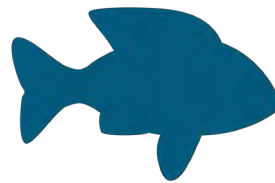
623 water quality samples collected from **22** sites between March and November. Samples are analyzed for nutrients, *Escherichia coli* (*E. coli*) and metals.

16 benthic invertebrate monitoring stations throughout the watershed.

Fish Monitoring

82 of the **160** native freshwater species in Ontario are found in the Sydenham River.

3,791 fish collected from **27** sites in 2019 including:



38 different fish species

1 invasive species

1 species at risk



SCRCA biologists collect fish using several different methods, including seine netting (pictured), backpack electrofishing, and fyke netting.

Reptiles at Risk

Snake Monitoring



14 artificial nesting boxes constructed and maintained throughout the watershed to promote snake nesting activity.

Coverboard monitoring occurred for **8** weeks with numerous snake species observed, including:

Eastern Foxsnake

Eastern Gartersnake

Butler's Gartersnake

The Eastern Foxsnake (left) and Northern Map Turtle (right) are found in the St. Clair Region and are provincially recognized Species at Risk.

Turtle Monitoring



785 turtle eggs successfully rescued, incubated, hatched, and released, including:

257 Spiny Softshell Turtles

268 Northern Map Turtles

247 Snapping Turtles

13 Midland Painted Turtles



Stewardship and Forestry



The SCRCA promotes and supports activities that will create healthy watersheds and improve local water quality and soil health. Conservation Authority staff provide educational opportunities, technical advice, and financial assistance to local landowners interested in establishing Best Management Practices (BMPs) and stewardship projects on their properties (e.g., tree planting, wetland creation). Additionally, our forestry experts offer woodlot management services that include developing woodlot management plans and certifying woodlands under the Managed Forest Tax Incentive Program (MFTIP).



Environmental Stewardship

\$236,000 in grant funding secured in 2019 to support 25 projects.



- 15** tree planting projects (20 hectares)
- 7** wetland projects (4 hectares)
- 2** erosion projects
- 1** fencing project



Tree Planting

68,570 seedlings and **232** large stock trees planted by SCRCA staff.

5,340 seedlings and **586** large stock trees supplied to local landowners.

2,700 litres of seed collected from **8** native tree species throughout the watershed.

Every fall, SCRCA staff collect seed from native trees throughout the watershed. The seeds grow into trees that will be used in future afforestation projects in our region and ensure the trees produced are genetically adapted to our local growing conditions.

Woodlot Management Services

Managed Forest Tax Incentive Program (MFTIP):

- 5** new plans, managing **58** hectares of forest
- 1** renewed plan, managing **12** hectares of forest

Woodlands Conservation Bylaw

Administered by the St. Clair Region Conservation Authority on behalf of the County of Lambton since 2011.

In 2019, the SCRCA partnered with the Ministry of Natural Resources and Forestry (MNR) to monitor insects known to host the fungal pathogen Oak Wilt – a disease that has impacted oak tree populations throughout the United States. The fungus is carried by the Nitidulid beetle (or picnic beetle) and can infect a tree when the host insect encounters open wounds. Three insect traps were set up in St. Clair Township between May and June that used pheromones to attract picnic beetles. The captured insects were collected and sent to the MNR to be analyzed for the presence of the fungus. No Oak Wilt fungus was detected in the insect traps located in St. Clair Township or any of the other traps set-up throughout Ontario.





Conservation Areas

Research has shown that spending time in nature has many positive impacts on both mental and physical health. The SCRCA owns and maintains properties throughout the watershed that provide numerous recreational opportunities including hiking, camping, fishing, and bird watching. Our team maintains and continuously strives to improve these areas for the enjoyment of our visitors.

Conservation Lands

15 Conservation Areas covering **620** hectares.

Manage **7** natural areas for Lambton County.

Over **40** kilometers of hiking trails.

Campgrounds

3 regional campgrounds with over **500** sites.

420 seasonal campsites

\$1.2 million gross revenue in 2019

Warwick Conservation Area Wetland Creation Project

A new wetland was constructed at the Warwick Conservation Area this year to reduce erosion, improve local water quality, and provide important wildlife habitat. Funding for the project was secured through the Habitat Stewardship Program administered by Department of Fisheries and Oceans, Wildlife Habitat Canada, and the St. Clair Region Conservation Foundation.



