

LOWER THAMES VALLEY CONSERVATION AUTHORITY

ANNUAL REPORT
FOR 2021

60
yrs



MESSAGE FROM THE CHAIR

40
partners augmented
municipal support with
\$1.82 million



Trevor Thompson
Chair LTVCA

To say the 2020–2021 year was challenging, is truly an understatement. The global COVID-19 pandemic has affected, and continues to affect our community's personal and economic wellbeing. In response, record numbers of residents continue to flock to our Conservation Areas to relax, refresh and regenerate. The Lower Thames Valley Conservation Authority (LTVCA) is pleased to help reconnect people to nature and the comfort and health that results. If there can be a positive take on these difficult times, it is witnessing the strength, determination and positive approach residents of our communities bring to innovative and progressive environmental projects. These projects benefit the whole community and our future.

More than 450 residents undertook environmental projects with the LTVCA this year - a record number, even in these challenging times. The Conservation Authority especially wishes to thank the watershed farm community which continues to lead in environmental innovation. Over 10,000 acres of cover crops were planted to reduce erosion and to help limit nutrients from running off agricultural lands into waterways.

Finally, I would like to thank the LTVCA Board for their work in 2021. Our Directors are appointed by local governments and represent each municipality in the watershed. Their efforts ensure that residents have a voice in the delivery of programs and services which further the conservation, restoration, development and management of our natural resources. The year 2021 was the 60th anniversary of the Lower Thames Valley Conservation Authority. Although conditions meant that celebrations were limited, we are proud of the service we have provided this community since beginning our work on February 2, 1961.

CHIEF ADMINISTRATIVE OFFICER'S REMARKS



Mark Peacock
CAO LTVCA

The Vision of the LTVCA is mirrored throughout this annual report as we work toward 'balancing a healthy watershed with a healthy economy'. 'Leading by example in environmental protection in partnership with the community' is our Mission and our activities supported this undertaking. We acknowledge the financial support of our 10 member municipalities, our granting partners and dedicated volunteers. In addition to municipal support, community and government partnerships assisted programs with nearly \$2 million this year.

All departments were very busy throughout the year. Of special mention is our expansion of landowner stewardship programs including reforestation, tall grass prairie establishment and wetland creation, as well as Best Management Practices promoting healthy soil and water. Another busy department was Planning and Regulations with the completion of record numbers of applications, permits and reviews. One additional planning staff member was hired to help ensure timely response to applications.

I would like to thank all staff members for the positive and professional manner that they have addressed the challenges we have faced during this time of COVID-19. I am privileged to be supported by a committed Board, a competent and dedicated staff, and a progressive strategic plan.

The Conservation Authority is moving to develop a new strategic Plan by 2024, which will respond to both community input and the new requirements of the provincial government found in changes to the Conservation Authorities Act. This plan will provide meaningful milestones for Lower Thames Conservation. I look forward to working with staff and our community while we develop recommendations to guide the work of the Conservation Authority into the future. We look ahead to 2022 filled with new challenges and rewards, as we all work together to improve our watershed for the benefit of our lower Thames community.

OUR VISION ... The LTVCA for a balanced and healthy watershed

Mission

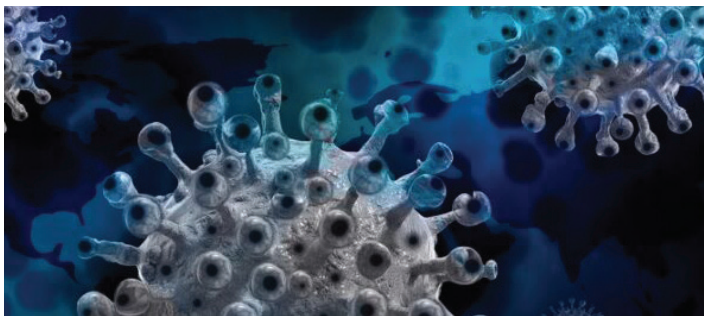
Leading by example in environmental protection in partnership with the community.

Core Values

Respect, integrity, commitment, objectivity, and collaboration.



Addressing COVID-19 at LTVCA



Before we look back on 2021 in more detail and look to the future, it is important to address Covid-19 and how we are handling the situation at the LTVCA. It is clear that the virus is placing considerable strain on society. People are worried, countless are falling ill and tragically, some are dying. The Conservation Authority is dealing with major challenges due to the pandemic.

