

2018 Annual Report

Lower Thames Valley Conservation Authority

"for a balanced and healthy watershed"



Message from the Chair



Linda McKinlay
Linda McKinlay
Chair LTVCA

This earth has given human beings incredibly beautiful gifts; rivers, fields, forests and different natural resources that help us survive on this planet every day. Technology and expansion has given us the ability to endanger this earth. Now we must work to address climate change and locally, to limit nutrients draining into Lake Erie from our rivers and streams. This annual report records the 2018 accomplishments of the Lower Thames Valley Conservation Authority (LTVCA) as we refocus to address these challenges. The work we do benefits our watershed partners – our ten municipalities and more than 100,000 residents. In turn, it will also benefit future generations to come.

A significant amount of our efforts support stewardship, as we implement projects to meet ambitious goals – especially pertaining to reduction in nutrients reaching Lake Erie. We work with our municipalities to adapt to a changing climate and its

effects on flooding, erosion and our natural resources. February saw some of the highest flows in the Thames River in decades and fortunately, the flood structures and dikes did their job limiting damage. The LTVCA also began work with Chatham-Kent to develop a plan to provide defensible science to support decisions on developing the Lake Erie shoreline.

It has been a year of change. We say goodbye to 10 Board Members, who have worked many years for this organization. I personally would like to thank these Members for their commitment to the LTVCA, their informed input, and their support.

Four years ago, the Board adopted a Strategic Plan, to assist the Board and staff in meeting our challenges. We are on target to meet all recommended actions of that plan. Our most important objectives relate to our stakeholders – strengthening and increasing collaboration with our community. With this in mind, I thank the 27 inspired partners from this year, who provided over \$1,548,472 for watershed conservation projects and services! If we are to meet the upcoming challenges of a changing climate and reducing phosphorus runoff into Lake Erie, it will only be with the support of the community. Thank-you, and we look forward to working with you in 2019.

Chief Administrative Officers' Remarks



Mark Peacock
Mark Peacock
CAO LTVCA

As demonstrated within the pages of this Annual Report, the staff and Members of the Lower Thames Valley Conservation Authority (LTVCA) continue to work toward the fulfilment of our vision for the watershed – balancing the health of our water and natural heritage with a healthy economy.

The two main issues facing this watershed are to reduce the discharge of phosphorus into Lake Erie through our watercourses, and to proactively plan for the impacts climate change will have on our watershed. Addressing these challenges requires the Conservation Authority to work cooperatively with our watershed community, and in particular with private landowners who manage most of the area's land. As there are limited new dollars to complete this work, existing resources are being moved and prioritized to meet these challenges.

Field work was increased with the creation of a full time eastern area

stewardship technician position, resulting in many new partnerships and positive feedback. Reforestation, wetland and prairie habitat creation and agricultural support projects were the main activities, all making positive inroads in addressing phosphorus runoff. Looking forward, the stewardship partnership between the LTVCA and ALUS is another important way we will connect with the farm community in implementing positive environmental change.

The LTVCA is working to modernize and provide better technical support to our communities through strategic investments. We are improving campgrounds with upgraded servicing, booking software and facilities. By creating efficiencies through innovation, we are investing in technical capability by hiring a full time GIS staff member. We look forward to working with the Town of Lakeshore in completing a leading edge technical study to make the community of Lighthouse Cove safer during times of flooding.

Become familiar with our programs and services and engage with our staff at every opportunity to help fulfil our collective goals. We are fortunate to live and work in the Lower Thames Valley, and have a duty to conserve and improve the region's environment for present and future generations.

Our Vision ~ The LTVCA ... for a balanced and healthy watershed

Mission

Leading by example in environmental protection in partnership with the community.

Core Values

Respect, integrity, commitment, objectivity, and collaboration.

Strategic Themes of Programs & Services

Stakeholder Engagement

Through creativity and collaborative involvement, the LTVCA has established a valuable reputation.

Prioritized Programs

We have prioritized programs to be sustainable, and connect our community with the natural environment.

Innovation and Collaboration

We prioritized efforts through collaborative methods, driving innovation to create change.

Corporate Sustainability

We have a competent, balanced workforce which provides value added services in an efficient, strategic manner with prioritized resources.

Strong Team Culture

We have a strong team culture, based on trust and mutual respect; transparent in its processes and inclusive of new ideas.



Program Deliverables & Initiatives

Customer / Beneficiaries Objectives

- strengthen and increase collaboration with community stakeholders
- increase the awareness of the value of good watershed stewardship
- strengthen brand recognition

Financial Objectives

- improve transparency and understanding of financial statements
- improve capital asset management
- strengthen staff stability (financial stability, attraction and retention)

Internal Processes Objectives

- improve internal communications
- improve internal understanding of roles and responsibilities
- improve conservation areas operations

Capacity Building Objectives

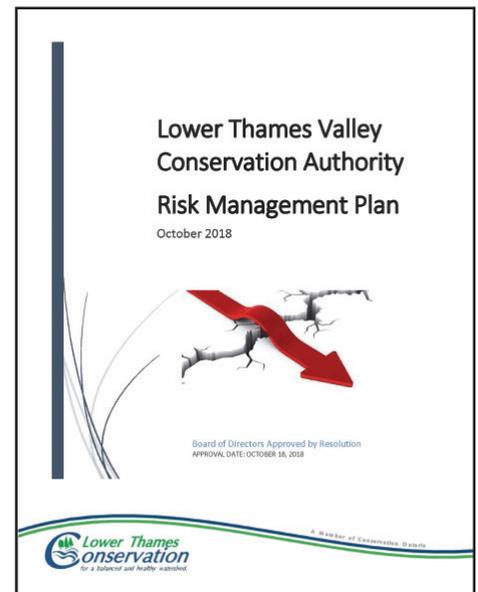
- improve human resources
- improve training opportunities for staff
- strengthen program review policy(s)

Risk Management Plan

The Lower Thames Valley Conservation Authority has begun a proactive Risk Management process to help limit its likelihood of being affected by chance or unplanned events. For the purposes of the plan, risk analysis considers the possibility of the unfortunate consequence that the event creates.

The process used to assess risks follows a traditional adaptive management approach. Risks are identified, evaluated and strategies are determined to help reduce the severity of each risk. These strategies included avoiding the risk, accepting the risk, transferring the risk to someone else, or creating a plan to reduce the risk.

The results of the risk identification showed 231 risks in 12 risk management areas. Of these, 47 were of high risk, 126 medium risk and 58 low risk. The analysis of actions designed to limit risk has been developed, and with those actions in place, only three risks remain in the high category, 59 in the medium category and 169 have been placed in the low risk category. These results show that significant reduction in risk can be obtained by a methodological approach to risk management in the LTVCA. Many of the recommended actions are simple best practices and many are already being implemented.



Board & Staff Directory

Directors 2018

Linda McKinlay (Chair) - Town of Lakeshore
Hilda MacDonald (Vice-Chair) - Municipality of Leamington

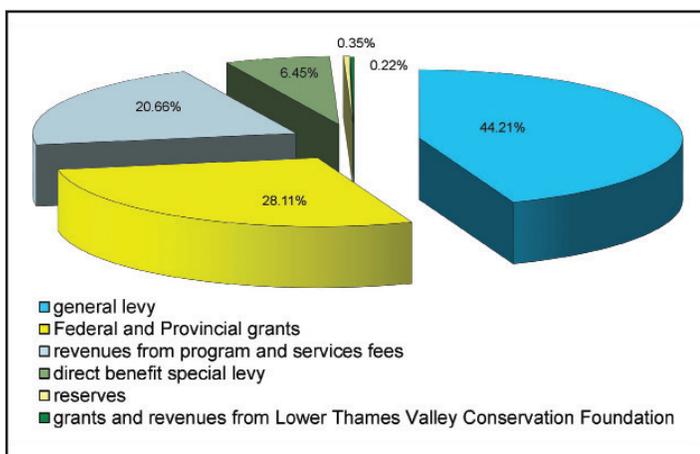
Gayle Bogart – Township of Southwold
Stanley Caveney – City of London
Ron Doane – Municipality of Strathroy-Caradoc
John Kavelaars – Municipality of Southwest Middlesex
Leon Leclair – Municipality of Chatham-Kent
Dan McKillop – Municipality of Dutton Dunwich
Steve Pinsonneault – Municipality of Chatham-Kent
Michelle Smibert – Municipality of Middlesex Centre
Trevor Thompson – Municipality of Chatham-Kent
Mary Bodnar – Municipality of West Elgin

Ska-Nah-Doht Village Advisory Committee

Don Fairbairn – Chair
Willem Bruinink – Vice-chair
Darcy Fallon, Gayle Bogart, Ron Doane, Stan Caveney,
Mark Peacock

Budget

Mark Peacock – CAO Secretary-Treasurer, directed the administration and financial aspects of the LTVCA, with support from Financial Services Supervisor - Todd Casier, Finance and Administrative Assistant - Chanel Barry and Administrative Assistant - Alison Roland.



