

Annual Report 2013



St. Clair Region Conservation Authority



"working together for a better environment"

Vision, Mission, and Objectives

Vision

Vision is defined as foresight. The vision of the St. Clair Region Conservation Authority reflects the future desired state of our region.

"The St. Clair Region Conservation Authority has as its vision, watersheds where human needs are met in balance with the needs of the natural environment."

Mission

A mission reflects action. In order to achieve our vision, it is necessary to provide leadership, effective management and ongoing communication.

"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."

Objectives

Develop and maintain programs that will protect life and property from natural hazards such as flooding and erosion - The SCRCA works in partnership with municipalities to protect life and property through the development of programs that minimize or prevent the impact of disasters such as flooding and erosion.

Protect, manage and restore our woodlands, wetlands and natural habitat - Because what we do on land is reflected in our water and ecosystems, the SCRCA develops programs that protect our land resources and promotes watershed stewardship practices that lead to healthy, sustainable communities and industries.

Ensure that our rivers, lakes and streams are properly safeguarded, managed and restored - Based on our system of watersheds, the SCRCA develops and delivers watershed-based programs that work with nature to protect, restore and effectively manage our water resources.

Provide opportunities for the public to enjoy, learn from, and respect our natural environment - Through the lands we manage and own, as well as the educational programs we deliver, the SCRCA provides opportunities for our communities to understand and appreciate the value of their natural environment as well as the social and economic benefits of protecting that environment.



2013 Board of Directors

Betty Ann MacKinnon, Township of Adelaide-Metcalf
Frank Nemcek, Municipality of Brooke-Alvinston
Joe Faas, Municipality of Chatham-Kent
Tom McGregor, Municipality of Chatham-Kent
Bill Bilton, Township of Dawn-Euphemia
Kevin Marriott, Township of Enniskillen/Village of Oil Springs
Elizabeth Davis-Dagg, Municipality of Lambton Shores
Ben Phay, Municipality of Middlesex Centre
Helen Havlik/Tim Brown, Town of Petrolia
Netty McEwen, Town of Plympton-Wyoming
Larry MacKenzie, Village of Point Edward
Anne Marie Gillis, City of Sarnia
Terry Burrell, City of Sarnia
David Boushy, City of Sarnia
Don McCallum, Municipality of Southwest Middlesex/Village of Newbury
Steve Arnold, Township of St. Clair
Steve Miller, Township of St. Clair
Tony Bruinink, Municipality of Strathroy-Caradoc
Norm Giffen, Municipality of Strathroy-Caradoc
Rod Glen, Township of Warwick

The Conservation Authority is governed by a Board of Directors appointed by the member municipalities within the jurisdiction of the St. Clair Region Conservation Authority. The 20 Authority Directors vote annually to select a Chair, Vice Chair and Executive Committee.

The Board met six times in 2013 and is responsible for establishing the policy and procedures under which the Conservation Authority operates. Conservation Authority board members provide a crucial link between this organization and the municipalities we serve.

Executive Committee

Steve Arnold, Chair
Terry Burrell, Vice Chair
Bill Bilton
Tony Bruinink
Joe Faas
Norm Giffen
Rod Glen
Betty Ann MacKinnon
Steve Miller



Chair's Remarks

As you read through our annual report, there are details on a wide array of projects and programs. I would ask you, however, to take special note of the many partnerships we have forged. It is through partnerships that we move the yardstick forward to create safer and healthier watersheds.

A fine example of partnerships at work culminated in the purchase of the Peers Wetlands near Wallaceburg in 2013. With leadership from the Sydenham Field Naturalists and the Friends of the St. Clair River, a local groundswell from the community aided us in leveraging this support with additional funds from both the provincial and federal governments. The result was a provincially significant wetland protected for future generations to enjoy.

We were pleased to continue our work on projects with two of our First Nation Communities. A project led by the Aamjiwnaang First Nation's Environment Committee has engaged the youth of the community in the revitalization of a portion of Talfourd Creek. A research and education project on species at risk with the Kettle and Stony Point First Nation combined the value of science and traditional knowledge for the students in the community.

Our Conservation Authority is participating in a multi-watershed project to create a Rural Stormwater Management Model. This collaborative project is funded through the Showcasing Water Innovation Grant. The Ausable Bayfield Conservation Authority is the lead on this project with support from the St. Clair Region, Maitland Valley, and Saugeen Valley Conservation Authorities and the Pine River Watershed Initiative Network.

We were honoured and humbled this year by the late Mr. Keith McLean. Mr. McLean provided our Foundation with a tremendous gift to the community that will allow his passion for his property and conservation to live on in perpetuity. Mr. McLean's legacy donation of his 130-hectare farm has been entrusted to the St. Clair Region Conservation Foundation with his primary goal to have it continue to be a welcoming place for the public to come and to enjoy.

Our Board of Directors and our staff have worked very diligently to create a program that meets the needs of our watersheds and does so within the financial constraint of the times. We will continue to be innovative and focused on the needs of our watershed and our member municipalities. I would like to thank the many partners who have joined with us and accepted us into their fold in order to make safer and healthier watersheds. I also thank the Board of Directors for their support and hard work over this last year and to our dedicated staff who continue to work on behalf of our communities.

Steve Arnold
Chair



Protecting Life and Property

Flood, Low Water and Shoreline Warnings

Flooding is a natural process. While the Conservation Authority has done much to reduce the risk to life and property, some flooding in developed areas is still inevitable. The Authority operates a flood warning program designed to warn residents in flood-prone areas. In addition, municipal representatives meet with Authority staff to review and update the Flood Warning Plan, enabling an organized and coordinated response in the event of changing watershed conditions. Through a network of 11 stream gauges, five snow sampling stations, ice monitoring, and current meteorological data, Authority staff monitor watershed conditions by tracking and updating data on an ongoing basis to scientifically determine short- and long-term trends. Should a flood be imminent, the Municipal Flood Coordinators and the media are advised and officials take appropriate action.

There are four types of statements issued:

- Watershed Conditions Statement for Water Safety
- Watershed Conditions Statement for Flood Outlook
- Flood Watch
- Flood Warning

In addition to riverine flooding, the Authority issues warnings for damage which may occur from wave action along southern Lake Huron, St. Clair River, and northeastern Lake St. Clair shorelines.

In 2013, five events including two Flood Watches and three Water Condition Statements were issued. Three events were related to winter-spring snow melts and two to severe rain events.



The Authority uses information collected from our network of stream gauges such as this one on Shashawandah Creek to help us monitor watershed flow conditions and water quality. This particular gauge includes a permanent water flow station and weather station. The sampling device can be triggered automatically to collect stream water samples during a rain event. SCRCA staff will be able to use this information to determine the impacts of individual storm events on Shashawandah Creek and estimate how much nitrogen and phosphorus enter the system through runoff in a storm.

Water and Erosion Control Infrastructure (WECI) Grants

Due to budget reductions by the Ministry of Natural Resources for WECI funding, several submitted projects were not funded again for 2013 - 2014. The SCRCA did receive, however, \$2,000 that was used toward repair work on the Coldstream and Petrolia dams.

The following projects, funded in previous years, were undertaken in 2013:

- Cathcart Park Shore Protection Phase II
- Sarnia Erosion Control Repairs – East of Pine Avenue
- Head Street (Strathroy) and Petrolia Dam Repairs (ongoing)
- McKeough Floodway Slump Repair (ongoing).

Erosion Work Continues at Cathcart Park and Brights Grove

The second phase of protection at Cathcart Park was completed in 2013. An additional 70 metres of armour stone protection was constructed on the island. St. Clair Township provided \$120,000 toward the total project of \$238,000. Grants to enhance the project by providing improved shoreline habitat were received from the Great Lakes Sustainability Fund (\$93,000) and from the Ministry of the Environment through Canada-Ontario Agreement (COA) funding (\$25,000).

Additional erosion protection work was also undertaken in Brights Grove east of Pine Avenue. Approximately 20 metres of the armour stone revetment were repaired and an armour stone groyne was constructed to provide additional protection. Total cost for the project was \$275,000 with \$200,000 supplied by the City of Sarnia and \$75,000 from the provincial Water and Erosion Control Infrastructure Program.



Shore protection at Cathcart Park on the St. Clair River

3-D Mapping Project Underway

The SCRCA began the process to develop better mapping using a detailed elevation model to improve our ability to accurately define flood lines. To date, the Province and several Conservation Authorities have invested in Pilot Projects to create a Digital Elevation Model (DEM) and contours from the 2010 digital photography with impressive results.

Higher quality flood plain mapping is key to carrying out the Conservation Authority's mandate. By partnering with neighbouring Conservation Authorities who have already begun this process, we will be able to ensure a consistent mapping base for shared Municipalities. Other benefits include the ability of land and water managers to identify water flow paths, areas requiring protection, and areas where stewardship projects such as wetland creation will help improve water quality in the watershed.

Equipment has been purchased in 2013 to allow for the development of detailed 3-D mapping. It is expected to take up to three years to complete the project.