At the LTVCA, we are working in a structured manner to handle the crisis. The Pandemic Management Committee is leading and coordinating our efforts, listening to input from staff and ensuring that the basis for management's decision-making is continuously up-to-date.

Firstly, the LTVCA is ensuring the health of staff. Recommendations from federal, provincial and local authorities form the basis for the measures we have implemented, but further safety precautions are also being taken, as part of the LTVCA Covid-19 Safety Plan.

Secondly, the LTVCA is ensuring continued operations and provision of services to the public. The digital workplace is being safeguarded by increasing security and capacity so that staff can work from home to a greater extent. Protocols have also been put in place to ensure safety to residents as we provide on site service.

Thirdly, we are engaging in dialogue with municipalities to ensure that we continue to provide uninterrupted services that meet timelines they require.

As we move to more "normal" operations, the LTVCA will ensure we provide the service and response that our communities have come to expect.

Conservation Authorities Act Changes - Bill 229

With the amendments to the Conservation Authorities Act (CAA) in Bill 229, the Protect, Support and Recover from COVID-19 Act (Budget Measures), 2020, now passed by the Legislature, the government has made a series of substantive amendments to the CAA in 2017, 2019 and in 2020. This resulted in a number of un-proclaimed provisions in the CAA that are being implemented through a series of regulations. These regulations are being brought forward in two phases.

The Province released Phase 1 regulations designed to implement amendments to the CAA in 2021. These regulations define categories of programs and services, timelines, details to be included within Transition Plans and requirements to enter into Memorandums of Understanding and/or Agreements with participating municipalities for programs not defined as mandatory by the province. The regulations were finalized with assistance from the provincially appointed multi-stakeholder Conservation Authorities Working Group, which includes Conservation Ontario and a number of Conservation Authorities (CAs) as well as representatives from the municipal, agricultural, and development sectors.

The Phase 1 consultations focused on details of the programs and services that CAs will implement and how they will be funded. The Province is now consulting on a Phase 2 of the proposed regulations, including details on municipal levies, fees, as well as standards for the delivery of other types of programs and services.

The completion of tasks for the LTVCA to comply with provincial requirements has meant significant additional work for staff. We completed the required municipal consultation and preparation of the LTVCA Transition Plan by December 31, 2021 and this document can be found on the LTVCA website. The detailed Inventory of Programs and Services, being brought to the Annual General Meeting for Board approval, was prepared in January and February of 2022 and will be posted to the website by February 28. To complete this effort, staff will be working with participating municipalities over the next year to finish Memorandums of Understanding and/or Agreements for implementation of programs not considered mandatory by the province.

BOARD & STAFF DIRECTORY

60 yrs

Directors 2021

Trevor Thompson (Chair) – Municipality of Chatham-Kent
Linda McKinlay (Vice-Chair) – Municipality of Lakeshore

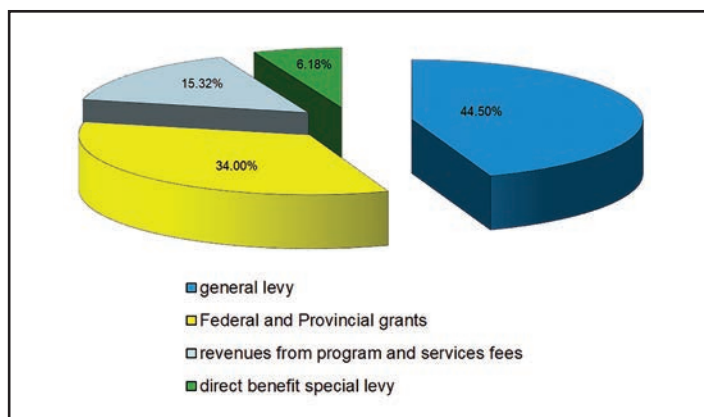
Hugh Aerts – Municipality of Middlesex Centre
Christa Cowell – Municipality of Southwest Middlesex
Sarah Emons – Township of Southwold
Amy Finn – Municipality of Chatham-Kent
Mike Hentz – Municipality of Dutton Dunwich
Sandi Hipple – Municipality of Strathroy-Caradoc
Richard Leatham – Municipality of West Elgin
JJ Strybosch – City of London appointment
to be confirmed by the Province
Paul Tiessen – Municipality of Leamington
John Wright – Municipality of Chatham-Kent

Ska-Nah-Doht Village Advisory Committee

Willem Bruinink – Chair
Don Fairbairn – Vice-chair
Gayle Bogart, Ron Doane, Sarah Emons, Darcy Fallon,
Sandi Hipple, Mike Hentz, Mark Peacock

Budget

Mark Peacock – CAO Secretary-Treasurer, directed the administration and financial aspects of the LTVCA, with support from the Manager, Finance and Administrative Services – Todd Casier, Finance and Administrative Assistant – Kally Casier and Clerk – Agnes Vriends.