The LTVCA's budget of \$3,179,437 received approval in February.

Joint Health & Safety Committee (JHSC)

The JHSC met eight times. All conservation area properties were inspected to ensure safe conditions not only for employees, but the general public. One committee member received their JHSC Certification. Task, operating and safety procedures continued to be updated and new ones developed.

Full-time Staff

Mark Peacock – CAO Secretary-Treasurer

Chanel Barry - Finance and Administrative Assistant
Amanda Blain - Land Stewardship Technician Western District
Dan Brinkman - Land Stewardship Technician Eastern District
Kally Casier - Finance & Administrative Assistant (mat leave)
Todd Casier - Financial Services Supervisor
Bonnie Carey - Community Relations Coordinator
Bruce Clark - Construction & Maintenance Technician
Jerry DeZwart - Conservation Education Technician
Jason Homewood - Water Resources & Regulations Technician
Paul Kominek - Western District Supervisor
Liam Laforest - Land Stewardship Technician
Colin Little - Agricultural Program Coordinator
Michael Latham - Eastern District Supervisor
Karen Mattila - Ska-Nah-Doht Village & Museum Curator
Vicki M^cKay - Species at Risk Biologist
Rose Nicholas - Ska-Nah-Doht Village Education Technician
Austin Pratt - Water Quality Specialist
Alison Roland - Administrative Assistant
Valerie Towsley - Resource Technician
Greg VanEvery - Environmental Project Coordinator
Randall VanWagner - Manager of Conservation Lands & Services
Agnes Vriends - Clerk / Secretary
Jason Wintermute - Water Management Supervisor

Seasonal / Part-time Staff

Sydnee Baker - Land Stewardship Technician
Austin Bently - Wilson Park Ranger
Mei-Ling Bonato - Species at Risk Communications Assistant
William Britton – Wilson Park Ranger
Robert Clark – Longwoods Weekend Maintenance
Kamila Costello - Cultural Outreach Assistant
Keith Kearney - Longwoods Visitor Services
Ben-Lucas Kuhstoss - Wilson Park Ranger
Jason Lavergne - Wilson Park Ranger
Luke Macintosh - GIS Technical Assistant
Michael McKerrall - Agricultural Research Assistant
Edward Merks - Environmental Outreach Assistant
Sherry Schofield - Conservation Education Assistant
Sabine Sinnige - Agricultural Research Assistant
James Vance Stark - Longwoods Weekend Maintenance
Daniel Taddeo - Species at Risk Assistant
Philip Van't Voort - Eastern District Labourer
Martin Van't Voort - Eastern District Labourer
Taylor Williams - Water Resource Technician

Board Appointed Contractor

Bill Menzie - Municipal Enforcement Unit

Protecting Life & Property

Water Management

The water management and technical services program provides science-based support for land and water resources management. This includes natural heritage programs, as well as technical expertise to forecast, control and monitor floods and erosion to protect life and property. Staff overseeing this program are Jason Wintermute - Water Management Supervisor, Jason Homewood - Water Resources and Regulations Technician, and Austin Pratt - Water Quality Specialist. Additional support is provided by other Conservation Authority staff as needed.

Thames River & Watercourse Flooding

The most significant flooding event in the last several decades occurred between February 19th and the 27th. In the Upper Thames watershed at St. Mary's, the highest flows were seen since recording began in the mid-1940s. The water level gauge at Byron experienced its highest water levels since the gauge started taking automated readings in 1955. The gauges at Currie Road and Thamesville saw their highest readings since 1977. In Chatham, the highest water levels since 1985 were observed, and the highest levels observed without an ice jam since 1947.

Prior to this event, there was approximately 40 mm of water in the snowpack of the Upper Thames watershed. A temperate spike and 50 mm of rainfall melted all the snow, adding to all the rain. Fortunately, Fanshawe Dam was able to reduce the peak flow on the North Thames branch by about 30%, resulting in a flow of about 1,020 m³/s passing by Byron. As the water spread out through the floodplain areas, flows were reduced to around 880 m³/s at Currie Road and 807 m³/s at Thamesville.

The entire community of Thamesville was asked to voluntarily evacuate, as historical events of that scale had put several feet of water throughout the town. While there was significant flooding in the Thamesville area, the flooding wasn't as widespread and damaging as it was in

1977 or even 2009. In Chatham, the 6th St. Backwater Dam and Pumping Station was operated and held back the highest flows experienced since its construction. This prevented significant flooding on the McGregor and Indian Creek systems in the south end of Chatham. Aside from voluntary evacuations for some homes along the river, 12 people had to be evacuated from their homes by Chatham-Kent EMS staff.

Fortunately, the ice had flushed out of the lower reaches of the river early in the event. The dikes downstream of Chatham were able to safely pass the flows, resulting in minimal impacts in the Raleigh, Dover, Tilbury and Lighthouse Cove areas.

In addition to the Thames River flood in February, several heavy rainfall events throughout the year caused local watercourses to rise and flood their banks, triggering operations of Indian-McGregor Creek Diversion Channel. The Diversion Channel was operated nine times: Jan. 11-13, Jan. 23-24, Feb. 16-17, Feb. 19-27, Apr. 15-17, May 12-14, May 15-17, Oct. 7-8, and Nov. 1-4.

Thirty-three advisories were issued for flooding concerns on the Thames River and local watercourses; six were Water Safety Bulletins, 15 were Flood Outlooks, six were Flood Watches and six were Flood Warnings.



This is an aerial view of the Thames River flood around Thamesville on February 24.



The 6th St. Backwater Dam and Pumping Station in Chatham continued operation on February 24, holding back the highest flows since construction in 1992.

Great Lakes Levels & Shoreline Flooding

Lake St. Clair water levels in January were around 40 cm above the long-term normal for that month. Water levels then tracked 50 to 60 cm above average throughout the year, ending the year at about 55 cm above the long term normal. Although significant flooding was not recorded on the Lake St. Clair shoreline, the high lake levels led to some erosion issues.

In January, Lake Erie water levels were around 35 cm above the long-term normal for the month. Water levels then tracked 45 to 60 cm above average throughout the year, ending the year at around 55 cm above the long term normal. During May and June, Lake Erie water levels were around 15 cm below their all-time record highs. As in 2017,

the high water levels on Lake Erie and strong seasonal winds from the south led to significant amounts of shoreline erosion all along the shoreline, and frequent flooding along Erie Shore Drive in Chatham-Kent.

Thirty-two advisories were issued for the Lake Erie shoreline and Erie Shore Drive this year; 15 were Water Safety Bulletins, 13 were Flood Outlooks, three were Flood Watches and one was a Flood Warning. Although each event affected the shoreline differently, there was water across the road, flooded front yards and basements, shoreline erosion, breakwall failures, and structural damages to homes and cottages.



Waves break along the Erie Shore Drive shoreline during a Lake Erie wind event on April 16.

Thames River Clearwater Revival

The Thames River Clearwater Revival (TRCWR) is a multi-agency partnership with the objective of improving the Thames River. Partners include First Nations communities, Environment and Climate Change Canada (ECCC), provincial ministries, the Upper Thames River and Lower Thames Valley Conservation Authorities and the City of London. Currently, the primary activities for the

TRCWR are the drafting of a Shared Waters Approach intended to update the 1975 Water Management Plan, and the implementation of the recommendations. The TRCWR continues to be involved in other activities such as supporting the Antler River Guardians from the 4 Directions: First Nation Youth Stewardship Program.

Water Quality Monitoring

The LTVCA partners with the Ministry of the Environment, Conservation and Parks on the Provincial Groundwater and the Provincial (Stream) Water Quality Monitoring programs. These programs assist in environmental reporting, decision-making, and program implementation by the LTVCA, member municipalities and the province.

The groundwater monitoring is conducted at nine wells throughout the watershed, with the use of water level loggers and supplemental rain and barometric pressure loggers at some locations. Eight of the wells were sampled in the late fall for water quality. The LTVCA maintains the instrumentation and samples the wells, while the Ministry provides equipment and lab analyses.

The stream water quality sampling is conducted at 11 locations throughout the watershed. The LTVCA samples monthly in the spring, summer and fall for general water chemistry and the Ministry performs the lab analyses. Since biological analyses are not part of the provincial program, the LTVCA tests for e-coli at the same sites. Currently, the program is supplemented with pesticide monitoring at five sites.

The LTVCA received a Canadian - Ontario Agreement (COA) grant from the Ministry to expand the surface water sampling network with an additional 11 locations across the watershed. By expanding the network to 22 locations and sampling during the winter months, a better understanding of water quality can be achieved. Winter and spring months have demonstrated to be the time period where most nutrients / contaminants are transported to the Great Lakes.