Lake Huron Shoreline Management Plan

The Authority continues to work with shoreline municipalities on incorporating technical shoreline information into development proposals along Lake Huron. The Lake Huron shoreline is a well-developed, highly desirable locale in the St. Clair Region. The Authority is seeing a significant conversion of seasonal cottage use to full-time residential use. The objective in reviewing development proposals is to place new development outside the flooding, erosion and dynamic beach hazards of Lake Huron.

In late 2013, a study was undertaken to delineate the dynamic beach in a section of shoreline in the City of Sarnia. This area is residential and there is a great deal of interest in redevelopment. By undertaking this study for this entire stretch of dynamic beach, individual landowners will not be required to complete separate reports and will provide a consistent approach along this section of shoreline.



Ipperwash Beach, Lake Huron

DART Protocol Approved

In 2008, the inter-agency Drainage Act & Section 28 Regulations Team (DART) was established by the Ministry of Natural Resources (MNR) and the Ministry of Agriculture, Food and Rural Affairs (OMAFRA) to explore the options and propose solutions to the legal liability issues for municipalities and conservation authorities arising from provisions in the Drainage Act and the Conservation Authorities Act.

Conservation Ontario, Drainage Superintendents, and staff from the Ontario Ministry of Agriculture and Food, and Ministry of Natural Resources have collaborated on a Provincial Drainage Act and Regulation Team to streamline approval processes that are required for municipal works, maintenance, and repairs completed under the Drainage Act, within areas regulated under Section 28 of the Conservation Authorities Act. The Drainage Act and Conservation Authorities Protocol was developed to provide provincially-approved guidance to conservation authority staff and municipal representatives regarding the most appropriate practices and permit requirements for municipal drain maintenance and repair activities.

The protocol includes a set of Standard Compliance Requirements for regular repair and maintenance activities that, if followed, would serve as the written permission to proceed with work under the CA Act.

The protocol only addresses the maintenance and repair of drains as required by the Drainage Act and does not address issues around new drains and improvements to existing drains. It also does not apply to permission under the federal Fisheries Act or the Ontario Endangered Species Act. Other items, such as new construction, will be the subject of a further protocol to be developed by the DART Committee. In 2013, 135 Standard Compliance Requirements were issued.



The Drainage Act and Conservation Authorities Protocol was developed to provide provincially-approved guidance to conservation authority staff and municipal representatives regarding the most appropriate practices and permit requirements for municipal drain maintenance and repair activities.

Promoting Safe Development and Healthy Communities

While municipalities encourage valuable development, it is important that new houses and businesses are located safely out of areas susceptible to potential natural hazards. It is also important that any development that is completed within an area of natural hazard does not endanger adjacent landowners, or other landowners within the system.

The St. Clair Region Conservation Authority is responsible for managing development within areas of natural hazards through *Ontario Regulation 171/06 - Development, Interference with Wetlands and Alterations to Shorelines and Watercourses*.

To prevent future risk and to protect the interests and liability of our member municipalities, O.R. 171/06 requires landowners to obtain permission of the Authority prior to developing within natural hazard areas associated with watercourses and areas susceptible to river or lake shoreline flooding, ravine and shoreline slopes, wetlands and lands adjacent to wetlands. Through pre-consultation with proponents and member municipalities, natural heritage areas and hazard constraints are discussed and avoided up-front in most cases.

The Authority provides natural heritage, hazard, and surface/groundwater comments on municipal planning matters. While the Authority has been delegated the responsibility to represent the provincial interest regarding natural hazards, we also provide technical advice on natural heritage and assist municipalities by reviewing natural heritage environmental reports such as wetland/woodland environmental assessments including Terms of Reference and Work Plans. Natural hazard studies can include floodlines, stormwater management, stable slopes, coastal assessments and engineering. The Authority, from time to time, may obtain outside expertise to review complex technical reports. This review and input assists municipalities in meeting their obligation to adhere to related provincial policies.

The Authority also responds to requests for property information from members of the public, lawyers, and real estate agents. These inquiries are very important so that prospective buyers of property or people wishing to work in high risk areas have a prior understanding of the risks involved.

Climate Change

Climate change is occurring in the SCRCA watershed, as it is in the rest of the world. This can be seen in several key features of climate, including warming temperatures, changes in precipitation patterns, and shifts in the growing season.

SCRCA staff continue to document how changes in climate are impacting local watersheds and how we can evolve our programs to meet the challenges posed by climate change.

Planning and Regulations Activity

	2012	2013
General Inquiries	21	12
Reviewing and advising on Official Plans, Official Plan Amendments, Zoning By-laws, Zoning By-law Amendments and Subdivisions	37	38
Reviewing and advising on Severances and Variances	47	43
Applications under Ontario Regulation 171/06	95	116
Inquiries under Ontario Regulation 171/06	238	246
Legal Inquiries	101	64
Review of Environmental Studies and Development Assessment Reports including Terms of Reference	13	12
Pre-consultation on Natural Hazards and Natural Heritage	not recorded	30
Total	552	561



Conserving Soil and Water

Tree Planting Program

This year, 76,000 seedling trees were planted on private and public lands. Authority crews planted 65,000 trees while 11,000 were planted by landowners. Three large projects were completed this year: Enbridge (4.5 ha); Bowens Creek (7 ha); and a private landowner in Plympton-Wyoming (6.5 ha). During the fall, 80 large stock potted trees were planted.

Approximately \$160,000 in federal, provincial and local grant were secured through 9 separate funding programs and used to offset planting costs for most of the 65,000 trees planted this spring.

Tree Maintenance

For a tree planting project to be successful, maintenance of the trees is essential. The Conservation Authority offers a service to provide weed control for newly planted seedlings for three years. In 2013, 180,000 trees were treated with herbicide to prevent competition from weeds.

Trees Ontario - 50 Million Tree Program

Trees Ontario has a long-term agreement to plant 50 million trees province-wide by 2025. In 2013, the SCRCA received \$70,000 from Trees Ontario to help plant 55,000 trees on 28 hectares involving 9 projects.



Authority Collecting Tree Seeds

Foresters understand that it is important to select the proper species for the site conditions where the tree is to be planted. Not only that, but a tree should be planted from a seed that evolved in the same geographic location.

The Conservation Authority collected local seeds throughout the watershed. The seeds were supplied to a nursery who will grow local tree stock for planting. Seeds collected in 2013 will be used in our tree planting program in 2015 - 2017. Seeds collected this fall include black walnut, bur oak, red oak, red cedar and shagbark hickory. Approximately 2,200 litres of seed were collected.

Woodlot Management Services

Qualified forestry staff provide woodlot management and marking services to landowners. This is an excellent option for landowners who would like independent advice or an appraisal of their woodlot. Management plans are created that meet the specific goals of the landowner. Proper silviculture techniques and "Good Forest Practices" are encouraged to ensure the long-term health of the woodlot while meeting the needs of the landowner. Staff are continuing to implement management plans for Conservation Authority, Foundation and Lambton County lands.

Woodlands Conservation By-law

The Conservation Authority continues to administer the Woodlands Conservation By-law on behalf of the County of Lambton. This partnership not only assists with the regulatory aspect of the by-law, but has expanded the outreach and education related to conserving woodlands. Staff have found an increase in enquiries by landowners with regards to woodlot issues and how they relate to the by-law.

Drain Maintenance Program

Authority staff worked with municipal drainage superintendents on the maintenance of 85 km of municipal drains in 2013. The herbicide applications assist in controlling woody vegetation, decreasing the frequency of drain clean-outs, and reducing sedimentation caused by frequent clean-outs.

Middlesex Stewardship Council

The SCRCA has partnered with the Middlesex Stewardship Council to provide support for their conservation programs. In 2013, the SCRCA developed a website and helped host a bus tour to promote conservation initiatives by local landowners undertaken with funding from various grants.



Healthy Watersheds

Grants Awarded to Conservation Authority Help Landowners

Water is a precious resource. The Conservation Authority's Healthy Watersheds Program is an initiative that provides technical and financial assistance to improve and protect rural water quality. The SCRCA actively seeks grants that will bring dollars into the region to support the conservation efforts of landowners. Projects include wetland creation, sediment traps, agricultural erosion control structures, buffer strips, riparian/stream bank protection, wildlife habitat creation, windbreaks, reforestation, and native grassland habitat. In 2013, \$250,000 in grants were obtained for landowners from Environment Canada, Ontario Ministry of Natural Resources, Ontario Ministry of the Environment, Ontario Ministry of Agriculture and Food, and the Trees Ontario Foundation.

- **Species at Risk Stewardship Fund** - \$47,000 in grant are available each year until 2016. This program, funded by the Ontario Ministry of Natural Resources, provides assistance for landowners with projects located in the east and north branches of the Sydenham River.
- **Clean Water Program** - \$20,000 in grant are available annually for landowners with projects located in Middlesex County.
- **50 Million Tree Program** - Up to \$1,000 per acre for reforestation projects are available from Trees Ontario for projects one hectare or larger in size. A total of \$75,000 or more is available each year for landowner tree planting projects in the SCRCA watershed.
- **Sydenham River Habitat Stewardship Program** - \$52,000 in grant are available each year until 2016. This program is for landowners with projects located in priority area 1 for aquatic species at risk in the east branch of the Sydenham River above Dresden.
- **Healthy Lake Huron – Lambton Shores Program** - \$25,000 in grant are available until March 2014. This program, funded by the Ontario Ministry of the Environment, assists landowners with projects located in the priority area.
- **Healthy Sydenham Headwaters Initiative** - \$20,000 in grant are available until March 2014. This program, funded by Wildlife Habitat Canada, assists landowners with wetland creation and upland habitat restoration projects in the Sydenham Headwaters watershed.