The LTVCA's budget of \$3,319,396 received approval in February.

Full-time / Long-term Contract Staff

Mark Peacock - CAO Secretary-Treasurer

Daniel Bittman - Watershed Monitoring Specialist
Amanda Blain - Land Stewardship Technician / ALUS CK Coordinator (*on leave*)
Bonnie Carey - Mgr, Communications, Outreach & Education
Ryan Carlow - Soil & Water Quality Technician
Kally Casier - Finance & Administrative Assistant
Todd Casier - Mgr, Finance & Administrative Services
Jerry De Zwart - Community Conservation Educator (*on leave August*)
Adam Gibb - Western District Supervisor
Jason Homewood - Water Resources & Regulations Technician
Carlyn Johnston - Community Educator (*to April*)
Jumanah Khan - ALUS Elgin Coordinator (*started December*)
Alison Klages - Curator Ska-Nah-Doht Village & Museum (*started June*)
Colin Little - Agricultural Program Coordinator
Karen Mattila - Ska-Nah-Doht Village & Museum Curator (*retired June*)
Vicki McKay - Species at Risk Biologist
Peter Moddle - Land Stewardship Technician / ALUS Middlesex Coordinator
Elizabeth Philip - Water Resources Engineer
Neil Pothier - GIS Technician
Vance Stark - Eastern District Supervisor
Valerie Towsley - Resource Technician
Greg Van Every - Conservation Services Coordinator
Randall Van Wagner - Mgr, Conservation Lands & Services
Agnes Vriends - Clerk
Connor Wilson - Planning Technician (*started December*)
Jason Wintermute - Mgr, Watershed & Information Services

Seasonal / Short-term Contract Staff

Melissa Abrosimoff - Outreach Specialist
Gabriela Carew - Species at Risk Communications Technician
Brooke Ciuman - Species at Risk Communications Technician
Sarah Cook - Outreach Specialist
Rachael De Zwart - Conservation Area Interpreter
Leanne Doxtator - Community Conservation Educator
Francois Gallant - Lead Hand
Anastasia Heuvelmans - Imagine McGregor Coordinator / Wetland Restoration Technician
Matthew Laprise - Lead Hand
Michael Latham - Lead Hand
Megan Lee - Environmental Field Technician
Daniel Nydam - Stewardship Outreach Technician
Jill O'Bright - Ranger
Sarbjit Singh - Water Resources Analyst
Ashely Smith - Ranger
Claire Soles - Watershed Monitoring Technician
Ashley Stewart - Conservation Services Assistant
Victoria Wisniewski - Watershed Monitoring Technician

Joint Health & Safety Committee (JHSC)

The JHSC is committed to improving health and safety conditions in the workplace by identifying potential health and safety issues and bringing them forward. The Full Committee met four times during the year. Due to COVID-19, individual committee members completed site inspections of all LTVCA properties. Committee members ensured that new and returning employees completed mandatory Ministry of Labour Health and Safety Awareness Training and were made aware of LTVCA policies and procedures.

Water Management

The Water Management program provides science-based support for water resources management and includes activities that protect life and property such as flood forecasting, control and monitoring of flooding and erosion, as well as broader watershed monitoring. Staff overseeing this program were Jason Wintermute – Manager, Watershed and Information Services; Jason Homewood – Water Resources and Regulations Technician; Valerie Towsley – Resource Technician; Neil Pothier – GIS Technician; Elizabeth Philip – Water Resources Engineer; Daniel Bittman – Watershed Monitoring Specialist and Connor Wilson – Planning Technician. Additional support was provided as needed by other Conservation Authority staff.