Sampling for benthic macroinvertebrates (insects, worms and crustaceans that live at the bottom of the stream) continued in partnership with the Biology Department at the University of Windsor. The research, being conducted by Masters' candidate Alyssa Frazao under the supervision of Dr. Jan Ciborowski, will assist the LTVCA in developing a

monitoring program most suitable for the region's unique biogeophysical environment. Sixteen locations were sampled this year.



The Deary Upstream Water Quality Monitoring Station was commissioned in 2018, and will be maintained through the McGregor and Jeannettes Creek Phosphorus Reduction Program.



Water quality monitoring provides important information about the health of our watersheds. Temperature, nutrients and benthic invertebrates (bugs) found in the sediment give us clues about stream health.

Ontario Low Water Response Program

The LTVCA participates in a provincial program that monitors watershed conditions to determine if the area is in a low water (drought) situation, and provides some means of responding to the issue. Local response is managed by a group of stakeholders referred to as the Low Water Response Team. There was very little activity throughout the year with regards to the program, as there was adequate rainfall and river flows.

Provincial Grant Funding for Capital Maintenance & Flood Forecasting

The LTVCA receives annual funding from the province for the operation, routine minor and preventative maintenance of flood and erosion control projects, flood forecasting and warning, chronic ice management, legal costs for ongoing joint LTVCA / Provincial capital projects, watershed management and related administration.

Land Use Planning & Regulations

Valerie Towsley - Resource Technician, Jason Wintermute - Water Management Supervisor and Jason Homewood - Water Resources and Regulations Technician, are the staff responsible for administering the land use planning and regulations program.

Municipal Plan Input & Review Under the Conservation Authorities Act

The land use planning and regulations program directs development away from hazardous areas to reduce hardship, loss of property and / or possessions, thereby aiding in the protection of life. Reducing the impacts of humans along and / or within hazardous areas, leaves regions for natural processes to occur without interference from people. Educating watershed landowners and our member municipalities about this program is key to helping to maintain these areas in a natural state.

Municipal Plan Review & the Development, Interference with Wetlands & Alteration to Shorelines & Water Courses - Ontario Regulation 152/06

Planning and regulations staff dealt with the review of 319 municipal planning submissions (OP's, ZBL's, OPA's, ZBLA's, Severances, Minor Variances, etc.) as they relate to Provincial Policy and Section 28 of the Conservation Authorities Act. These planning numbers are down from 2017 but with a corresponding increase in general property inquiries to 1,914, from landowners, lawyers and consultants seeking information prior to buying property and / or planning construction activities.

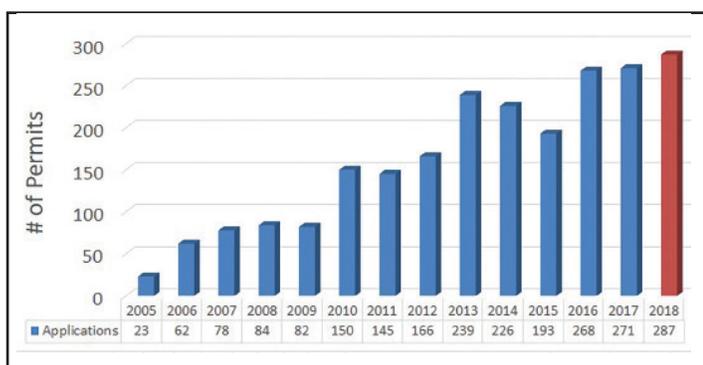
Staff reviewed 287 permit applications with respect to Section 28 of the Conservation Authorities Act and Ontario Regulation 152/06 - 16 more than 2017 and 19 more than 2016. Of the 287 permit applications, all complied with LTVCA policies and were approved by staff. Private property landowners submitted 164 permit applications for a wide range of projects, some of which included the construction of new homes in floodplains, additions to existing development in hazardous lands, altering shorelines, and habitat / stewardship projects in regulated

areas. One hundred and three permit applications were related to municipal drains and the Drainage Act, eight applications were related to municipal / county infrastructure, and 12 applications were related to utility companies (including gas, oil, and electricity generation / transmission). Sixty-one private properties were surveyed for permit and official plan flood proofing requirements.

For the third consecutive year, the number of permit applications set a new annual record. Due to the increasing number of permit applications being received, supplemental revenue from permit application fees is increasing.

Enforcement Issues

Thirty-five new complaints / tips were received, resulting in two notices of violation being issued with multiple ongoing investigations - the goal being to obtain compliance or future compliance. Twenty-two of the 35 complaints / tips were violations of the Conservation Authorities Act, and six of those files have been closed without prosecution. Of the 35 complaints / violations received, 26 were in Chatham-Kent, two were in Lakeshore, two were in Southwold, two were in West Elgin, one was in Southwest Middlesex, one was in Strathroy-Caradoc, and one was in Dutton Dunwich. Ongoing enforcement issues from 2016 and 2017 were also monitored and continue to be investigated. Staff worked towards the rehabilitation of the wetland involved in the 2016 court case, attending multiple meetings with the defendant's lawyer, agent, and consultants.



The above chart illustrates the rising number of development applications in hazardous areas since 2005.

At right are the regulatory and municipal plan review summaries for the year. Plan input and review is one of the ways the Conservation Authority monitors development and achieves its objectives. The input the LTVCA has on new development near or in natural hazard areas like floodplains and steep slopes, ensures identification of potential hazards before complications arise.

Permits	Municipal Drain	71	4	3	6	1	6	5	1	7		104	
	Private Property Owner	106	4	25		1	5		1	7		149	
	Utility Company	5		3			3					11	
	Municipal / County Infrastructure	4	2	1				1				8	
	Habitat / Stewardship	4	6					1		4		15	
	Wind Turbine											0	
Plan Input and Review	Official Plans	0										0	
	Official Plan Amendments	3						1				4	
	Comprehensive Zoning Bylaws	0										0	
	Zoning Bylaw Amendments	58	7	4	3	3	1	8	11	2	11	108	
	Severances	43	6	3	6		1	5	11	2	16	93	
	Minor Variances	22	2		1		1	8	1			35	
	Plan of Subdivision	1		1						2	1	5	
	Legal Inquiries	30	1	16	11		1	4	1	6	4	74	
	General Property Inquiries	1151	72	183	11	6	21	91	39	36	75	229	1914
	TOTAL SERVICES PER MUNICIPALITY		1498	104	239	38	9	27	130	71	50	125	229
SERVICES													
MUNICIPALITY		Chatham-Kent	Dutton-Dunwich	Lakeshore	Leamington	London	Middlesex Centre	Southwest Middlesex	Southwold	Strathroy-Caradoc	West Elgin	General Inquiries	TOTALS

Chatham-Kent Lake Erie Shoreline Study

In partnership with Chatham-Kent, the Province of Ontario, the Government of Canada, the International Joint Commission, and the LTVCA, Pete Zuzek of Zuzek Inc. and other partners (University of Waterloo, RWDI, Baird, etc.) were successful in obtaining a Natural Resources Canada grant to undertake a comprehensive Lake Erie shoreline study in Chatham-Kent. Using existing knowledge of natural hazards and projected effects of climate change, the study will develop information to reduce coastal risks, increase the resilience of the shoreline, and protect natural assets such as beaches and coastal wetlands. The study will produce updated 100 year erosion rates, estimates of changes in ice cover, and storm frequency and severity information.

As part of our participation in the study, staff have been busy providing the consultant with historical aerial photographs of the shoreline and historical photos of the hazards. We toured the Lake Erie shoreline with the consultant, surveyed the Rondeau Barrier Beach Island, collected bathymetric data in and around Erieau and Shrewsbury, as well as attended several meetings and conference calls with the agencies and partners. Staff are also participating in the Conservation Authority Coastal Working Group for peer review of the study.



A coastal geoscientist conducted a field assessment of the Lake Erie shoreline as part of the Chatham-Kent Lake Erie Shoreline Study.

Enhancing Watershed Health

Tree Planting, Restoration, Stewardship

We would like to express gratitude to our 10 member municipalities who recognize the need for and contribute to the Land Stewardship Department, giving us the opportunity to do the work we do. LTVCA acknowledges the financial support of our 10 municipalities, our many granting partners, and dedicated volunteers. Above and beyond municipal funding, over \$1.3M was generated from various sources to enhance watershed health.

Land Stewardship Project Summary

Randall Van Wagner - Manager of Conservation Lands and Services, Greg Van Every - Environmental Project Coordinator, Liam Laforest, Dan Brinkman and Amanda Blain - Land Stewardship Technicians, oversaw the stewardship projects.

Environmental Restoration 204 acres / 83 hectares:

- Reforestation 121 acres / 49 hectares
- Wetland 33 acres / 13 hectares
- Prairie 50 acres / 20 hectares
- Landowners contacted - 250
- Landowners involved - 179
- Seedlings planted - 91,390 across watershed
- Large-stock trees planted - 799 across the watershed
- Two promotional bus tours highlighted stewardship efforts
- Seven farm related events were attended for environmental education and stewardship promotion



A 10 acre / 4 hectare parcel of land was reforested near Wheatley.