In 2013, 59 projects were completed at a value of \$930,000. \$280,000 in grants were provided to landowners. Over the last 13 years, the Conservation Authority distributed more than \$2.2 million in grants to landowners which resulted in over 750 projects worth \$7.7 million.



OMAF Supports Research and Education

The SCRCA received a \$57,800 grant for phosphorus reduction from the Ontario Ministry of Agriculture and Food. The goal is to increase the information available to landowners about soil erosion control and nutrient best management practices (BMPs) by implementing and demonstrating these BMPs, providing a workshop on cover crops and soil nutrients, and making available knowledge through publications and a public website. This Project will help the Ministry meet its commitment under the Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem (COA) to work with the agricultural sector to implement beneficial land and water management practices and reduce phosphorus levels in the Great Lakes Watersheds. To date, more than 70 landowners have participated in the soil testing program.

Ontario Trillium Foundation Supports Healthy Watersheds

The SCRCA partnered with Middlesex Stewardship Council to implement a three-year Healthy Sydenham Headwaters Initiative to improve and protect rural water quality through a community-based habitat rehabilitation approach. The Ontario Trillium Foundation has provided funding for staff implementation for the duration of the three-year program. The area of focus includes the Upper East Sydenham River Watershed and the Strathroy-Caradoc Sand Plain. By strategically restoring wildlife and aquatic habitat in these two natural features of our watershed, we will be able to increase the potential of impacting ecosystem health and improving biodiversity over the entire branch of the East Sydenham River. High priority recovery actions include the restoration of headwater wetlands and riparian vegetation.

Healthy Lake Huron

In 2013, the SCRCA provided grants to farmers to subsidize the planting of cover crops in Lambton Shores. Cover crops are crops planted in the late summer and fall and are important in reducing erosion over the winter months and improving soil fertility, structure, and quality. Three farmers received grant to subsidize the planting of 160 acres of cover crop this winter. This cover crop grant is part of the Lambton Shores Clean Water Cost-Share Program which offers grants to landowners for eligible projects that improve water quality in the Lambton Shores Watershed.

The SCRCA co-hosted the second annual Great Canadian Shoreline Cleanup event with the Municipality of Lambton Shores to increase awareness of the importance of shoreline habitat and water quality at Centre Ipperwash Beach. In November, staff hosted a workshop with a representative from Ontario Ministry of Agriculture and Food as well as a Certified Crop Advisor, speaking to local farmers about crop residue management.

Currently, staff are facilitating discussions on techniques to improve water quality through a landowner-directed steering committee and are raising awareness of the cost-share program and water quality concerns at a number of community events and workshops.

The Healthy Lake Huron Program is funded by Environment Canada and the Ontario Ministry of the Environment.

Helping Aquatic Species at Risk

The Sydenham River continues to be a hot spot in Canada for species that use aquatic habitats and are threatened with extinction. This includes many species of freshwater mussels and fish. The Conservation Authority received federal and provincial funds to undertake research, site-specific habitat improvements, and development and distribution of an annual newsletter. An education program where students learn about the biology and ecology of species at risk was implemented.

Reptiles at Risk

Turtle Surveys

The 2013 turtle survey conducted on the Sydenham River was completed with the help of volunteers. The survey took place along a stretch of the Sydenham River from Rokeby Line in Brooke-Alvinston to Dresden Conservation Area. This area was canoed and kayaked in search of turtle sightings as many turtles are Species at Risk. A total of 231 turtles were observed during this year's survey which included: 60 spiny softshell, 25 midland painted, 112 northern map, 1 Blanding's, and 2 snapping turtles (31 turtles were not identified).

Snake Monitoring

Staff monitored snakes on nine sites from July until early October, using cover boards and road surveys. Snakes can regulate their body temperature by warming themselves in the daytime in places like a sun-warmed cover board, or by holding their heat at night time by sheltering under items like a cover board. Road surveys included records of road mortalities and identification of areas where snakes were hit by vehicles. Five species were found (65 snakes in total) including eastern foxsnake, eastern garter snake, DeKay's brown snake, milk snake, and Butler's garter snake. Two of these species, the eastern foxsnake and the Butler's garter snake, are listed as Endangered under the Species at Risk Act.

The Conservation Authority hosted an eastern foxsnake nesting box workshop to educate landowners about the benefits of having foxsnakes as neighbours and how to improve their habitat.



Snake surveys help us understand the population of these interesting reptiles and help determine where habitat improvements would benefit their survival.

Fish Monitoring on the Sydenham River

In 2013, staff from the SCRCA conducted fish surveys at several locations in the Sydenham River, however, most of the effort was focused on the Sydenham Headwaters. This area was of particular importance, as a number of stewardship projects have been implemented within the subwatershed aimed at improving water quality. The most common species observed were the bluntnose minnow, greenside darter (once a species listed as special concern but now delisted), and pumpkinseed. A blackstripe topminnow, a species at risk, was found upstream on the East Branch of Sydenham River. This finding was significant since it was further upstream than any recorded sighting of this rare species.



A rainbow trout was caught by staff while sampling fish populations by electrofishing in Trout Creek, a cold water stream in Strathroy-Caradoc.

Conservation Action Plans

Conservation Action Plans are being developed by Carolinian Canada in cooperation with watershed municipalities, farm organizations, residents, conservation authorities, and interest groups. In 2013, the SCRCA collaborated with Carolinian Canada on Conservation Action Plans for Lake St. Clair Coastal, Rondeau – Erie Coast, and the Sydenham River watershed. Conservation Action Plans focus on conservation efforts that are most urgent and are likely to be achieved. Their clear achievable recommendations are attractive to potential funders.

Watershed Report Cards

Conservation Authorities across Ontario have prepared Watershed Report Cards to help measure the environmental health of their region. The second Report Card for the St. Clair Region was released in 2013 and includes summary tables of many environmental features that reflect or affect watershed health. There are individual cards for each of 14 watersheds within the St. Clair region. Each Report Card includes:

- surface water quality grades
- forest condition grades
- summary of watershed features
- highlights of progress since 2005
- local solutions that will improve environmental conditions

While there was a slight improvement in some watersheds, it is clear that work needs to continue to improve the health of our watersheds.

SCRCA Reviews Municipal Drains

Municipalities have a legal responsibility to work in accordance with Fisheries and Oceans Canada (DFO) requirements when municipal projects could impact fish habitat. Since 1998 under a signed agreement with DFO, St. Clair Region Conservation Authority staff have provided fish habitat advice for municipal drainage projects. This helps protect fish habitat while streamlining the review and approval process for municipalities.

This partnership agreement was cancelled by the federal government on November 25, 2013. The SCRCA suspended fish habitat review activities under the federal Fisheries Act effective on that date. DFO has indicated they may develop a new memorandum of understanding with conservation authorities. In the interim, the SCRCA will comment on fisheries in drains only upon request from a municipality.

Between January 1, 2013 and November 25, 2013, St. Clair Conservation staff provided advice or authorization for 204 drain projects which could affect fish habitat in our region.

Funding for Drain Enhancements

In 2013, with the support of the Great Lakes Sustainability Fund, St. Clair Conservation launched a Municipal Drain Enhancement Program. The pilot program involved working with the drainage community to provide funding to projects that increase fish habitat and mitigate sediment and erosion in agricultural watercourses of the St. Clair River Area of Concern. Enhancements such as grass buffers, sediment pools, and two-stage ditches were supported.



Water Quality Monitoring

Surface Water

Surface water samples are collected at 20 sites to provide water chemistry information for the following programs:

- Provincial Water Quality Monitoring Network
- Canada-Ontario Agreement on Great Lakes Water Quality
- Healthy Lake Huron – Lambton Shores Tributaries
- St. Clair River Area of Concern Tributaries
- Phosphorus Reduction Education

Field tests are conducted on parameters such as dissolved oxygen, pH, conductivity, and temperature, while samples are bottled and shipped to MOE to be analyzed for nutrients, *E. coli*, and metals.

The health of the aquatic habitats is also assessed by sampling the invertebrate organisms such as insects, worms and crustaceans that live on the bottom or benthos of the watercourse. Benthic samples were collected at 15 sites.

Results of this sampling form the basis for the water quality grades reported in the SCRCA Watershed Report Card.

Groundwater

In an effort to better understand Ontario's groundwater resources, the Ontario Ministry of the Environment implemented the Provincial Groundwater Monitoring Network to monitor water quality and quantity in a number of test wells. The Network is a cooperative effort of the Conservation Authorities in Ontario, on behalf of the Ministry of the Environment. Water levels are monitored at the nine groundwater wells, and the water quality of eight wells was sampled in the fall of 2013.

One of the wells has been outfitted with radio-telemetry and is used by the province as part of its monitoring program for low water advisories.