Thames River & Watercourse Flooding

It was an odd year for flooding on the Thames River, with little spring freshet. Approximately 20 cm of ice had accumulated in the lower reaches of the river by the third week of February, but it melted before the spring rains. The highest flow event during the spring saw only 300 m³/s at Thamesville. The largest flow event of the year was actually in September. Overnight on September 21st and through the 22nd the western watershed received around 60 mm of rain, while areas around Glencoe and London saw over 100 mm. Flash flooding caused road closures in some areas, especially in the Municipality of Southwest Middlesex. As the Thames River rose, the river flats from Delaware to Chatham flooded. The Thames River peaked at around 590 m³/s near Dutton on September 25th and 505 m³/s at Thamesville on September 26th. This flow in Chatham was slightly beneath what would be required to operate the 6th Street Dam. However, the LTVCA was closely monitoring the situation, as significant debris jams had occurred at the 5th St. and 3rd St. bridges. This caused enough of a change in water levels in Chatham for concern that further jamming could result in water levels to rise high enough to necessitate the operation of the 6th St. Dam. In the end, the flood passed though the city out into Lake St. Clair without 6th St. Dam operations and without issues further downstream.

Throughout the year, quite a few rainfall events caused high water levels on local watercourses. However, the McGregor Creek Diversion Channel was only operated four times this year, once during the September event on the Thames River, from July 16th to 18th, from October 29th to 31st, and from December 6th to 8th.

Eighteen advisories were issued for flooding concerns on the Thames River and local watercourses during the year; four Safety Bulletins, six Flood Outlooks, five Flood Watches and three Flood Warnings.



This is the McGregor Creek under flood conditions.



Mark Peacock - LTVCA's CAO, was interviewed by the media on September 27 for an update on the Thames River flooding situation.

Great Lakes Levels & Shoreline Flooding

It was another challenging year for shoreline property owners, particularly along Erie Shore Drive in the Municipality of Chatham-Kent. Water levels on both Lake St. Clair and Lake Erie were still well above normal, which led to flooding and erosion concerns. However, water levels largely managed to remain below the record setting levels of 2019 and 2020. There also seemed to be fewer wind events during the year, reflected in a lower number of flood messages being issued. Fortunately, there were no instances of severe flooding that required evacuations of residents from Erie Shore Drive or other shoreline areas.

High lake levels led to 56 flood messages issued for the shoreline areas. There were nine monthly standing Flood Outlook messages issued for shoreline flooding/erosion. For events on Lake Erie, there were 20 Flood Outlook messages, 13 Flood Watches and seven Flood Warnings for Erie Shore Drive. While there were no flood messages for events expected to impact only Lake St. Clair, there were seven messages issued for events that could potentially impact both lakes; two Flood Outlooks and five Flood Watches.



High lake levels pushed water up and over Lake Erie shoreline protection.

Thames River Clear Water Revival

The Thames River Clear Water Revival is a multi-agency partnership with the objective of improving the Thames River. Partners include *Environment and Climate Change Canada*, First Nations communities, provincial ministries, the Upper Thames River and Lower Thames Valley Conservation Authorities and the City of London.

During the year, several of the partners, including the LTVCA, signed off on the Thames River (Deshkan Ziibi) Shared Waters Approach to Water Quality and Quantity, and the partnership is now moving into an implementation phase. Agricultural and municipal subcommittees have been started to seek broader participation from other stakeholders. Although COVID-19 has impacted some outreach activities such as the Antler River Guardians from the 4 Directions: First Nation Youth Stewardship Program, the partnership is committed to promoting the Shared Waters Approach and to seeing projects implemented to address the health of the watershed.



A September Thames River is viewed from the Municipality of Middlesex Centre.

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. This program assists 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. Typically, wells are sampled in the late fall for water quality. However, this year's sampling was pushed back into early 2022. The LTVCA maintains the instrumentation and samples the wells, while the ministry provides equipment and lab analyses.

The provincial 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 three sites. We received a 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 as winter and spring months have shown to be the time where most nutrients and contaminants are transported to the Great Lakes.

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 local stakeholders referred to as the Low Water Response Team. It was a fairly dry spring this year and a Low Water Level One Condition was declared in June. However, that only lasted one month, as significant thunderstorm activity later in June raised water levels. The Low Water Condition was lifted in early July. Sufficient rainfall throughout the rest of the year meant no further concerns for the program.

Sampling for benthic macroinvertebrates (insects, worms and crustaceans that live at the bottom of the stream) was conducted in May and June this year. Due to COVID-19 restrictions at the *University of Windsor*, the sampling was done entirely by LTVCA staff and the samples have been preserved and stored for later analysis by the University once restrictions have been lifted.



The provincial stream water quality sampling was conducted at 11 locations throughout the watershed.

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. The funding amounts to \$81,467.

Unprecedented Erosion

The last five years have seen unprecedented erosion and flooding along the Lake Erie shoreline.