Funding for Stewardship

Ducks Unlimited Canada - Ducks Unlimited Canada (D.U.C) was successful in securing more funds for wetland restoration this year. Our combined programming will continue to offer cost share for wetland excavations. LTVCA received \$88,091 from D.U.C.

Elgin Stewardship Council - The Elgin Stewardship Council provided \$17,355 to landowners within our watershed, to assist in offsetting the cost of restoration

projects in Elgin County. Seven wetland restoration and erosion control projects were completed.

Elgin Clean Water Program (ECWP) - The ECWP is a cooperative project between Catfish Creek, Kettle Creek, Long Point Region and the Lower Thames Valley Conservation Authorities. It assists landowners with projects which improve and protect water quality in Elgin County. Seventeen projects were completed within the LTVCA's jurisdiction of Elgin County. In total, the ECWP contributed \$37,804 to landowners in our watershed to assist with the implementation of clean water projects.

Forests Ontario - The LTVCA partnered with Forests Ontario and landowners on 26 tree planting projects, for a total of over \$66,000 in funding. Watershed-wide projects planted over 43,000 seedlings. Additionally, 32,000 seedlings were purchased and planted by landowners on their own.

Ontario Power Generation (OPG) - OPG supported 12 projects in Chatham-Kent with \$24,651.

RECOGNIZING OUR PARTNERS

Aamjiwnaang First Nation
ALUS (Alternative Land Use Service)
Agricultural Adaptation Council
Canadian Chestnut Council
Chatham-Kent Public Health Unit
Chatham-Kent Retention & Attraction
Chatham-Kent Secondary School
Chippewas of the Thames First Nation
Delaware Nation at Moraviantown
Ducks Unlimited Canada
Elgin Stewardship Council
Enbridge
Environment & Climate Change Canada
Fisheries and Oceans Canada (DFO)
Forest Gene Conservation Association
Forests Ontario
Green Jobs
Ontario Native Scape
Ontario Power Generation
Oneida Nation of the Thames
Ontario Federation of Agriculture
Ontario Ministry of Agriculture & Rural Affairs
Ontario Ministry of Environment & Climate Change
Ontario Ministry of Natural Resources & Forestry
Ontario Ministry of Transportation
Ontario Soil & Crop Improvement Association
Scouts Canada & Riparian Rangers
TD Bank
Thames River Phosphorus Reduction Collaborative
Union Gas
Wildlife Habitat Canada
Neighbouring Conservation Authorities





Conservation Partnerships

Highway 40 - 401 interchange - Staff planted 475 large stock trees on the insides of the ramps to provide aesthetics and to shield roads from wind and snow.

Badgerway - Through a partnership with Ontario Soil and Crop Improvement Association, this program engaged two landowners and resulted in 2.5 acres / 1 hectare of reforestation on two farms in Chatham-Kent.

The Tomorrow's Greener Schools Today - Since 2013, this schoolyard tree planting initiative between Chatham-Kent Public Health and the LTVCA has resulted in the planting of over 600 native trees. The program provides shade, offers protection from the harmful effects of the sun, increases tree cover and educates youth - a program that addresses health and the environment!

Scouts Canada and Riparian Rangers - Fifty tallgrass prairie plugs and 250 tree seedlings were planted near Camp Cataraqi with the help of 120 Scout volunteers, during their "eco camp" weekend.

Green Jobs - Funding from Green Jobs provided additional staff for the tree planting season. Employees were students interested in acquiring experience in the environmental field.

Habitat Structures - Chatham-Kent Secondary School technology students built 60 bluebird boxes. Four duck and four bat boxes were constructed by James Stonehouse and students from John McGregor Secondary School.

Stewardship Outreach - New education and outreach materials were created with the financial assistance of Environment and Climate Change Canada. Pamphlets promote tree planting, wetlands, tallgrass prairie and urban stewardship, and four videos are being created with the help of GATTA Creative. The videos will be used to promote stewardship programs. They will highlight local concerns like habitat loss, invasive species, blue-green algae, soil health and offer solutions to mitigate these challenges.

CK Retention and Attraction, CK Public Health – These municipal departments sponsor "Your Roots Are Always in CK". This partnership aims to retain or influence youth to return to Chatham-Kent after post-secondary education. CK Public Health has an interest in skin cancer prevention through shading school yards and communities with trees.

Forest Gene Conservation Association (FGCA) - Staff worked with FGCA and watershed residents to locate and evaluate healthy butternut trees (*Juglans cinerea*) in the hopes of reversing the widespread effects of butternut canker (*Sirococcus clavignenti-juglandacearum*). Discussions continue to see if we can establish and operate a butternut orchard at one of our conservation areas as a gene bank and a seed production orchard.

Canadian Chestnut Council (CCC) - Dr. Dragan Galic, Ron Casier and their summer students planted 25 blight-resistant native chestnut seedlings at Longwoods Road Conservation Area. Two landowner sites in Strathroy-Caradoc and Dutton Dunwich were also planted. We look forward to working with landowners and the CCC to locate mature trees showing blight resistance.



Meesingw and Union Gas - A partnership connected Delaware Nation, Union Gas and the LTVCA with a 20 meter buffer and trail project along the Thames River in Delaware Nation at Moraviantown. Over 350 large stock trees were planted with the help of the Union Gas 'Helping Hands Program'.

Alternative Land Use Service ALUS Chatham-Kent

ALUS Chatham-Kent was launched in September and became ALUS Canada's 23rd community. Amanda Blain is the Coordinator. The Partnership Advisory Committee (PAC), made up of farmers and industry professionals, was formed in November and held one meeting. ALUS Chatham-Kent has a diverse group of members with interests in cash crop, cattle, greenhouse farmers, academics and agriculture

retailers. ALUS Chatham-Kent works with farmers to offer ecological services and help with establishment cost and annual payments for the management and maintenance of these projects. Through their ALUS projects, ALUS Chatham-Kent participants help to produce cleaner water and air, and improve biodiversity including pollinator habitat, which will benefit surrounding communities.

Species at Risk

Vicki McKay is our Species at Risk Biologist. A Section 11 Conservation Agreement under the *Species at Risk Act* (SARA) was drafted with Fisheries and Oceans Canada (DFO). It ensures a coordinated and focused approach to the implementation of measures for aquatic species at risk (SAR) conservation, survival and recovery in the LTVCA. Some fish and mussel survey equipment and \$84,954 in Habitat Stewardship Program (HSP) 2018/19 funding was received from DFO to support actions identified in this agreement. Actions include an assessment of threats and communications activities related to aquatic SAR (fish and mussels) in our watershed.

Staff worked with Environment and Climate Change Canada (ECCC) and University of Guelph to assess the effects of road salt-impacted winter meltwaters on freshwater mussels in Baptiste and McGregor Creeks. Results were presented by ECCC at the Society of Environmental Toxicology and Chemistry (SETAC) conference in Sacramento, CA.

"Mussel Mondays" and "Fish Fridays" Facebook postings were developed by a SAR Communications Assistant hired through Canada Summer Jobs and HSP funding. Postings, which will continue into March 2019, introduce followers to local fish and mussel SAR and the threats impacting them, encouraging readers to take specific steps to help recover these aquatic SAR.

Staff met with representatives of four Indigenous communities (Chippewas of the Thames First Nation, Oneida Nation of the Thames, Munsee Delaware Nation and Delaware Nation at Moraviantown) regarding fish and mussel SAR in the lower Thames River and how LTVCA can potentially work with them to benefit these SAR. We coordinated delivery of a DFO-led freshwater mussel identification workshop for these communities.

Drain Classification Project

Fisheries assessments were completed on six drains and flow assessments were completed on 15 drains as part of a DFO-funded drain classification project. A SAR Assistant was hired with Canada Summer Jobs funding to help with this work.

Reptile SAR Program

Reptile identification cards and factsheets on how to construct snake nesting structures, turtle nesting beaches and reptile hibernation sites were distributed to interested landowners.

An additional six "Please Slow Down Wildlife Crossing" signs, with outlines of a turtle and snake, were erected in areas identified as having high snake and/or turtle road mortality.

A reptile SAR educational program was developed. Ten life-sized, life-like models of local reptiles at risk are now used in educational programming and were featured at our Grow Wild Go Wild and International Plowing Match displays!



A Mussel Identification Workshop was held at Delaware Nation at Moraviantown.