Rural Stormwater Management Model

The SCRCA is a part of an innovative water quality project with four other Conservation Authorities along the Lake Huron shoreline. The project will improve our knowledge of how agricultural and rural drainage function in a rural landscape. The purpose of the model is to help determine how to manage stormwater during major precipitation events. The model will aid in effectively managing runoff through strategically placed stewardship projects.

A permanent water flow station and weather station were installed in summer 2012. The sampling device can be triggered automatically to collect samples during a rain event. SCRCA staff will be able to use this information to determine the impacts of individual storm events on Shashawandah Creek and estimate how much nitrogen and phosphorus enter the system through runoff in a storm. In 2013, SCRCA staff collected water samples monthly from the station, as well as from 9 separate storm events. Thus far, our data suggest that during intense storm events, levels of nutrients and suspended solids increase, but the rates at which they do differ.

This data will be combined with information from the other priority watersheds to help flesh out patterns of nutrient movement in storm events in Southwestern Ontario.

Talfourd Creek Restoration

The Aamjiwnaang Environment Department has continued to work towards restoring a stretch of Talfourd Creek adjacent to the Community Centre in Bear Park. The main goal of the project was to bring the creek back into the lives of the community. By restoring the creek, it is hoped that a new appreciation of the creek is fostered, therefore returning the creek to the people.

SCRCA assisted with this project and was awarded funds through the Great Lakes Guardian Fund in order to assist with certain aspects of the restoration work. Contributions have focused on four main areas:

- pre- and post-restoration benthic macro-invertebrate monitoring
- involvement with educational programs at four community events
- development and design of interpretive signage for the site
- planting of native large stock trees and native shrubs



West Nile Virus Control

Lambton County Community Health Services contracted the Conservation Authority to undertake the Lambton County Larvicide Program as part of its overall West Nile Virus Control Program. Approximately 15,000 catch basins were treated in Sarnia-Lambton on three separate rounds of application. The catch basins were treated with a pelletized larvicide called methoprene. The treatment is designed to prevent mosquito larvae from becoming adult biting flies and reduce the risk of spreading West Nile Virus throughout the community.

High School Students Get Hands-on Experience

St. Clair Conservation, in collaboration with St. Clair Secondary School in Sarnia, undertook a project to enhance the habitat of snake and turtle species at Perch Creek Habitat Management Area. Two field days were spent out at Perch Creek to allow the students to receive hands-on experience in habitat restoration and enhancement. The two days consisted of developing turtle habitat and teaching the students different monitoring techniques used for snakes and frogs.



Aboriginal Fund for Species at Risk

The SCRCA was one of eight partners working with the Kettle and Stony Point First Nation to provide monitoring, habitat enhancement, stewardship and outreach with respect to Species at Risk on Kettle and Stony Point lands. Outdoor education and biology staff members visited Hillside Elementary School to lead an outdoor education program with a focus on how important the Kettle and Stony Point First Nation area is to a wide range of species.



St. Clair River Area of Concern

The St. Clair River Area of Concern stretches from the Blue Water Bridge to the north shore of Mitchell's Bay on Lake St. Clair and includes the immediate drainage basin of the St. Clair River. This area is one of 43 Areas of Concern the International Joint Commission has identified within the Great Lakes basin where there are known environmental problems. In each area, local partners are working together to implement Remedial Action Plans and take action so the area can be rehabilitated and removed from the list of Areas of Concern. The Conservation Authority is playing an important role in this plan by coordinating and managing projects. Delisting the St. Clair River as an Area of Concern under the Canada-US Great Lakes Water Quality Agreement is the ultimate goal of Ontario, Canada, and all local partners.

Road to Recovery

The Canadian RAP Implementation Committee continues to work towards the removal of water-use impairments from the original list of problems. The decision to re-designate Beneficial Use Impairments to "Not Impaired" status is reached through consensus with the Remedial Action Plan partners, and is endorsed by the St. Clair River Binational Public Advisory Council, First Nations, and government agencies.

A draft status assessment of the "Degradation of Aesthetics" and "Restrictions on Dredging Activities" Beneficial Use Impairments both have been completed this past year and found to be "Not Impaired." The "Degradation of Aesthetics" Beneficial Use Impairment was assessed by circulating surveys to water users in the community, conducting three years of aesthetic monitoring at eight sites along the St. Clair River shoreline and quantitatively rating each site using an Aesthetic Quality Index. The "Restrictions on Dredging Activities" assessment evaluated sediment data from dredging projects since the year 2000 along with past and present methods of dredged material disposal. Public and First Nation consultation is ongoing on these draft assessment reports to get input before a decision to re-designate them is made in 2014.

Results from recent field studies on "bird and animal deformities or reproduction problems" and "beach closings" are promising. Assessment reports will be prepared on these Beneficial Use Impairments in 2014-15 for subsequent consultation.



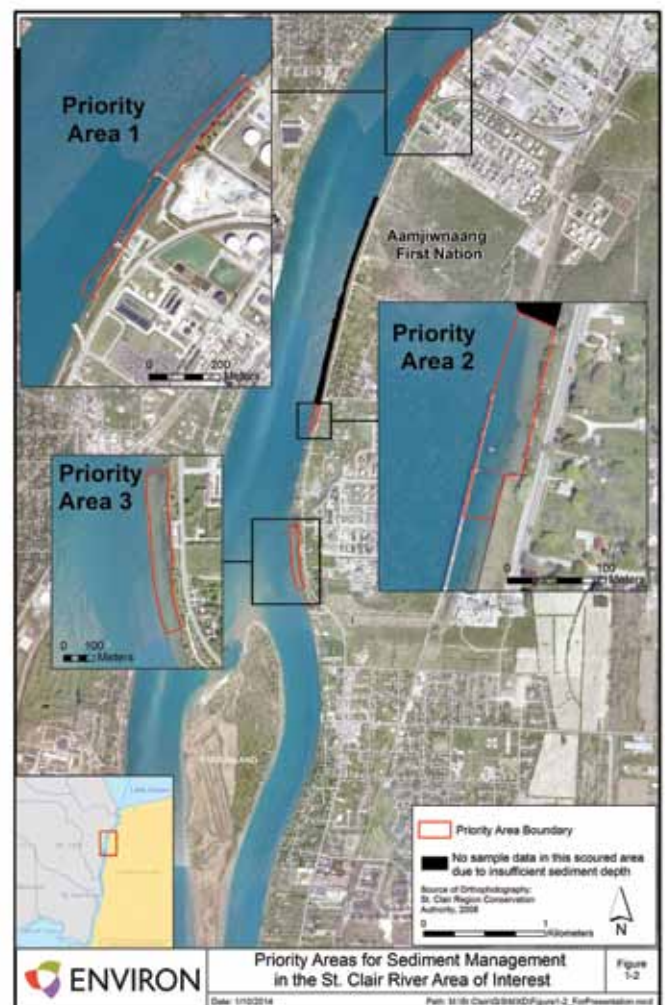
Photo courtesy of Environment Canada, 2013

Contaminated Sediment Management

Contaminated sediments at three priority areas in the St. Clair River contain elevated levels of mercury and methyl mercury. Mercury was used in historical industrial processes. While these contaminated areas do not pose an immediate health risk to humans, the contaminants biomagnify in fish (such as pike) that humans eat. Biomagnification is the process through which chemicals build up in animals as predators eat smaller contaminated creatures.

A local multi-partner technical team has been studying ways to manage the contaminated sediment since 2009. Three management options were developed and extensive public and First Nation consultation was completed in early 2013. In total, over ten open houses or meetings were held regarding the sediment management project for the St. Clair River. These meetings and open houses provided partners, the public, and First Nation communities the opportunity to ask questions, voice concerns, and provide preferences on remedial options.

A consensus was reached through the consultation process that dredging the contaminated sediment was the preferred option. This result was submitted to the federal and provincial governments in 2013 for their consideration and for funding. The governments are actively considering the dredging proposal. Detailed engineering and environmental assessments are the next steps in the process. The target date for completion of the clean-up is 2016-17.



Drinking Water Source Protection

The purpose of the provincial Clean Water Act (2006) is to protect existing and future sources of drinking water. Protecting water at the source – municipal wells and water intakes – is the first barrier in a multi-barrier approach to providing a safe, clean supply of water. The Act is part of the Ontario government's commitment to protecting and enhancing human health and the environment, as well as implementing the Walkerton Inquiry recommendations.

The St. Clair Region, Upper Thames River, and Lower Thames Valley Conservation Authorities have been working together, along with the Thames-Sydenham and Region Source Protection Committee, to develop a Plan to protect municipal sources of drinking water throughout the region. The Committee is a group of citizens, appointed under the Clean Water Act representing municipal, business, general public, and interest group sectors from across the region. The Committee is responsible for guiding the development of a local Source Protection Plan.

Source Protection Plan Submitted to Province

The Thames-Sydenham and Region Proposed Source Protection Plan was submitted to the province in December of 2012. The Committee is awaiting comments from the Ministry of the Environment.

The goals of the plan are:

- To protect existing and future drinking water sources in the Source Protection Area.
- To ensure that for every area identified in an Assessment Report as an area where an activity is or would be a significant drinking water threat,
 - the activity never becomes a significant drinking water threat, or
 - if the activity is occurring when the Source Protection Plan takes effect, the activity ceases to be a significant drinking water threat.