With the high lake levels and ice-free winters on the lake, damaging waves made it on shore, impacting the toe of the shoreline bluff. As well, the waves reached further in land due to wind events pushing the high lake levels even higher, impacting development in low lying areas.



Wind driven waves resulted in spray overtopping dwellings and flooding lots.

Thames River Algae Blooms

There was another algae bloom on the Thames River this year. The bloom was more brown in colour and to many people, it looked more like an oil or gasoline spill.

However, streaks of what appeared to be blue-green algae were also observed at times within the larger brown bloom. The bloom was first reported to Chatham-Kent Fire Service on the evening of August 2nd from around the Kent Bridge area. By August 10th, the bloom was observable from around Melbourne Road or Iona Road, downstream past Chatham, to around Winter Line. The bloom persisted for another couple of weeks until heavy rains on September 22nd flushed it away.

Initial results from the Ministry of Environment, Conservation and Parks' investigations suggested that the bloom was largely dinoflagellates and most likely *Glendonium*; a species not known to produce toxins.

As in past years, LTVCA staff were out in the field determining the extent of the bloom and collecting samples for research purposes.



On August 9, an algae bloom was spotted on the Thames River at Kent Bridge, in the Municipality of Chatham-Kent.

Land Use Planning & Regulations

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, and loss of property and possessions, and to aid in the protection of life. Reducing the impacts of humans along and within hazardous areas, also leaves crucial regions for natural processes to continue, without interference from mankind. Education of the public and our member municipalities is key to helping maintain these areas in a natural state.

Planning and regulations staff dealt with 465 municipal planning submissions (OP's, ZBL's, OPA's, ZBLA's, Severances, Minor Variances, etc.) as it relates to Provincial Policy and Section 28 of the Conservation Authorities Act. Planning numbers increased from 2020.

COVID –19 Planning and Regulatory Processes

This year was again an unusual one, in that most staff worked from home. This situation posed unique challenges for undertaking 'business as usual'. Even with the shutdown, staff were extremely busy with planning submissions and processing the record setting permits. We directed the public to contact us by email, as staff were not at their desks and able to immediately answer telephone inquiries. For the most part, the public and other agencies were very understanding of our work situation. In a few situations, individuals' requests were delayed until staff were able to access their office for information relevant to the query. Overall, staff responded in a timely manner to inquiries.

Permits	Municipal Drain	58	10	6	2			11	1		5		93
	Private Property Owner	316	7	52	2		1	8	3	3	24		416
	Utility Company	124	6	5	1			4	2	2			144
	Municipal / County Infrastructure	19		2			1		1	1	2		26
	Habitat / Stewardship	3	2										5
Plan Input and Review	Official Plans								1				1
	Official Plan Amendments	4	1		1		1						7
	Comprehensive Zoning Bylaws												0
	Zoning Bylaw Amendments	62	12	6	7		2	17	7	3	2		118
	Severances	104	7	4			1	6	7	1	11		141
	Minor Variances	55	11				3	7	7	3	2		88
	Plan of Subdivision		1	1				2		1			5
	SWM Ponds/Other Studies							0		0			0
	Legal Inquiries	77	1	10	5		1	4	1	2	4		105
	General Property Inquiries	1304	88	216	12	2	25	81	20	30	156	38	1972
TOTAL SERVICES PER MUNICIPALITY		2126	146	302	30	2	35	140	50	46	206	38	3121
SERVICES													
MUNICIPALITY		Chatham-Kent	Dutton Dunwich	Lakeshore	Leamington	London	Middlesex Centre	Southwest Middlesex	Southwold	Strathroy-Caradoc	West Elgin	General Inquiries	TOTALS

Here 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.