Phosphorus Reduction Initiatives

Binational Phosphorus Reduction Targets for Lake Erie

The 2012 Great Lakes Water Quality Agreement recognized the need to reduce phosphorous loadings to Lake Erie. In December of 2014, the Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health was signed and in June 2015, Ontario signed the Western Basin of Lake Erie Collaborative Agreement. The consensus is that the annual total phosphorus loadings to the western and central basin of Lake Erie should be reduced by 40%. The Thames River has been identified as a priority watershed that needs to see a 40% reduction in dissolved phosphorus and total spring loadings as well. At this reduced rate of nutrient loading, it is anticipated that the lake will maintain algal species consistent with healthy aquatic ecosystems and minimize the extent of hypoxic zones in the lake. In February 2018, the Canada Ontario Lake Erie Action Plan entitled 'Partnering on Achieving Phosphorus Loading Reductions to Lake Erie from Canadian Sources' was released. The LTVCA continues to engage in phosphorous reduction programs and initiatives including the addition of several new phosphorus reduction projects during the year.

Thames River Phosphorus Reduction Collaborative (TRPRC)

The LTVCA performed water quality monitoring services for the TRPRC at the phosphorus filter tank pilot site, located southeast of Chatham. The LTVCA is monitoring the technology to determine its efficacy at reducing phosphorus loads sourced from agricultural subsurface tile drainage systems and have agreed to conduct water quality monitoring services at the site during the period of 2018 - 2022. The TRPRC has agreed to provide the LTVCA with \$60,000 over the study duration, for these monitoring services. The TRPRC strategy is aimed at raising awareness and providing extension services to reduce the surface and subsurface transportation of phosphorus off agricultural land, either directly into waterways or via municipal drainage systems. The TRPRC steering committee has representation from a variety of local stakeholders, including: farm organizations, municipalities, ENGOS, the LTVCA, Chatham-Kent Drainage, various academics, and First Nations.

LTVCA Agricultural Improvement Fund

The LTVCA Agricultural Improvement Fund provided \$21,450 to nine agricultural landowners to complete projects focused on improving soil health, water quality, and air quality.

McGregor and Jeannettes Creek Phosphorus Reduction Program

The LTVCA was successful in raising a total of \$884,962 to support the McGregor and Jeannettes Phosphorus Reduction Program. Specifically, the Agricultural Adaptation Council (AAC) has approved \$284,962 in grant funding from the Canadian Agricultural Partnership Organization and Collaborations program over the duration of 2018 - 2020 to support project monitoring and applied research costs. As well, Environment and Climate Change Canada (ECCC) approved \$600,000 from the Great Lakes Protection Initiative (GLPI) for the period of 2018 - 2022 to assist with program monitoring costs and to provide Best Management Program (BMP) incentive dollars to participating farmers. The approved grant funding from ECCC and AAC will be used to sustain the monitoring, research, and extension activities that began through the GLASI Jeannettes Creek Priority Subwatershed Project (2015 - 2018). The new project will be geographically expanded and will offer financial contributions to agricultural producers to implement BMPs within the McGregor and Jeannettes Creek subwatersheds. The main goal of the project is to improve soil health and reduce the amount of agriculturally sourced phosphorus entering the Thames River, Lake St. Clair and ultimately the western basin of Lake Erie. The Jeannettes and McGregor Creek BMP incentive program will be launched in 2019. Monitoring and research activities will occur over the entire duration of the project.



Colin Little - Agricultural Program Coordinator and Austin Pratt - Water Quality Specialist, oversee the phosphorus reduction initiatives of the LTVCA. The TRPRC phosphorus filter tank pilot project site is located southwest of Chatham near the Thames River.

Awards & Sponsorships

LTVCA Environmental Award Winners

- *Landowner Category*



LTVCA's Environmental Project Coordinator - Greg VanEvery presented Mike Hentz and his wife the 2017 Environmental Award for 'landowners' at the Annual General Meeting (AGM) in February.

- *Organizational Category*



'Montessori', was a big LTVCA 'organization' partner and was selected for the Stewardship Award. Rick Nicolls - MPP for Chatham-Kent-Essex presented a certificate from the Province at the AGM.

NEW! LTVCA Volunteer Heroes Award



Don Hector - Volunteer Coordinator for the Chatham-Kent & Lambton Children's Water Festival was the deserving recipient of the first annual LTVCA Volunteer Heroes Award! It was presented by Bonnie Carey - Community Relations Coordinator (LTVCA) at the AGM.

Graduation Award Sponsorship



A \$500 award was presented to a graduating student from the Academic Proficiency, Associates Diploma in Environmental Management Program at the University of Guelph - Ridgetown Campus. Andrew Van Maele (Ridgetown College) received the award as presented by Mark Peacock - CAO (LTVCA).

Thames - Sydenham and Region Source Protection Region

The purpose of the provincial Clean Water Act (CWA) (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 government's commitment to protecting and enhancing human health and the environment, while implementing the Walkerton Inquiry recommendations.

The Upper Thames River, Lower Thames Valley and St. Clair Region Conservation Authorities partnered together to form the Thames - Sydenham and Region Source Protection Region and worked with municipalities, stakeholders and the public to develop a Source Protection Plan to protect drinking water, while taking into account the needs of our communities. The Source Protection Committee is appointed under the Clean Water Act, 2006, representing municipal, business, general public and interest group sectors in the region. The Committee is responsible for guiding the development of the Source Protection Plan. Jenna Allain is the Source Protection Coordinator.

Highlights of the Year

On May 1st, the Thames-Sydenham and Region submitted their first **Annual Progress Report** on the implementation progress of the Thames-Sydenham and Region Source Protection Plan. The first Thames-Sydenham and Region Annual Progress Report reflects implementation efforts from January 1, 2015 to December 31, 2017.

The first Annual Progress Report indicated that the implementation of the Thames-Sydenham and Region Source Protection Plan is progressing well, with 845 of significant drinking water threat policies being implemented, or in progress. Of the 1,054 existing threats identified at the time that the Plan was approved, over half have been addressed through policy implementation or have been confirmed to no longer exist. In addition, a total of 41 risk management plans have been established to regulate significant threats in the Region.

In the spring, a selection and appointment process was initiated for the seven SPC member positions that were expiring in June. After a successful selection process, the Striking Committee appointed Brian Lima as the new representative for London and Middlesex, and Gary Martin and Nicholas Seebach as new representatives for the general public. Brent Clutterbuck (representative for Elgin, Essex and Chatham-Kent), John Van Dorp (Agriculture),

Earl Morwood (Industry), and Hugh Moran (Oil and Gas) were all reappointed to the Committee. All new and reappointed members were appointed for three year terms that extend until June 2021. Pat Donnelley (representative for London and Middlesex), Valerie M'Garry (General Public), and Joe Kerr (General Public) all left the Committee after 11 years of service. They are thanked for their years of dedication to the protection of municipal drinking water sources.

On November 30th, the Thames-Sydenham and Region submitted a workplan to the Ministry of the Environment, Conservation and Parks under Section 36 of the Clean Water Act. Section 36 of the Clean Water Act is intended to ensure that assessment reports and source protection plans undergo a comprehensive review and update on a periodic basis. The workplan identifies items in the Assessment Reports and Source Protection Plan that the Thames-Sydenham and Region would like to review. Items in the workplan include: specific vulnerable area mapping that requires updating to reflect changes to drinking water systems, specific policies that should be reviewed due to implementation challenges, and several technical updates. Work to start amending the Source Protection Plan and Assessment Reports will begin in 2019.



Stepping Into Nature

Conservation Areas

The LTVCA has protected 695 hectares of environmentally sensitive lands, wetlands, culturally unique features and significant biological, ecological and scenic qualities through its conservation areas program. Out of the 30 LTVCA owned lands, 463 hectares have been preserved at 18 conservation areas for public use in the watershed and region. The LTVCA promotes its objectives through recreational and educational opportunities in the Conservation Areas - places to actively experience the natural world and increase environmental awareness through interpretive signage and special events.

Randall VanWagner - Manager of Conservation Lands and Services along with Paul Kominek - Western District Supervisor, Michael Latham - Eastern District Supervisor, and Bruce Clark - Construction and Maintenance Technician, are responsible for the development and maintenance of these sites. The LTVCA's Safety Committee tours the conservation properties regularly to assess their safety for public use. Additionally, it is the Conservation Authority's policy, to ensure conservation area facilities and programs are as accessible as possible for everyone's enjoyment. Conservation Area development and maintenance of facilities is enhanced by annual donations of money and volunteer time from local individuals, companies, conservation clubs and organizations.

Conservation Area Updates

C.M. Wilson Conservation Area

With the implementation of a new online camping reservation system called "Let's Camp", there were significant changes to staff and how we conducted business. "Let's Camp" allows for visitors to book campsites directly from our website and upon arrival, Wilson Park Ranger's verify their reservation using a mobile tablet. This eliminated the need for gatehouse staff and provided the LTVCA with flexibility to utilize the Rangers in a broader sense throughout the whole Conservation Area. Upgrades to signage, the barn and trails, an accessible walkway to the day use washroom, reduced mowing and a thorough cleaning of the workshop yard were highlights of the year.