The Source Protection Plan contains local policies that address a range of drinking water threats. Landowners with significant threat activities on their property will be required to follow these policies.

The Source Protection Committee worked hard to create a balance between the important goal of protecting our municipal supplies of drinking water and the burden this would create on municipalities and other implementers. In general, for existing activities that are a significant risk, the approach was to manage the risk through the use of Risk Management Plans and Prescribed Instruments. This allows the activities to continue while managing the risk such that the activity is no longer a significant threat to the drinking water source.

For future activities that would create a new significant risk, generally the approach was to prohibit this activity in those vulnerable areas where it would be a significant threat. Whenever possible, where other agencies have mechanisms in place that adequately address the significant threats, these mechanisms were used to reduce duplication. If additional policies were needed, these were developed to complement existing mechanisms.

The Committee also felt it was important to address moderate and low risks. This was done primarily through education and outreach.

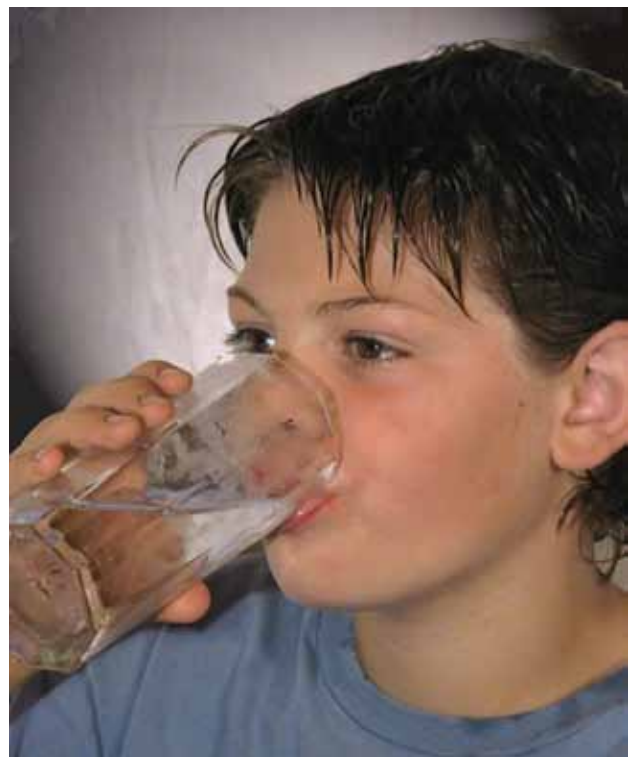
In 2013, the focus of the Committee's work shifted to preparing for implementation of the Plan upon approval by the Ministry of the Environment. Several meetings were held with municipalities to explore options for the implementation of policies contained in the plan.

Update to IPZ-3

As part of an update to the Source Protection Plan, a study involving an extension of IPZ-3 for the Lake Huron and Wallaceburg intakes was completed. This work was undertaken to include risks associated with chemical spills from shipping, pipeline breaches, and road and rail accidents. A summary report is being reviewed by the Technical Advisory Committee. The summary report and the delineated IPZ-3 maps will be submitted to the MOE in February 2014.

Wallaceburg Issue Contributing Area

Through the Clean Water Act, there is a mechanism to consider concerns at the intake identified by water treatment operators. In the case of the Wallaceburg intake, water treatment operators identified nitrates as a possible problem. While levels in the raw drinking water source are now below the drinking water standard, there is a trend of increasing levels. The approved Assessment Report has identified nitrates as an Issue. The Source Protection Committee is looking into this situation and is working to define areas that are contributing to these increasing levels of nitrates. This area is called an Issue Contributing Area (ICA). Once determined, activities within the ICA that are contributing to the increased levels of nitrates would be considered a significant risk to the Wallaceburg intake and the Source Protection Committee would be required to use existing or develop new policies to address this threat.



Conservation Lands

Lands owned by St. Clair Conservation are an important part of the land available for recreation in this region. Fifty-five per cent of all public outdoor recreation lands in the region are owned by the Authority. The Authority and the St. Clair Region Conservation Foundation own more than 2,000 hectares of land including beaches along Lake Huron, campgrounds, day use parks, wetlands and forests. A wide range of recreation activities are available on these lands including swimming, boating, hiking, bird watching, camping, fishing and hunting.

Camping

Our three campgrounds were busy in 2013 with many successful events and activities for campers. Some of these events included Canada Day Fireworks, Elvis Day, Geocaching, Fish Fries, Pig Roasts, and live entertainment. Our campgrounds are very fortunate to have a group of dedicated volunteers who assist staff in delivering many events and activities throughout the camping season.

Campgrounds recorded a 6% increase in gross revenues to \$999,815. With 522 serviced campsites and 407 seasonal campers, these three campgrounds provided a significant contribution to the local economies while providing employment opportunities for over 22 contract and seasonal staff.



Land Donation Adds to Strathroy Conservation Area

Mr. Nick Prigioniero generously donated 2.8 hectares of forest and provincially significant wetland to the Conservation Authority in 2013. This land abuts the Strathroy Conservation Area and provides an opportunity to expand the nature trail. This parcel includes rare plants which are now protected as part of a Conservation Area.



Peers Wetland Opened

Thanks to the support of many donors, the St. Clair Region Conservation Authority negotiated a combined purchase and donation of an 11-hectare wetland located east of Wallaceburg on the Kimball Sideroad. The Peers Wetland is the only sizeable wetland that remains along the lower reaches of Otter Creek. In 2013, work was undertaken on a berm and pumping scheme to manage water levels in the wetland. A parking lot was constructed and a trail established to improve public access to the site. In addition, 5,000 trees and shrubs and a 0.5 ha tall grass prairie were planted adjacent to the wetland to provide a more diverse habitat.



Conservation Area Development Summary

Lorne C. Henderson Conservation Area

Township of Enniskillen

145 serviced sites with 118 seasonal campers

- Main washroom shower areas renovated with new ceramic tiles on floors and walls and new exterior siding installed
- New septic system and dump station complete
- Canoe and fishing dock constructed

Warwick Conservation Area

Township of Warwick

232 serviced sites with 189 seasonal campers

- Main washroom shower areas renovated with new ceramic tiles on floors and walls
- Approach ramps with railings installed on main trail bridge
- Hydro servicing installed to 2 group camping areas
- Canoe rack and viewing platforms constructed

A. W. Campbell Conservation Area

Township of Brooke-Alvinston and Municipality of Southwest Middlesex

145 serviced sites with 100 seasonal campers

- Renovations to pool including ladders and railing anchors
- Steel doors installed on main washroom building
- Renovations to visitor centre including new windows

Strathroy Conservation Area

Municipality of Strathroy-Caradoc

- Two trail bridges upgraded
- New boardwalk sections installed
- Demonstration green parking spaces were created as an experiment at the administration office
- New entrance sign erected for administration centre

C.J. McEwen Conservation Area

Town of Plympton-Wyoming

- New steel roof installed on washroom building

Clark Wright Conservation Area

Municipality of Strathroy-Caradoc

- Trail improvements include the installation of a bridge and the replacement of 18 boardwalk sections





Conservation Areas	Camping			swimming pool	beach	picnic shelter	play ground	trails	natural area no facilities	phone (519)
	served lots	seasonal and overnight	group							
A. W. Campbell	✓	✓	✓	✓		✓	✓	✓		847-5357
Warwick	✓	✓	✓	✓		✓	✓	✓		849-6770
L. C. Henderson	✓	✓	✓	✓		✓	✓	✓		882-2280
Coldstream	✓		✓			✓	✓	✓		666-0190
Shetland	✓	✓	✓			✓	✓			692-5148
Wawanosh Wetlands						✓		✓		245-3710
Highland Glen					✓	✓				245-3710
C.J. McEwen					✓	✓				245-3710
Clark Wright								✓		245-3710
Bridgeview						✓	✓	✓		882-2350
Strathroy								✓		245-3710
Esli G. Dodge						✓	✓	✓		786-2335
Crothers						✓	✓	✓		360-1998
Tony Stranak						✓	✓	✓		360-1998
McKeough Floodway								✓		892-3824
Management Areas										
Sinclair									✓	245-3710
Huff Woodlot									✓	245-3710
Perch Creek								✓		245-3710
Moore								✓		245-3710
Marthaville								✓		245-3710
Harrison Woodlot								✓	✓	245-3710
Bates Lands									✓	245-3710
Gawne									✓	245-3710
Maples Woodlot									✓	245-3710
Reid Property									✓	245-3710
Cuddy Woods									✓	245-3710
Stirling Wetlands									✓	245-3710
Keith McLean									✓	245-3710



Management of Lambton County Forests

Based on the Conservation Authority's experience in managing natural areas, The County of Lambton has contracted out the management of a number of its properties to the Conservation Authority.

- Lambton County Heritage Forest
- Perch Creek Habitat Management Area
- Marthaville Habitat Management Area
- Bowen's Creek Habitat Management Area
- Moore Landfill Buffer Lands
- Szabo Forest
- Meadowview Villa Forest

In 2013, work focused on a forest inventory of the Lambton County Heritage Forest to determine standing timber values. Tree planting, as recommended in the approved management plans, occurred at the Bowen's Creek Management Area. Trail work was undertaken at Perch Creek and Marthaville Management Areas to provide better access for the public.