Special Projects

Healthy Lake Huron

To improve water quality and promote clean beaches along the southeast shores of Lake Huron, the Healthy Lake Huron program was launched in 2011. Since then, the SCRCA has partnered with all levels of government, local health units, other conservation authorities, and community groups to retain nutrients on the land and reduce the risk of harmful algal blooms between Sarnia and Tobermory. The SCRCA monitors water quality in the Lambton Shores Tributaries watershed, one of five priority watersheds identified for immediate action. Staff also attend local events to educate landowners on how they can reduce their impact on local water quality, which has resulted in over 40 stewardship projects completed throughout the region.



Sydenham River Watershed Phosphorus Management Plan

Through funding provided by Environment and Climate Change Canada, the SCRCA is coordinating the development of a phosphorus management plan for the Sydenham River watershed to reduce the loading of this nutrient to waterways, which is contributing to algal blooms in Lake Erie. The objective of this program is to work with local stakeholders to identify sources of phosphorus, determine best-value solutions, and implement an outreach strategy. Throughout 2019, meetings were held with the Point Source and Non-Point Source Working Groups, Indigenous Engagement Committee, Advisory Committee, and Water Quality Technical Team. Feedback from these committees have directed on-going research and are being incorporated into the draft Management Plan.

St. Clair River Area of Concern

The St. Clair River was identified as an Area of Concern (AOC) in 1987 due to a lengthy history of urban and industrial development. For over 30 years, the local community, Indigenous Peoples, and government have been working together to improve the water quality and aquatic habitat of this water body and remove it from the list of Great Lakes AOCs. Progress continued in 2019 with the initiation of a project involving the preparation of a Detailed Engineering and Design Plan to manage mercury contaminated sediment. The plan will outline the logistics for clean up of the sediment that remains in three areas of the river. The SCRCA is managing this project with funding support provided by Environment and Climate Change Canada, the Ministry of the Environment, Conservation and Parks, and Dow Canada.

Lambton County Phragmites Partnership and West Nile Virus Control Program

Through funding provided by Lambton County, the SCRCA has assumed the coordinator role for the Lambton County Phragmites Partnership. The objective of this program is to increase local awareness on the threat of invasive Phragmites and support local organizations and municipalities in implementing eradication measures to reduce its spread. In addition, the SCRCA was contracted by Lambton County to treat catch basins in partnership with Lambton Public Health as part of their West Nile Virus Control Program. In 2019, 16,500 catch basins were treated several times with a larva growth regulator throughout the County and Aamjiwnaang First Nation to prevent mosquito larvae from developing into adult insects.

Outreach and Education



Education is an important part of shaping tomorrow's environmental leaders and teaching communities about local conservation efforts. Our Conservation Education program offers a variety of hands-on, curriculum-based, indoor and outdoor programs geared towards both elementary and secondary school students. Local media outlets and social media are utilized to enhance and expand conservation awareness throughout the St. Clair Region watershed, and beyond. Additionally, staff organize and attend local events to introduce communities to the SCRCA, what we do, and how we can assist them in becoming more environmentally-minded in their everyday lives.



Education

12,115 students participated in conservation education programs in 2019.

Offer over **25** elementary and **20** secondary conservation education programs.

Offer **13** Specialist High Skills Major (SHSM) certification courses.

Over **\$90,000** in funding provided by **7** different organizations and government agencies to reduce or eliminate costs to schools and students as well as support education program upgrades.

Communications

16 media releases

97,867 website views by
38,550 users

21 events
organized or attended
by SCRCA staff

570
news article mentions

Social Media

Facebook

1,380 Followers

1,347 Page Likes



Twitter

69 Tweets

106 Retweets

575 Followers

2,709 Engagements (clicks, retweets, replies, follows, and likes)



Special Events 2019

SCRCA staff organize and attend a number of events throughout the year. In 2019, events included:

Maple Syrup Festival

A.W. Campbell Conservation Area,
Alvinston

PAIRS Career Exploration Event

Sarnia

Emergency Preparedness Day

Sarnia

Coldstream Library Wetland Night

Coldstream

Conservation Connections and Nature Fun

Lambton Heritage Museum, Grand Bend

Kids FunFest

Sarnia

SCRCA Project Tour

Warwick and Lambton Shores

Ipperwash Phrag Day

Lambton Shores

SCRCA Turtle Birthday Celebration

A.W. Campbell Conservation Area,
Alvinston

A Geocaching Adventure

Lorne C. Henderson Conservation Area,
Petrolia

Fall Fairs

Brigden, Forest, Wyoming

Chatham-Kent & Lambton Children's Water Festival

Blenheim

TD Tree Days

Strathroy, Sarnia

Lambton Upland Gamebird Youth Day

Sarnia

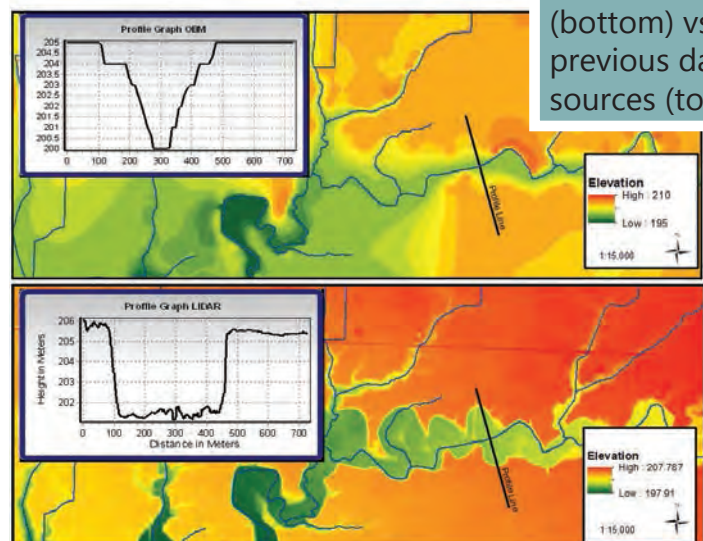
GIS and IT

Our Geographic Information System (GIS) and Information Technology (IT) experts provide essential support services to all SCRCA departments and programs. In addition to maintaining important technological infrastructure (i.e., computers, servers), our GIS and IT staff create, update, and manipulate geographic data into a form that other departments and programs can easily comprehend and utilize. Our GIS/IT staff also researches and investigates new and exciting technologies to improve efficiencies within the Authority.

2019 Highlights

- Extended GIS into the field, enabling staff to more efficiently and accurately collect data on mobile devices.
- Enhanced GIS techniques and mapping to better analyze and assess phosphorus inputs into the SCRCA watershed in support of the Sydenham River Watershed Phosphorus Management Plan.
- Developed a new Case Manager Database to better track and report on planning and regulation activities and permits.
- Continued to meet the mapping and data needs of SCRCA staff, consultants and partner organizations.
- Acquired access to new Light Detection and Ranging (LIDAR) data, allowing staff to develop more detailed Digital Elevation Models (DEMs) for natural hazard, erosion, and flood applications.

LIDAR data
(bottom) vs.
previous data
sources (top)

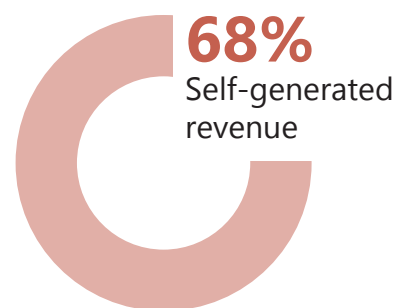
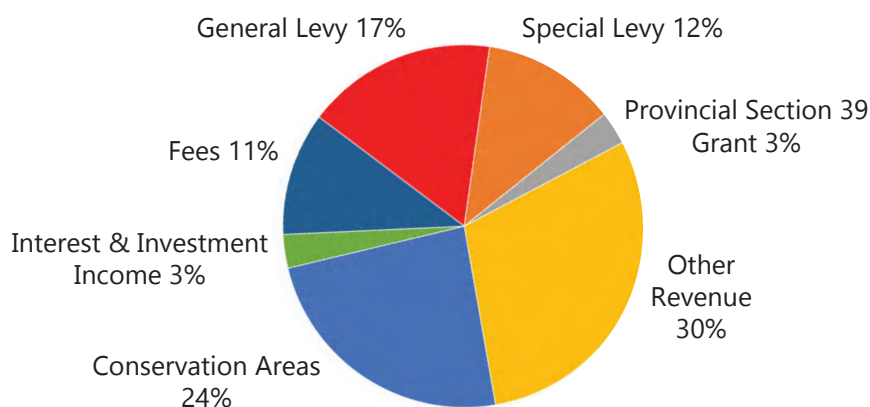


Administration

The administration and finance team at the St. Clair Region Conservation Authority plays an integral role in fostering a positive and safe workplace for all Authority employees and managing the Authority budget. Our team continuously updates and improves SCRCA policies to achieve business excellence and sustainability while maintaining a positive corporate atmosphere.



2019 Revenues - \$5,244,536*



Over **\$3.6 million** in funding provided to the SCRCA by 21 organizations and government agencies (2019-2020 fiscal year).

\$3.89 per \$100K of Assessment Value

Municipal Levy

Each year, SCRCA staff actively seek additional funding opportunities and sources of revenue to support conservation in our region thereby reducing costs to our member municipalities. As a result, the SCRCA holds the lowest municipal levy as a percentage of budget in Ontario (17%).