The barn received an interior redesign. The storage space was cleaned out and two walls were removed, increasing the usable floor space. Accessibility to the bathrooms was also improved. The second level of the building was thoroughly cleaned with the access removed. The foundation now exists to further develop the second level. The barn was rented for nine events: weddings, family gatherings, parties and church meetings. The other pavilions were rented for two events.

At the gatehouse, dilapidated landscaping was removed from the front entrance with new landscaping to be completed in 2019. The parking lot was upgraded with the removal of old parking barriers and the installation of new. A wood building was also created for the storage and sale of campground firewood.

Canoe rental was successful with canoes offered free to paying visitors and campers beginning August 5th. During the 12 weeks canoes were available, they were used on 32 occasions.

Students from the Chatham Christian High School volunteered their time picking up litter and enjoyed an outdoor picnic in the day use area. Multiple classes from both Blenheim District High School and Chatham Kent Secondary School learned to canoe in the pond in September and October. The annual McKinlay Memorial Forest Dedication Service was held in September with over 500 people attending. A half dozen large stock trees were planted as ceremonial trees.



In order to safely and effectively allow free use of canoes to visitors, a small building was constructed at the water's edge housing paddles, life jackets, boat safety kits and agreements. Visitors contacted staff to obtain instructions, the access code to the building and the canoes.

Diversion Channel

This 3.5 km man made corridor helps protect Chatham from flooding by diverting water from McGregor Creek. As such, this channel should be free from obstructions that would slow down water flows. Staff developed a maintenance plan, dividing the corridor into five sections. This year, staff along with summer students cut and treated woody stems that were over two inches in diameter.

Big Bend Conservation Area

Staff delineated campsites with marking posts and created several new campsites along the Thames River. This campground will be included in the "Let's Camp" online reservation system in the future.

Sharon Creek Conservation Area

Many upgrades to this high use property materialized, including the installation of two new docks for fishing and launching of watercraft. Implementation of the MacKay Pay Phone app, allows users to pay for their day use or purchase a Vehicle Day Use Permit through their smart phone. Through this system, over 650 transactions generated more than \$5,000. As a result, this value was invested back into the property in the form of improved security and patrols, upgrades to facilities, port a john rental and increased maintenance.

Land Donation

Ward Conservation Area

The donation of a 10.5 hectare (26 acre) carolinian forest, wetland and prairie was received in November. This Merlin area property will be classed as a Nature Reserve and not open to the public. However, it will be available for private tours and educational purposes.

Walter Devereux

Increased maintenance was conducted throughout the year due to the popularity of the new trail. There was a decrease in the frequency and severity of vandalism because of the new parking lot and limited access to more remote areas. Photo surveying was conducted for 16 weeks between July and December, revealing a rise in positive use visitors and a total of 168 vehicles.

Courey Islands

Staff have been working with a local contractor to fight the resilient invasive *Phragmites Australis* at this Provincially Significant Wetland. A long term control method was to create a more diverse plant community. In the spring, staff planted a variety of native wetland shrubs and trees, (over 2,000 Red Dogwood, High Bush Cranberry, Tamarack and Sycamore) to eventually out compete this invasive plant.

Conservation Area Events

Conservation Areas are full of adventure and are just waiting to be explored! Public events encourage us to 'Step into Nature'. We partner with many community members and organizations in order to offer a variety of activities for everyone! Many of these events have been noted throughout this Annual Report in various sections.

Events of special note not mentioned elsewhere are the **Big 'O' Birding** in April, **Artifact Day** at Longwoods in July, **Spirit of the Harvest** at Longwoods in September, **Learn to Fish** at Sharon Creek in September, and **Season's Greetings** at Longwoods in November.

In the future, we hope to expand our events watershed wide to other conservation areas, with new and exciting partners!



Summer concerts at Two Creeks Conservation Area in Wheatley are organized by the Wheatly Two Creeks Association.

Conservation Education

Conservation Education programs provide field trip and in-class presentations to students and our community. Education staff enable and enhance the efforts of stewardship partners, service clubs, schools, volunteers and public to foster an understanding and appreciation of our renewable natural resources. Jerry DeZwart is the Conservation Education Technician. Sherry Schofield - Conservation Education Assistant assisted with school group programs.

School Programs

The beautiful trails at Longwoods Road Conservation Area provide a perfect setting for school visits. Conservation Education field trip programs reached 1,467 students and 270 adults at Longwoods Road and C.M. Wilson Conservation Areas, equating to 68 classes. In-class programs were presented to 250 students and 20 adult educators from 10 classes. Teachers are very positive about our new programming direction which combines nature and stewardship with First Nations' relationship with nature. Our Predator Prey game, continues to be one of the popular programs at Longwoods, however, only a few

groups were able to take advantage of our snowshoeing program, with many having to cancel due to the weather. This really brings home the climate change situation facing us.

Supported by area service clubs, the LTVCA delivered the River & Creek Safety Program to 12 classes - 275 watershed grade two students and 26 educators. The Glencoe District Lions Club, Rodney Lions Club, Royal Canadian Legion Branch 251, and Delaware Lioness are greatly appreciated for funding this valuable safety program for over 16 years. We also thank West Elgin Mutual Insurance Company, who graciously "jumped in" and funded two presentations at Dunwich Dutton Public School.

A water safety activity was presented to 150 students at a Safety Day held at Delaware Central Public School. Ways to remain safe and help yourself out of dangerous situations were enacted by participants.

Public Education Events at Longwoods

- **Moonlight Winter Family Hike** - Over 100 participants enjoyed a February evening of listening to and viewing owls along the trails by moonlight.
- **Native Plants Workshop** - An April workshop attracted over 90 visitors who discovered wildflowers and pollinators of our fields and forests.
- **March Break Hikes and Tours** - Staff provided hiking and learning opportunities for 324 parents and children along the trails and Ska-Nah-Doht Village.
- **Twilight Tuesdays** - These summer evenings were very popular attracting 227 participants. Outdoor fun included benthic invertebrate tickling, owl calling, bug-hunting, sing-alongs and Haudenosaunee living and legends from 1,200 years ago.
- **Youth Groups** - Evening Owl Prowls and a Saturday playing Predator Prey were enjoyed throughout the year.



Grade 2 students learn how to help themselves out of a bad situation during the River and Creek Safety Program. Coop student Eddie says "OK, remember not to breathe," while grade 2 students exclaim "OMG!!!" plunging their hands into a bucket of ice water.

Community Education

Coop Education

The LTVCA Administration Office and Longwoods Road Conservation Area provide high school and college and university student placements. This year Eddie Merks from West Elgin Secondary School was a great addition to our Longwoods team, assisting in River & Creek Safety presentations, field trip programs, trail maintenance, tree planting, wildlife habitat creation and Eastern Bluebird / Southern Flying Squirrel nest box monitoring. Eddie went on to gain summer student employment here and received the Conservation Foundation Bursary for his future studies in Ecological Restoration Honours B.Sc. at Fleming College and Trent University.

Local First Nations

In February, consultation with elders and youth from Oneida First Nation helped focus their environmental project team's direction and community education goals. This outreach helps form a stewardship team that can benefit from grants for restoring and improving waters, forests and species at risk in our watershed.

Thames Valley Science and Engineering Fair

LTVCA joined the Upper Thames River and Kettle Creek Conservation Authorities to judge and present the Conservation Award at the Thames Valley Science and Engineering Fair in April. Drastic Plastic – a project outlining the impact of plastics / microbeads and implementing alternatives won this year's award for University Heights Public School in London.



The 2018 Conservation Award goes to these happy young ladies, along with 2 pairs of binoculars for them to enjoy the present and to keep focused on the future!

Plowing Match vs Water Festival

The Chatham-Kent & Lambton Children's Water Festival, an annual event held at C.M. Wilson Conservation Area, was not held this year, as the International Plowing Match (IPM) in Pain Court took centre stage. Many water and conservation related learning opportunities were highlighted in our IPM tent for the 1,000's of visitors to enjoy.



A new augmented sandbox was a hit in our plowing match tent, teaching visitors about watersheds and other local landscape features.

Taxidermy Donation

A huge donation of taxidermy wildlife appraised at over \$9,000, was gifted to Longwoods Road Conservation Area by the Frank Contoursi family. Summer students and education staff pitched in to install the large woodland / wetland seasonal interactive display in the Resource Centre. The exhibit provides a great indoor attraction, and affords more space for visitors and group education presentations.



There's a new area to enjoy at Longwoods! In case you need to mingle with moose or just dig deer, we've got you covered!

Ska-Nah-Doht Village & Museum



OUR MISSION

Ska-Nah-Doht Village and Museum continues to be a community leader, to educate about the past, collect and preserve local history and faithfully interpret the Haudenosaunee - People of the Longhouse.

OUR VISION

Ska-Nah-Doht Village and Museum is an interactive museum that engages the public in the preservation and presentation of the past through experiences on-site and in the community.