W. Darcy McKeough Floodway

The W. Darcy McKeough Floodway, located 12 km north of Wallaceburg, was built to protect the community of Wallaceburg and portions of the former Townships of Chatham and Sombra from severe flooding. Since 1984, the McKeough Floodway has been operated six times. In 2013, a number of maintenance and repair items were completed on the Floodway:

- Continued monitoring of slump erosion on the floodway
- Continued to deal with vandalism by attempting to restrict unauthorized access by ATVs
- Continued weed control in channel bottom and side slopes

McKeough Upstream Lands

A number of projects were undertaken on Authority owned lands upstream of the McKeough Floodway. Environmental Farm Plans were completed for 18 properties. Temporary ponding basins were constructed in erodible crop land areas to prevent rill and gully erosion as well as stop sediment runoff into the adjacent creeks. Funding from the Ontario Ministry of Agriculture and Food and the Ontario Land Trust Assistance Program assisted with the development of management plans.

Wetland creation and erosion control works were conducted on several properties in 2013. Approximately 3 ha of wetlands were created in areas where land has eroded or is located in low lying and poorly drained farm land.

Bowen's Creek Project Continues

The Bowen's Creek project started in 2011 with the construction of eight hectares of wetland. Last year, hundreds of waterfowl were using the new wetlands as a migratory stop-over.

In 2013, 14,000 trees and 5 hectares of tall grass prairie were planted to enhance the existing 20 hectare site. This property in St. Clair Township resides within the heart of Carolinian Canada and within the St. Clair River Area of Concern. It is biologically connected to woodlands and provincially significant wetlands treasured for their unique biodiversity.

Many partners have been involved with this project and include the federal government through the Great Lakes Sustainability Fund, Trees Ontario, Ducks Unlimited Canada, Shell Fuelling Change, Enbridge, RBC Foundation, St. Clair Region Conservation Foundation and Authority, and the Friends of the St. Clair River.



Wetlands constructed at Bowen's Creek are starting to develop into a diverse ecosystem supporting a variety of aquatic life.



Staff lay out a buffer strip on one of the McKeough properties to help improve water quality and provide additional wildlife habitat.

Communications

Conservation For Kids

The Authority provides young people with the opportunity to discover how the Conservation Authority manages the region's natural resources. The program is designed to create an enthusiasm for our natural heritage which will carry over into the child's adult life. The Authority offers outdoor and in-class programs. Many of the education programs are supported by donations from businesses and organizations. A complete list is included in the St. Clair Region Conservation Foundation's section of this report. In total, 13,444 students participated in conservation education classes in 2013.

River Critters and Groundwater

River Bottom Critters is an in-class program, sponsored by the Sarnia-Lambton Environmental Association (SLEA), which gives students a first-hand opportunity to see how river bottom animals can be used to determine the quality of the aquatic health of a watercourse. 2,949 students poked and probed through the mud and discovered the wealth of life which thrives on the St. Clair River bottom. SLEA also sponsors *Go With the Flow* which is a groundwater program taught by Authority staff in the classroom. The program introduced 852 grades 4 - 8 students to the fundamentals of groundwater hydrology and the importance of protecting our groundwater resources.

The River Rap

The Friends of the St. Clair River sponsors a program that helps teach students about the impairments to the St. Clair River and the progress toward the goal of delisting the river as an Area of Concern. The highlight of the program is *One Shot - The River RAP*, a RAP video produced locally about the St. Clair River Remedial Action Plan. You can see the RAP video on You Tube by searching St. Clair Region Conservation.

Spring Water Awareness Program

This program was developed to warn students about the hazards of fast flowing rivers and melting ice and has reached the classroom thanks to sponsorship by Union Gas. In February and March, 56 classes participated in the program bringing this safety message to over 1,000 students.

Alternative Energy

This new program examines the issues related to alternative energy sources. Sponsored by Enbridge, the program is taught both in the classroom and as an outdoor class. There was considerable interest in all grade levels so we have expanded the program to reach grades 2 - 12.



Events - Experience our Watershed

Healthy Hikes

Healthy Hikes was a provincial initiative coordinated by Conservation Ontario to help people engage with Conservation Areas. Ontarians were encouraged to take the Healthy Hikes challenge by registering online and then recording their time spent hiking in the more than 270 Conservation Areas owned and operated by Conservation Authorities across Ontario for a chance to win great prizes. The SCRC hosted two Healthy Hike events.

Strathroy Paddle Day: This was an opportunity to introduce the Strathroy community to the water trail established along the Sydenham River. This event was coordinated by the Conservation Authority with support from Canoe Water Adventuring. Boy Scouts assisted by supplying additional canoes and helping new paddlers. About 100 people came out to explore the water trail.

A Geocaching Adventure: Geocaching is a high-tech treasure hunt which uses a global positioning system (GPS) unit to locate a hidden cache (treasure). The event was held at the Lorne C. Henderson Conservation Area where 60 people took to the woods to discover hidden caches.



Maple Syrup Festival

Over 1,000 people visited the A.W. Campbell Conservation Area to experience demonstrations of syrup production from times past. Tours included a story of how maple syrup was discovered by our First Nations people who later taught pioneers the wonders of this important staple. The festival was held March 16 - 17. The Alvinston Firemen's Association provided the traditional pancake and sausage meals at the Alvinston Community Centre.



Sydenham River Canoe Race

Fifty-seven canoes and kayaks braved high water to participate in the Sydenham River Canoe and Kayak Race on April 21. Over \$2,500 was raised for Conservation Education. The Award for the most money raised went to Steve Arnold and Corinne Lemieux and the fastest time for the 16-km competitive race was won by Dean Brown and Rene Boogemons at 1 hour 21 minutes and 2 seconds. Thanks to the fast current, this was almost 9 minutes faster than the fastest time last year.



Conservation Awards

The Conservation Authority offers Conservation Awards to deserving individuals and groups who have contributed to the environmental wellbeing of our region.

Sydenham Field Naturalists

The Sydenham Field Naturalists were presented this award for their extraordinary effort in raising funds for the purchase of the Peers Wetland. Numerous wetland areas on both the north and south side of Otter Creek have been drained for use as valuable farm land and is the only sizeable wetland - around 11 hectares - that remains along the lower reaches of Otter Creek. While the SCRCa received funds from a number of government programs and from the Municipality, this would not have been possible without a strong show of support from the community gained through the leadership of the Sydenham Field Naturalists.

Karen and Doug Opperman

Karen and Doug Opperman have been campground hosts since 2000 at the Lorne C. Henderson Conservation Area. Beginning in 2003, they spearheaded very successful fund-raising events that helped support the purchase of equipment, new facilities and programs. Their efforts have added greatly to the quality of camper experiences at the Lorne C. Henderson Conservation Area.

Brendan Martin

In 2013, Brendan Martin worked on a volunteer basis with the biology staff as an intern accumulating over 120 hours in just 3 months. Brendan is a student at the University of Guelph studying Biology. Brendan took initiative and demonstrated a great deal of independence in completing a number of projects. Overall Brendan produced high quality written reports, data analysis, and graphic design products. Brendan worked with other staff and the Strathroy-Caradoc Museum to create interpretive materials to go with an aquarium display of local Sydenham River fishes. Brendan also showcased his oral communication skills in a presentation he made to the Board of Directors on the Eastern Foxsnake.



Volunteer Brendan Martin seeks out eastern foxsnake nesting sites.

New Website Launched

The SCRCa has revamped its website making it more user-friendly and to comply with the new Accessibility Act. The new site includes several features to allow for easy navigation while maintaining our wish to provide comprehensive information to our stakeholders and the public.

Community Outreach

Kid's Funfest: This Sarnia event focused on children and provided an opportunity for the Conservation Authority to engage youth in nature-based activities.

Art Walk: The Conservation Authority participated in Artwalk, a weekend-long festival celebrating the development of Sarnia's arts and culture district.

Agriculture in the Classroom: The Conservation Authority works with the Agriculture in the Classroom program at both the Brigidgen and Wyoming Fairs. Our display focused on common sources of pollution found on a farm and solutions to those problems. A hands-on 'Enviro-scape' model demonstrated how pollution travels across a watershed causing pollution of down stream water bodies.

Circles Program: A geocaching event was held to support Lambton County's Circles Program. This is an initiative that helps cycle people out of poverty. Families are matched with community members who provide assistance. They have monthly gatherings and our geocaching is one of their requested events.

Young Naturalists: The SCRCa coordinates the Young Naturalists Program on behalf of Lambton Wildlife Inc. Young nature enthusiasts participated in a number of events over the year including a Wildflower Hike at Mandaumin Woods, Kids Kayaking Day at Henderson C.A., Pelee Island birding, SCRCa Turtle Survey, and the Pinery Butterfly Count.



Young Naturalists enjoy an opportunity to explore wetlands and discover the importance of conservation.