In 2019, our programs and services cost \$6.03 per person in the SCRCA watershed.



Conservation Foundation

The St. Clair Region Conservation Foundation is a registered, charitable organization with the purpose of raising funds to support the conservation programs of the Authority. The organization accepts donations and raises funds through the dedication of volunteers and staff that support several initiatives including conservation education; tree planting; the protection of wetlands, soils and forests; and programs that protect communities from flooding and erosion.



Authority Support

Over **\$92,000** provided by the Foundation to support 2019 Conservation Authority programs.

Memorial Forest Programs

47 trees planted at **13** different locations through the Foundation's Memorial Forest Program.

Foundation Lands

17 properties
totalling
461 hectares

For over 20 years, the Foundation has partnered with Denning's Funeral Home to establish the Denning's Memorial Forest Program. Through this program, Denning's makes donations on behalf of families they serve which support tree planting efforts and conservation education. A donation of \$18,280 was made in 2019 and was celebrated at two dedication services.



Conservation Scholarships



4 scholarships presented to graduating high school students pursuing post-secondary studies in a conservation-related field.

A.W. Campbell Memorial Scholarship - \$1,000 award

Kevin Robertson, Great Lakes Secondary School

Abigail Irwin, Lambton Central Collegiate & Vocational School

Tony Stranak Conservation Scholarship - \$500 award

Madeline Morrison, St. Patrick's Catholic High School

Mary Jo Arnold Conservation Scholarship - \$500 award

Laura Benedict, Strathroy District Collegiate Institute

Our Staff

Administration Office

Eva Baker, Planning and Regulations Clerk (Jan – Jul)
Kevan Baker, Director of Lands (Jan)
Donna Blue, Manager of Communications
Erin Carroll, Director of Biology
Stephen Clark, Risk Management Official/Inspector
Dallas Cundick, Manager of Planning
Emily De Cloet, Water Resources Specialist
Melissa Deisley, Regulations Coordinator
Marlene Dorrestyn, Administrative Assistant (Jan - Jun)
Nicole Drumm, Special Project Technician
Chris Durand, Manager of IT/GIS
Ashley Fletcher, Administrative Assistant/Board Coordinator
Michelle Gallant, Regulations Officer
Nicholas Hagerty, Survey Technician (Apr - Dec)
Sarah Hodgkiss, Planning Ecologist
Sarah Hume, Payroll and Accounting Clerk
Kelly Johnson, St. Clair River RAP Coordinator (Jan - Jun)
Anastassia Lagounova, Stewardship Outreach Technician (Oct - Dec)
Brian McDougall, General Manager
Mike Moroney, Project Manager (Feb - Dec)
Erica Ogden, Planner
Craig Paterson, Water Quality Technician (Oct - Dec)
Tim Payne, Manager of Forestry
Tracy Prince, Director of Finance
Girish Sankar, Director of Water Resources
Alison Seidler, GIS Specialist
Jeff Sharp, Conservation Services Specialist
Steve Shaw, Manager of Conservation Services
Kelli Smith, Watershed Biologist
Olivia Sroka, Aquatic Research Technician (Apr - Aug)
Susan VanderVaart, Water Quality Technician (May - Sept)

Jessica Van Zwol, Healthy Watershed Specialist
Meagan Weber, Planning and Regulations Clerk (Oct - Dec)

Greg Wilcox, Watershed Monitoring (Jan - Mar), Manager of Conservation Areas (Mar - Dec)

Drinking Water Source Protection

John Campbell, Senior Information Management Analyst
Deb Kirk, Administrative Assistant
Linda Nicks, Hydrogeologist

Field Offices

McKeough Floodway

Shane White, Maintenance Foreman, McKeough Floodway

A.W. Campbell Conservation Area

Mike Tizzard, Superintendent
Don Skinner, Assistant Superintendent

Lorne C. Henderson Conservation Area

Terry Barrie, Superintendent
Luke Derks, Assistant Superintendent
Sharon Nethercott, Conservation Education Coordinator
Melissa Levi, Conservation Education/Community Partnership Technician

Warwick Conservation Area

Glenn Baxter, Superintendent
Jessy VanderVaart, Assistant Superintendent

McLean Conservation Lands

Scott O'Brien, Superintendent

Staff Retirements

At the St. Clair Region Conservation Authority, we have been fortunate to benefit from the experience and knowledge of long-term staff members. In 2019, Kevan Baker, Director of Lands, and Marlene Dorrestyn, Administrative Assistant, retired after dedicated careers with the Authority. We wish both Kevan and Marlene the best in their next chapters.



Kevan Baker
38 Years with SCRCA



Marlene Dorrestyn
37 Years with SCRCA



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