Village Curator - Karen Mattila managed the \$229,094 Ska-Nah-Doht Village and Museum budget. Rose Nicholas - Village Education Technician conducted programs and events, and directed the inventory for the Turtle Trail Gift Shop - which had its best year of over \$17,000 in sales. We graciously acknowledge the \$22,992 in financial support from the Ministry of Culture through the Community Museum Operating Grant. As part of its Mission to educate about the past, Ska-Nah-Doht Village programs attracted 3,490 students and 735 adults from 165 classes, on-par with last year. Comparatively, public tours and workshops were up with 541 participants.

Education Epilogue

Rose Nicholas retired at the end of 2018 after 30 years of sharing her Haudenosaunee culture, traditional knowledge and her humour! Teachers had the opportunity to give their good wishes throughout the year. They will miss her style, often accusing her of "hypnotizing" their students with her storytelling. Rose's legacy will continue through the staff as well as the 1000's of volunteers and summer students she mentored over her career.

5 Things Rose Taught Me

by Karen Mattila

1. Be a human first then answer questions like "What do you or they want to be called?", "Why are you teaching this?"
2. Be open to ideas, people and recognize those who may not be so open.
3. Always be you – be true to yourself.
4. Listen to your inner voice, you already know the answer.
5. Not everyone can make fried bread!



Rose teaches a class visiting the Museum in 1994.



Summer student Julia Castrogiovanni works with Rose in 2014.

Turning the Page in 2019

The next chapter in education is shaping up to be a busy one. In January, the LTVCA will hire a new Community Educator, and by September, the blended Conservation and Heritage education programs will be launched. Our goal is to continue to engage visitors both on site and in the community, with some new public events as well!

Friend Returns for Aboriginal Peoples Television Network (APTN) Filming

"I always felt an attachment to this place" - Ray John Jr. shared as he stepped back into the Village in September. That could be because he was one of the youngest to attend the official opening of Ska-Nah-Doht back in 1973. His picture even made the local newspaper!

Forty-five years later, a community leader with Oneida of the Thames, and working at the local school board, Ray returned to be featured in an upcoming episode of APTN "Future History - Season 2". Ska-Nah-Doht Village was the background for the documentary series that

features Indigenous leaders preserving culture within their communities. While filming, Ray brought his children along and shared memories of Longwoods, as well as his interpretation of the village. We were happy to reconnect and work together again. In fact, Ray brought the "Scanning History Project" to us (see story below).



This news clipping of Ray John Jr., is from the Village Opening in 1973 (not to be reproduced).



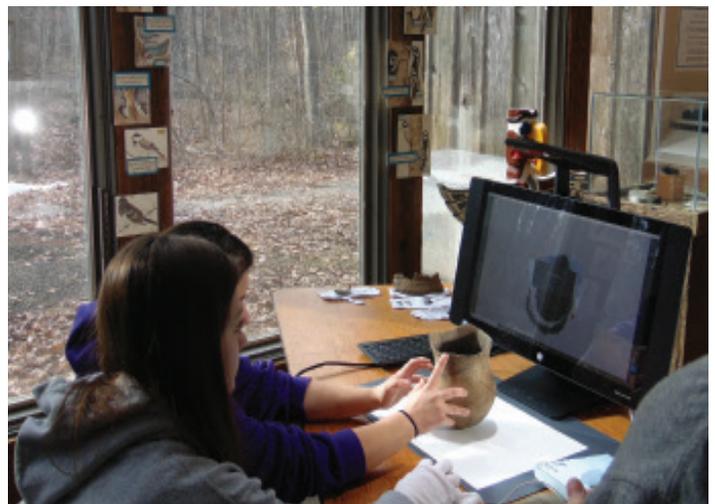
Ray is seen with his son (background-right) along with the APTN crew and host, Kris Nahrgang (in hat).

Artifact History Project

In December, we hosted Indigenous students from the London District Catholic School Board's Grand Confederacy Council. The "Scanning History Project" was led by Mr. Jim Pedrech, a teacher at Holy Cross School in Strathroy. Several artifacts were scanned and turned into 3-D images. Pieces chosen from our museum collection, focused on artifacts representing the beginnings of agriculture for the area's Indigenous people.

Summer Synopsis

Canada Summer Jobs provided two students to assist with events onsite and in the community. During Twilight Tuesday's hikes, Eddie Merks and Kamila Costello spoke about current conservation issues such as the effects of the Emerald Ash Borer. They also moved and installed the Resource Centre's four seasons permanent exhibit, and created a promotional YouTube video "A Longwoods Journey".



Students scanned a 1,000 year old pot, an axe head and a bone awl - items necessary for life: food, shelter, and clothing. They also scanned the 8,000 year old mastodon jaw!

Partnering with the Community

Community Relations - A Part of All Programs

Communication efforts enhance awareness and an understanding of the goals and programs of the LTVCA for our target audiences, enabling them to support and enjoy our facilities and services. Through accurate, consistent and clear messaging, staff expand the range of the target audiences whenever possible. Bonnie Carey - Community Relations Coordinator is assisted by Agnes Vriends - Clerk - Secretary on communications projects. Additional support is provided by other Conservation Authority staff as needed.

Community Relations activities inform our primary audiences - LTVCA Board and Committee members, Councillors and staff from member municipalities, Government agencies and our own staff about Conservation Authority programs and services. Watershed residents, media, users of LTVCA facilities and services, partners including the LTVC Foundation and potential

partners, are additional vital audiences.

Through regular updates of social media and the production of literature, our goals and objectives are broadcast across the watershed. Special events and tours are hosted, and staff initiate and assist with local environmental projects such as children's festivals. As well, displays are designed, arranged and created for fairs and conferences.

Fostering partnerships and collaboration with organizations, volunteers and other stakeholders are priority, and help to further the conservation of our watershed resources. Meeting facilitation, fund-raising with the Lower Thames Valley Conservation Foundation, supervising employment programs and contributing on conservation committees and working groups, all support the LTVCA's vision and mission.

Highlights of the Year

It was a busy and rewarding year, beginning with the creation of the LTVCA's annual report and its presentation to the Board of Directors at the Annual General Meeting. Daily updates were posted to our website and Facebook page (now with 1,351 followers!) and 28 media releases were issued. Special events were planned, six reports for Directors' meetings were prepared, registrations for area farm shows were completed, and publications were reviewed and produced, including the LTVCA's Watershed Report Card.

We participated in many education and outreach activities across the watershed. In London, we presented at the March **"Focus on the Thames Forum"**, and in April, attended the **"Go Wild Grow Wild Expo"** – our display booth well attended by over 600 people.

The **"Lake Erie Student Conference"**, held in Rondeau Provincial Park, was organized with the assistance of a \$14,300 grant from the Ontario Ministry of the Environment and Climate Change. It was attended in late April by 65 secondary school students selected from the Lambton Kent District School Board. The event featured six workshops led by community specialists on issues affecting the Great Lakes, especially Lake Erie.

The annual **"Longwoods Heritage Weekend"** attracted nearly 2,000 visitors to the Longwoods Road Conservation Area in May and we concluded the year's festivities with **"Season's Greetings"**. Public events were expanded to Sharon Creek Conservation Area with a visit from **"Salt Haven Wildlife Rehabilitation & Education Centre"** in July, and a **"Learn to Fish"** workshop in September led by the Ontario Ministry of Natural Resources and Forestry.

Meetings were held throughout the year with the St. Clair Region and Essex Region Conservation Authorities and the Coordinator of the Chatham-Kent & Lambton Children's Water Festival, to plan a tent display for the **International Plowing Match (IPM)** September 18-22 in Pain Court. An estimated 6,000 people toured through the hands-on **"Be a Watershed Hero – Protect the Great Lakes"** themed exhibit!

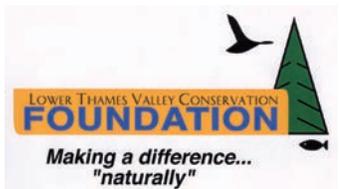
The LTVCA thanks the 370 dedicated volunteers who gave 950 hours of their time in 2018 to our programs and services, helping to create a balanced and healthy lower Thames watershed and region.



A talking "Professor Trout" and a babbling brook showcasing species at risk, engaged and educated all ages at our IPM tent in September!

Lower Thames Valley Conservation Foundation

Highlights of the Year



The Lower Thames Valley Conservation Foundation works in partnership with the Lower Thames Valley Conservation Authority, to raise funds towards the wise management of our renewable natural resources. Since 1995, the Foundation has raised nearly \$790,000 for natural and cultural heritage conservation. Thousands of dollars were raised throughout this year for conservation projects.

The Lower Thames Valley Conservation Foundation assists volunteer organizations with their fund raising efforts and manages the Sharon Creek Trust Fund, initiated by the Friends of Sharon Creek. The Foundation supports special projects and events like the annual Moonlight Winter Family Hike, the Carey Carolinian Arboretum and Trail and the Lower Thames Valley Conservation Foundation Bursary. Through the Foundation's Memorial Forest Program, the Conservation Authority has planted thousands of trees across the lower Thames region. The Foundation submits funding applications to corporations, government agencies, service clubs and other philanthropic organizations to undertake projects and programs, which assist the LTVCA and watershed region.