Conservation Foundation

Foundation Board of Directors

Duncan Skinner, President	Ken Brooks
Lyn Goddard, Vice President	Ralph Coe
Norm Giffen, Treasurer	Ottavio Colosimo
Steve Arnold	Rex Crawford
Bill Bilton	John Simmons

Leaving a Legacy - Keith McLean Conservation Lands

The Keith McLean Conservation Lands was officially opened in a ceremony held on Thursday, June 27. Mr. McLean, who passed away on November 20, 2012, donated his 130-ha farm to the St. Clair Region Conservation Foundation. "We discovered shortly after Keith's death that he was donating his land and a sizeable trust fund to our Foundation. It is a great gift and a huge responsibility," Duncan Skinner, President of the Foundation said.

The property includes wetlands, tallgrass prairie and farmland. The property is best known, however, for its lotus ponds.

"It truly is a remarkable gift," Steve Arnold, Chair of the St. Clair Region Conservation Authority said. "Now it is our task and responsibility to see that this gift is transformed into the vision that Keith laid out for us."

Mr. McLean provided the Foundation with a letter. In the letter, Mr. McLean laid out a challenge for the Foundation: "To accept this property and, with vision and foresight, enhance the beauty of this site, continuing the conservation effort for the benefit of wildlife and the general public." Then he went on, "There may be many ideas and improvements that I have never imagined but always bear in mind that this is a place where the public should always feel warmly welcome."

While the land was donated to the Foundation, the Conservation Authority on behalf of the Foundation, will be managing this property. The first step will be the development of a management plan. In the fall, an open house was held to seek input on the plan. "The opportunities seem endless and will only be limited by our imaginations," Arnold said.



A plaque was unveiled at a ceremony to honour the donation of this beautiful land by the late Mr. Keith McLean.



While the property includes wetlands, tallgrass prairie and farmland, Mr. McLean's land is best known for its lotus ponds.

Local Business Supports Conservation Education

The Foundation continued its efforts in 2013 to seek corporate support for Conservation Education. We wish to sincerely thank the following organizations for their support of conservation education this year.

Sarnia-Lambton Environmental Association

The Sarnia-Lambton Environmental Association (SLEA) donated \$30,000 to support two in-class education programs dealing with the use of benthic invertebrates to measure river quality and the importance of our groundwater resources. Over the last 17 years, SLEA has donated \$454,000 to conservation education.

Enbridge

Enbridge made a three-year commitment of \$10,000 per year to support an Alternative Energy Program. This program is taught both in the classroom and at the L. C. Henderson Conservation Area.



Union Gas

Union Gas continued its support of the Spring Water Awareness Program with a donation of \$5,000. This program is offered to Kindergarten - Grade 6 classes.



TD Friends of the Environment Foundation

A \$750 donation was made to help purchase binoculars for use by students participating in education programs.

RBC Blue Water Project

RBC Blue Water Project donated \$5,000 to supply trees and shrubs to be planted by students and community volunteers in Strathroy.



Memorial Forests

The St. Clair Region Conservation Foundation launched the memorial forest program in 1987 with the purpose of raising funds to reforest lands within our region. To date, 12,900 trees have been dedicated covering 44 different sites. Through the program, the Foundation arranges for the dedication of trees which have been planted from donations received directly from members of the community. In addition to these trees, the Foundation receives donations from the McKenzie and Blundy Funeral Home, Sarnia; Eric F. Nicholls Funeral Home, Wallaceburg; and the Denning Brothers Funeral Home, Strathroy and have established separate memorial forests to recognize this contribution to the environment.

Through the Foundation, trees can be dedicated at any of the Authority's Conservation Areas. In 2013, 538 trees were dedicated and more than 1,000 people attended dedication ceremonies held at the various memorial forests.



A large crowd attended the McKenzie and Blundy Memorial Forest dedication ceremony.

Foundation Supports 2013 Projects

- \$8,500 - support trail development at the Strathroy and Clark Wright Conservation Area.
- \$5,000 - 3-D Mapping Project that will improve the quality of the Conservation Authority's mapping resources
- \$5,000 - assist with the purchase of the Peers Wetland
- \$15,000 - support purchase of equipment for benthic and water quality monitoring



Conservation Scholarships Awarded

The Conservation Scholarship program rewards graduating high school students continuing their post-secondary studies in a conservation-related field based on their academic achievement and their demonstrated interest and involvement with the environment. In total, \$3,250 was awarded across the St. Clair region this year.

A.W. Campbell Memorial Scholarship: two \$1,000 awards
Derek Bulsink, Ursuline College, Chatham
Laura Williams, North Lambton Secondary School

Tony Stranak Conservation Scholarship: one \$500 award
Ian Van Arkel, Lambton-Kent Composite School

Mary Jo Arnold Conservation Scholarship: one \$500 award
Jordan Henry, St. Christopher Secondary School

SCRCA Conservation Scholarship: one \$250 award
Kurtis Smith, Northern Collegiate

The scholarships are made possible through trust funds established by the St. Clair Region Conservation Foundation and its donors.

Bingo Supports Conservation

Thanks to the many Foundation volunteers who assisted with our bingo program in Sarnia, the Foundation was able to support several conservation programs in 2013. A total of \$19,600 was provided to support conservation education, trails, visitor services, and tree planting throughout Lambton County.

Foundation Land Donations

The Foundation accepts land donations that further the objectives of the St. Clair Region Conservation Authority by preserving important natural areas. To date, the Foundation has received 16 land donations totalling 455 hectares. The Conservation Authority manages these lands on behalf of the Foundation.

- **Bates Conservation Lands**, Municipality of Chatham-Kent, 29 ha, qualified as an Ecological Gift through Environment Canada
- **Clark Wright Conservation Area**, Municipality of Strathroy-Caradoc, 20 ha
- **Cochrane Property**, Enniskillen Township, 1 ha
- **Cuddy Woods**, Municipality of Adelaide-Metcalf, 7 ha
- **Evoy Woodlot**, Township of Enniskillen, 36 ha (irrevocable trust agreement)
- **Fraser Property**, Municipality of Lambton Shores, 1 ha
- **Gawne Property**, Township of Dawn-Euphemia, 40 ha
- **Harrison Woodlot**, The Township of Middlesex Centre, 8 ha
- **Huff Property**, Municipality of Chatham-Kent, 12 ha qualified as an Ecological Gift through Environment Canada
- **Keith McLean Conservation Lands**, Municipality of Chatham-Kent, 130 ha (awaiting transfer)
- **Maples Woodlot**, Town of Plympton-Wyoming, 3 ha
- **Murray Property**, Municipality of Lambton Shores, 1 ha
- **Reid Conservation Area**, Township of St. Clair, 69 ha, qualified as an Ecological Gift through Environment Canada
- **Sinclair Property**, Township of Dawn-Euphemia, 80 ha
- **Stirling Wetlands**, Municipality of Chatham-Kent, 12 ha
- **Western Land Company Property**, Municipality of Strathroy-Caradoc, 6 ha

Ecological Gifts

Three of the properties have qualified as an Ecological Gift through Environment Canada. Canada's Ecological Gifts Program provides a way for Canadians with ecologically sensitive land to protect nature and leave a legacy for future generations. Made possible by the terms of the Income Tax Act of Canada, it offers significant tax benefits to landowners who donate land or a partial interest in land to a qualified recipient. Recipients, such as the Conservation Foundation, ensure that the land's biodiversity and environmental heritage are conserved in perpetuity.

Finance and Administration

The Conservation Authority had a successful year in program development and financial management. On an ongoing basis, Authority staff work to find funds to undertake the proposed projects and to take advantage of funding opportunities that arise over the year. Efforts to find alternative sources of funds have helped the SCRC maintain one of the lowest municipal levy levels in the province at only \$3.22 per capita.

Employment Programs

The St. Clair Region Conservation Authority actively seeks opportunities to provide employment for local youth and those who are seeking to gain valuable work experience. In 2013, the SCRC was successful in obtaining grants to hire 15 people which assisted in a variety of conservation programs.