684

permit applications
reviewed re:
Section 28 CA Act &
Ont Reg 152/06

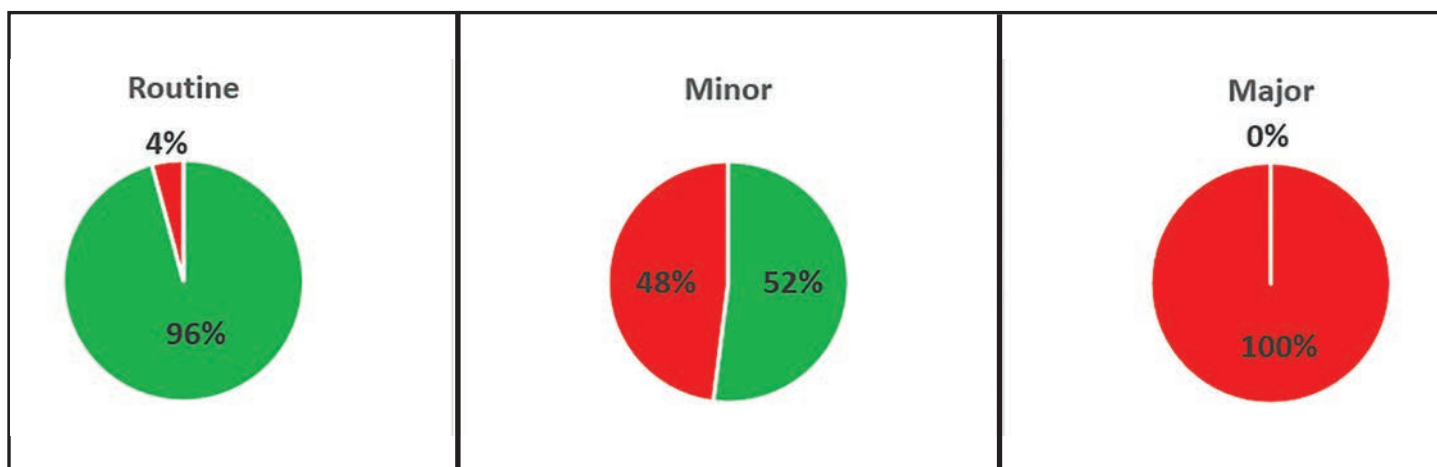
60 yrs

Development, Interference with Wetlands & Alteration to Shorelines & Watercourses - Ontario Regulation 152/06

Regulations staff reviewed 684 permit applications with respect to Section 28 of the Conservation Authorities Act and Ontario Regulation 152/06. This was 128 more than 2020 and 190 more than 2019. Of these applications, all but 14 had been or will be approved by staff. Three applications were approved by the Executive Committee in hearings, three applications require future hearings, and eight applications were cancelled by the applicants.

Private property landowners submitted 421 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 LTVCA regulated areas. Ninety-three permit applications were related to municipal drainage works and the Drainage Act, 26 applications were related to municipal / county infrastructure, and 144 applications were related to utility companies (including gas, oil, communications, and electricity generation / transmission). Two hundred and seventy-six private properties were surveyed for permit and official plan flood proofing requirements.

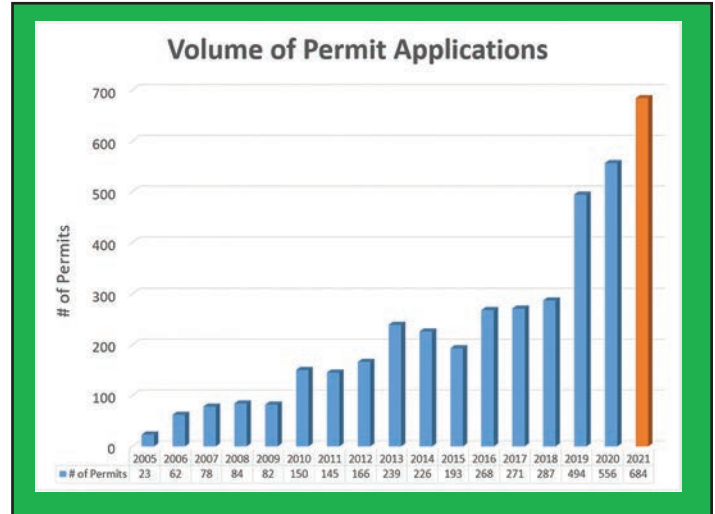
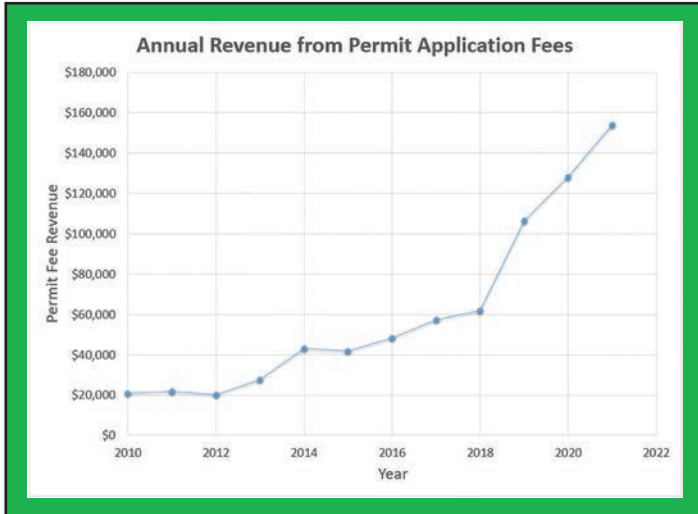


Using the customer service standards developed by Conservation Ontario, the table above indicates that 96% of routine applications met their delivery standard, 52% of minor applications met their delivery standard, and 0% of major applications met their delivery standard. While improvements were made in turnaround times for applications considered to be 'routine' compared to 2020, turnaround times for both 'minor' and 'major' applications did not improve during the year.