Lower Thames Valley Conservation Foundation presented a \$500 Bursary to Eddie Merks. Eddie is enrolled in the Ecological Restoration Program at Sir Sandford Fleming College. Foundation Directors Don Pearson (left) and Dan McKillop (right) were on hand to present the cheque.

The Conservation Foundation is a not-for-profit, federally registered charity, governed by a Board of Directors. Tax receipts are issued for all donations. The Executive - President Grant Jones, Vice-president Ken Brooks and Secretary-Treasurer Dan McKillop are recognized for their dedication and support in 2018.

The **Ontario Trillium Foundation** awarded the Lower Thames Valley Conservation Foundation a \$72,000 Seed grant to complete a 12 month Feasibility Study at Longwoods Road Conservation Area, the location of the Ska-Nah-Doht Village and Museum in the Municipality of Strathroy-Caradoc. The Feasibility Study will examine the key outcomes of a public 'Visioning Project' that took place in 2017, resulting in a lofty plan for rebuilding some aspects of the conservation area and expanding the programming being offered.

The Foundation also helped fund and support several other Conservation Authority and watershed initiatives:

- ♦ 283 memorial trees \$4,090.50
- ♦ Carey Carolinian Arboretum and Trail \$817 for new trees
- ♦ Lower Thames Valley Conservation Foundation Bursary \$500
- ♦ Volunteers for Moonlight Winter Family Hike event and 4 memorial forest dedication services



Over 700 family and friends of loved ones attended four Memorial Forest Dedication Services held across the watershed. The Conservation Foundation recognizes the support of the McKinlay Funeral Home, the Tilbury and District Horticultural Society and the LTVCA as partners in this reforestation program.

Wishing you the best!

Staff Retirements



*Rose Nicholas 1987 - 2018
Ska-Nah-Doht Village Education Technician*

LTVCA staff, past and present, will smile when they remember working with Rose Nicholas, Ska-Nah-Doht Educator. Her 30 year career started on contract but it became clear that she had more to share of her traditional knowledge with her own brand of humour and charm. Rose, Bear Clan of the Mohawk Six Nations (Brantford), speaks with a soft-spoken dignity that is captivating; drawing the listener in closer. Whether presenting to a class or repairing the village palisade or snowshoes, starting fires, beading or making dreamcatchers, it was actually the stories, the hours of teaching while doing all these “job tasks” that is her legacy. It continues through the staff, volunteers and students she mentored. Her voice is everywhere from the village design to the museum displays, educational programs including the Ska-Nah-Doht Resource Guide, plus her leather craft and beadwork is in the Turtle Trail Gift Shop. Still her passion is teaching children. Rose plans to continue doing just that at “The Bear Den” her new business with her daughters and grandchildren. We send her our good thoughts and much success in her retirement.



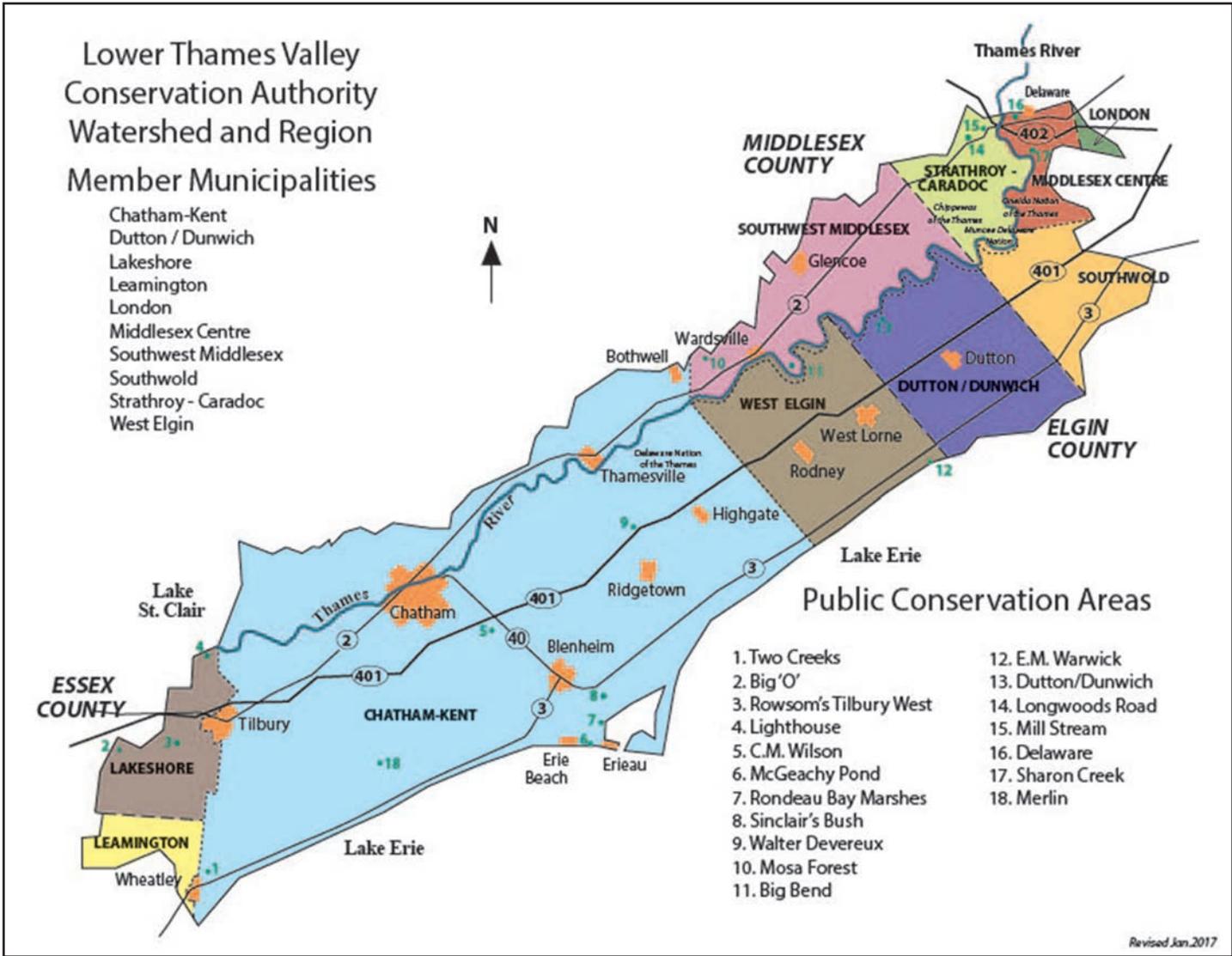
*Dan Brinkman 2016 - 2018
Land Stewardship Technician - Eastern District*

The LTVCA would like to express our gratefulness and appreciation of the work Dan Brinkman has done leading on the ground stewardship projects in this watershed. Dan has always had a warm and caring approach to the work and the people of this area. Dan brought a personal touch to projects and will be leaving a solid base for stewardship in the Eastern end of our watershed. During his short time here, Dan has been instrumental in identifying American Chestnut in our area and working with landowners to preserve these rare trees. He has also developed positive working relationships with numerous community groups that will support conservation authority work in the future. A vast knowledge of plants and animals, a keen sense of humour and the wisdom to work with people, no matter what their approach and concerns is what makes Dan special. Dan we wish you all the best in your future endeavors, please keep in touch.



*Liam Laforest 2017 - 2018
Land Stewardship Technician - Western District*

Liam Laforest was an excellent Land Stewardship Technician during Amanda Blain’s maternity leave. During his employment, he assisted with project recruitment, grant writing and project implementation which lead to over 200 acres of land restoration including trees, wetlands, and prairie. Liam was successful with a grant submission to Wildlife Habitat Canada and acquired \$40K for wetland restoration in 2018. He was always willing to help out at stewardship workshops, including Go Wild Grow Wild. All the best to you Liam in your new role as Forestry Technician for Hydro One.



Lower Thames Valley Conservation Authority (LTVCA) watershed means those lands draining into the Thames River from the community of Delaware to Lake St. Clair, those lands draining into Lake Erie south of the lower Thames River watershed from the Two Creeks watershed in the west to the Talbot Creek watershed in the east and the lands draining into Lake St. Clair north of the Thames River watershed north to and including the Boyle Drain watershed. The area covers approximately 3,274 square kilometers (1,264 square miles) and is home to over 120,000 people.



**LOWER THAMES VALLEY
CONSERVATION AUTHORITY**



The LTVCA is one of 36 Conservation Authorities in the Province of Ontario. Member of Conservation Ontario.

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The Thames River celebrated its 18th year as a Canadian Heritage River. Thousands of volunteers cleaned up hundreds of kilometres along the river during the 19th Annual Thames River Clean-up in April.