Job Creation Partnership: contribution agreement for \$102,365 with the Ministry of Training, Colleges and Universities to provide employment training for 7 people for 26 to 36 weeks

Summer Job Service: \$3,600 provincial grant to provide a wage subsidy for 6 summer students

Summer Experience: \$5,570 grant to employ 2 students



Administration Office

Muriel Andreae, Senior Biologist
Kevan Baker, Director of Lands
Rick Battson, Director of Communications
Diane Brodie, Payroll and Accounting Clerk
Erin Carroll, Aquatic Biologist
Stephen Clark, Data Technician
Dallas Cundick, Environmental Planner/Regulations Officer
Melissa Deisley, Regulations Officer (November - December)
Marlene Dorrestyn, Administrative Assistant
Chris Durand, IT/GIS Specialist
Michelle Fletcher, Environmental Regulations Technician (January - October)
Patricia Hayman, Director of Planning
Claude Lafrance, St. Clair River RAP Coordinator
Heather Long, Receptionist/Administration Clerk
Brian McDougall, General Manager
Tim Payne, Forest Management Specialist
Tracy Prince, Director of Finance
Girish Sankar, Water Resources Engineer
Alison Seidler, GIS/Resources Technician
Jeff Sharp, Conservation Services Technician
Steve Shaw, Conservation Services Specialist
Kelli Smith, Biological Technician
Sara Storey, Data Entry Clerk
Donna Strang, AOC Research Assistant
Jessica Van Zwol, Healthy Watershed Specialist

Drinking Water Source Protection

John Campbell, Source Water Protection Database Specialist
Michelle Fletcher, Source Protection Policy Advisor (October - December)
Deb Kirk, Administrative Assistant
Ingrid Vanderschot, Source Protection Policy Advisor (January - September)

Field Offices

McKeough Floodway

Shane White, Maintenance Foreman

A.W. Campbell Conservation Area

Mike Tizzard, Superintendent

Don Skinner, Assistant Superintendent

Lorne C. Henderson Conservation Area

Terry Barrie, Superintendent

Mark Bakelaar, Assistant Superintendent

Sharon Nethercott, Conservation Education Coordinator

Melissa Gill, Conservation Education/Community Partnership Technician

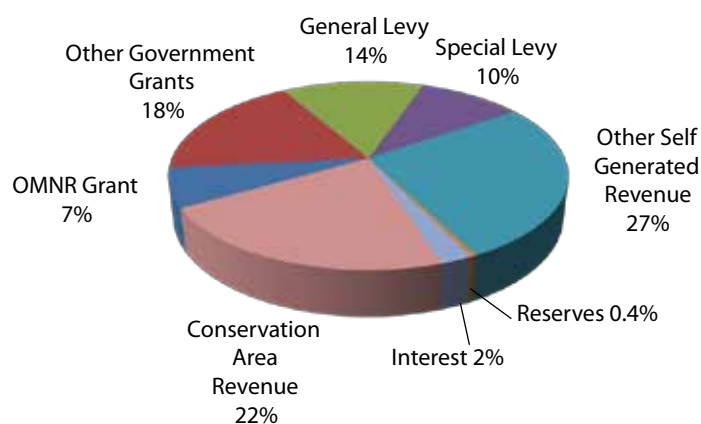
Warwick Conservation Area

Bill Turner, Superintendent

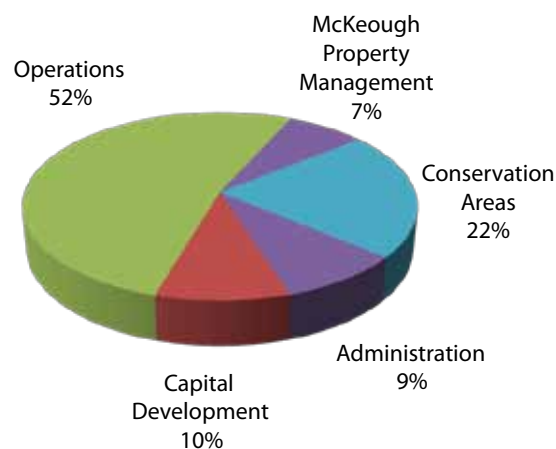
Glen Baxter, Assistant Superintendent

2013 Revenue and Expenditures

Revenue - \$4,614,389



Expenditures - \$4,614,389



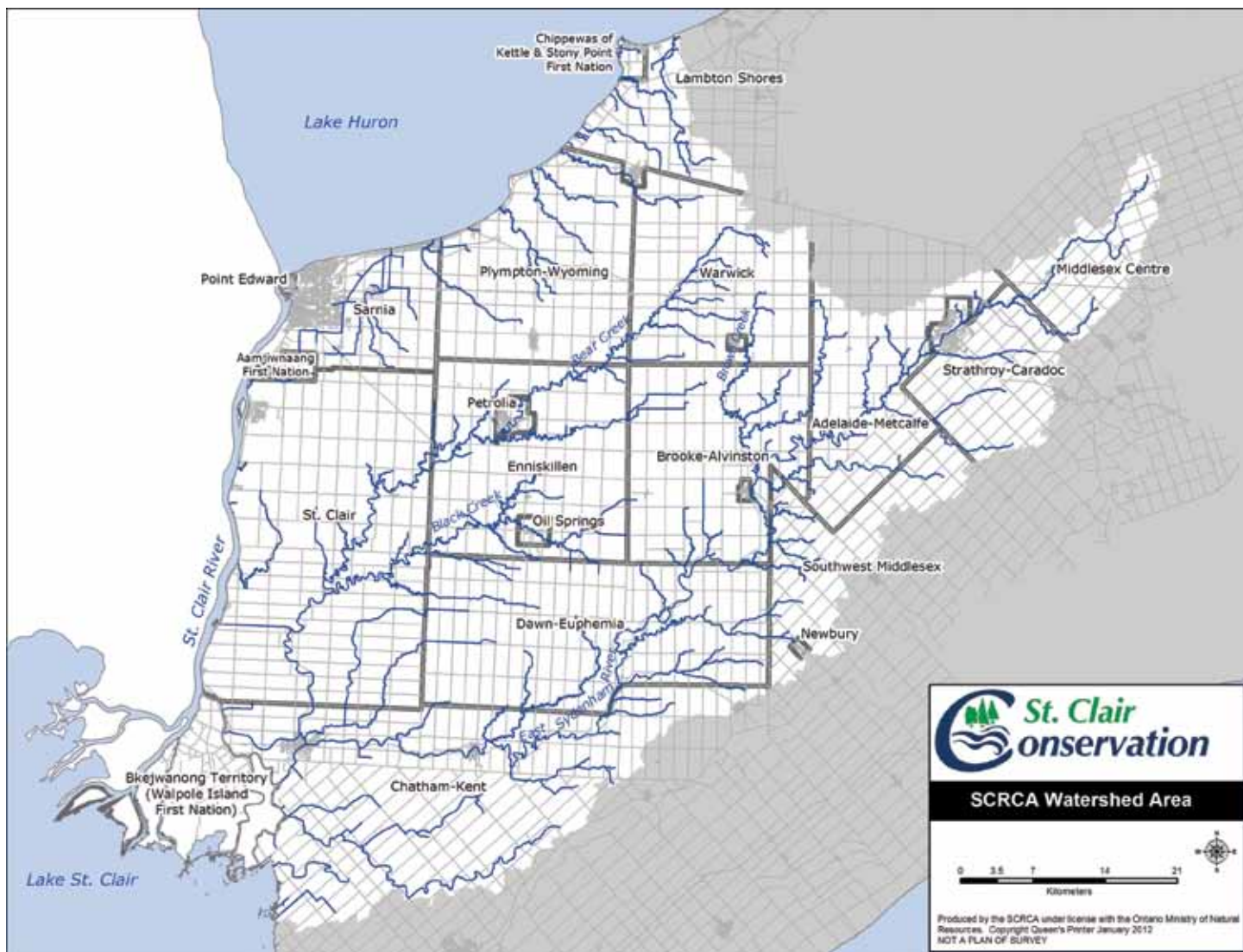
Supporting Conservation

Each year the Conservation Authority actively seeks additional grants to bring funds into the region to support conservation. We thank the many organizations that provided grants to support conservation programs.

Species at Risk (MNR)	\$40,000
Reptiles at Risk	
Habitat Stewardship Program	
Habitat Stewardship Program for Species at Risk (EC)	\$84,000
Ministry of Natural Resources Stewardship Fund	\$18,000
Water and Erosion Control Infrastructure (MNR)	\$2,000
St. Clair River AOC (MOE/EC)	\$188,000
Drinking Water Source Protection (MOE)	\$348,000
Great Lakes Sustainability Fund (EC)	\$235,000
Fish Habitat Enhancement	
Bowen's Creek	
Peers Wetland	
Cathcart Erosion Control	
GIS	
Canada-Ontario Agreement (MOE)	\$25,000
Cathcart Park	
Wildlife Habitat Canada	\$28,000

Great Lakes Guardian Fund (MOE)	\$22,000
Ontario Trillium Foundation	\$173,000
Middlesex Stewardship Council	
Healthy Lake Huron (MOE/EC)	\$106,000
Trees Ontario	\$70,000
Ontario Land Trust Assistance Program	\$16,000
Bowen's Creek	
Cartier-King	
Property 103, McKeough	
Chatham-Kent Community Partnership Fund	\$10,000
Peers Wetland	
Employment Programs	\$112,000
Service Canada	
Employment Ontario	
Ministry of Training Colleges and Universities	
Industry	\$64,000
Sarnia-Lambton Environmental Association	
Union Gas	
Enbridge	
RBC Blue Water Fund	
TD Friends of the Environment Foundation	
Shell Fuelling Change	
Friends of the St. Clair River	\$2,000

EC - Environment Canada
MNR - Ministry of Natural Resources
MOE - Ministry of the Environment



Facts and Figures

Watershed Area - 4,100 km²

Population - 167,000

Drainage area of the Sydenham River - 2,724 km²

East Branch of the Sydenham River

total length - 165 kilometres

total fall - 106 metres

North Branch of the Sydenham River

total length - 137 kilometres

total fall - 77 metres

Land owned by Conservation Authority - 1,695 ha

Land owned by Conservation Foundation - 455 ha

Land managed by Conservation Authority (not owned) - 543 ha

Flood Easements - 648 ha



**St. Clair Region
Conservation Authority**

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