Complexity of Application	# of Days to Review Permit Applications in 2021				
	0 - 14 Days	15 - 21 Days	21 - 28 Days	29 - 90 Days	> 90 Days
Routine	136	3	1	2	0
Minor	155	119	85	164	4
Major	0	0	0	1	4

The above chart illustrates the number of days it took to review permit applications, based on whether the applications' complexities were routine, minor or major.

1,972
telephone inquiries
planning, regs, general



For the sixth consecutive year, the volume of permit applications set a new record. The number of property inquiries handled by the Regulations Technician decreased from 1,736 in 2020 to 1,631 in 2021. This was due to the Water Resources Engineer taking on inquiries related to the Drainage Act (not tracked this year). The tables above summarize the upward trends of annual revenue from permit application fees and volume of permit applications over the years.

Applications/Inquiries	2021	2020	2019	2018	2017	2016	2015
# of Permit Applications	684	556	494	287	271	268	193
# of Planning Applications	357	303	216	245	302	298	242
# of Landowner Inquiries	1972	2102	2343	1746	1354	1057	1108
# of Legal Inquiries	105	104	68	74	92	59	40
# of Hearings	4	2	2	0	1	0	1

The above table summarizes the plan review and permit workloads over the past seven years.



Jason Homewood – Water Resources and Regulations Technician surveyed flood markers along the Thames River following the September flood.

Enforcement Issues

Fifty-three new complaints/tips were received throughout the year, however no notices of violation were issued due to staffing resource issues. Forty-one of the 53 complaints / tips were violations or potential violations of the Conservation Authorities Act and two of those files closed without prosecution. Of the 53 complaints / violations received, 32 were in the Municipality of Chatham-Kent, six were in the Municipality of Lakeshore, six were in the Municipality of West Elgin, four were in the Municipality of Southwest Middlesex, two were in the Municipality of Dutton Dunwich, two were in the Municipality of Strathroy-Caradoc, and one was in the Municipality of Middlesex Centre. In the last two years, the LTVCA received 24-30 complaints/tips regarding Section 28 enforcement per year.

ENHANCING WATERSHED HEALTH

60^{years}

Tree Planting, Restoration, Stewardship

Our conservation services team continues to grow and adapt to operational challenges due to COVID -19 and budget limitations. We overcame hurdles and met funder targets, while delivering all our valuable services to member municipalities and citizens within the Lower Thames watershed. LTVCA acknowledges the financial support of our many granting partners, and dedicated volunteers. The team included Randall Van Wagner – Manager, Conservation Lands and Services; Greg Van Every – Conservation Services Coordinator; Peter Moddle – Land Stewardship Technician / ALUS Middlesex Coordinator; Jumanah Khan – ALUS Elgin Coordinator; Amanda Blain / Ashley Stewart – Land Stewardship Technician / ALUS CK Coordinator; Colin Little – Agriculture Program Coordinator; Ryan Carlow – Soil & Water Quality Technician; and Vicki McKay – Species at Risk Biologist. The success of our projects was also a result of the hard work and expertise of the many seasonal and short-term contract staff participating in stewardship efforts including outreach and communications technicians / specialists, restoration and field technicians, and watershed monitoring technicians.

Land Stewardship Project Summary

Reforestation – 146 acres/59 ha
Wetlands – 41 acres/17 ha
Prairie – 83 acres/34 ha
Landowners involved in tree planting, wetland, prairie restoration – 357
Seedlings planted – 87,370 across watershed + 331 memorial forest trees
Large-stock trees planted – 1,202 across watershed

Restoration Projects

Project specific grants and local partner funding make stewardship projects possible. *Chatham-Kent Secondary School's* environmental club and tech class students helped to build 50 Eastern Bluebird houses along with a few Wood duck boxes. Students each kept one box, with the rest distributed to landowners across the watershed. We have received a lot of community interest for these boxes.

With the Ontario Seed Plant closing a few years ago and the brief cancellation of the 50 Million Tree Program, the lack of seedlings in the supply chain finally caught up and we feel the pressure of demand on the supply.

A local university student was hired for tree planting and restoration work over the summer with funding from *Canada Summer Jobs*. This student transitioned into a wetland technician role which was 50% sponsored by *Ducks Unlimited Canada*. Thanks to our local funders: *ALUS Elgin, ALUS Chatham-Kent, ALUS Middlesex, Elgin Clean Water Program, Elgin Stewardship Council, Engie, Enbridge, Ducks Unlimited Canada, Grasslands Ontario, Member Municipalities, Ridge Landfill*, and various watershed service clubs.

Events

LTVCA offered stewardship events benefitting the community, providing an opportunity to connect with nature despite the challenge of the COVID-19 pandemic.

Presentations

A program overview was given to the Kent Federation of Agriculture and Kent Soil and Crop Improvement Association.

Cultivating Conservation Tour

This was a self-guided tour minimizing exposure to COVID-19. Ninety people participated in the event, which showcased several stewardship project sites in the Municipality of Chatham-Kent. Landowners received an in person experience about our services and projects.



Our phosphorus reduction team engaged participants at the Walter Devereux Conservation Area - one of the stops along the Cultivating Conservation Tour route held September 2nd.

88,903
trees planted

448
landowners assisted
with \$ from
stewardship grants

Partnerships

Working together was more important now than ever in reaching stewardship goals. The LTVCA had numerous new and continued partnerships established this year. We partnered again with *West Elgin Roads Department* and the *Municipality of Dutton Dunwich* for a tree giveaway to citizens. These trees helped replace trees that were removed for maintenance and infrastructure needs. Events are important and engage the public, provide a space to spend time outside, connect with nature, and steward a better environment.

Ridge Landfill Community Trust and LTVCA worked together on a major Meadowlark mitigation project. Forty acres (16.1 ha) of prairie were established in two separate parcels, the Diversion Channel and the Johnston property near Charing Cross, to accommodate for habitat removed by the landfill. *Waste Connections Canada* was the corporate body, which runs the landfill. Due to some recent expansions, environmental assessments determined certain mitigation measures had to be implemented. LTVCA was in the perfect position to implement these mitigation measures. These projects require significant funding and are above and beyond the *Community Trust* \$1M funds.

Longstanding partner with a new project; *Enbridge* has committed an additional \$5,000 for 2022 to continue the shoreline restoration project that was initiated this year.

Ducks Unlimited and Imagine McGregor

In June, a new technician developed the 'Imagine McGregor' program for LTVCA while assisting *Ducks Unlimited* in the South West Region. Wetland projects were sought after and completed within Lambton, Essex and Chatham-Kent areas through the Ducks Unlimited portion of this position, with three wetlands in the ground and several lined up for the year to come.

An outreach plan was created and updated as necessary. Over the summer we hosted events, planted prairie with volunteers at Lake Morningstar, and cleaned up litter and weeded the Administration Office's native gardens with volunteers from the *Children's Treatment Centre of Chatham-Kent*. 'Imagine McGregor' also had a booth at the Cultivating Conservation Tour.

'Imagine McGregor' hosted our first CK Paddle & Clean, collecting 1107.4 lbs. of garbage from the Thames River, its shore and the shore of McGregor Creek. Fifteen



First annual Imagine McGregor CK Paddle & Clean was held in October.

individuals in canoe, kayaks and a boat collected garbage on the water, and 10 volunteers from the *Rotary Club of Downtown Chatham* collected on the banks of McGregor Creek. Eight volunteers from the *Rotary Club of Chatham Sunrise* helped weigh everything, track it and sort out recyclables. Small businesses made in-kind and monetary donations for the event including *The Stronghouse Twin Dolphin Canada Corp.* They provided volunteers and donated funds to purchase hemp fabric t-shirts for the participants, made in Chatham by *Hereafter*. *SignRageous* donated the printing of the t-shirt design. Participants collected garbage in mesh bags donated by *Lloyd Bag Co.* and *Water Hut* provided an onsite water refill station. *Waste Connections of Canada* donated our garbage bin and subsequent collection.

McGregor Creek subwatershed residents picked up a free tree from the *Retired Teachers of Ontario District 33*. Twenty-four large stock trees were given out. Thirty large stock trees were also planted with grant funding and the *Sunrise Rotary*.

By November, 'Imagine McGregor' and the stewardship team created a radio ad campaign focused on sharing habitat facts with the community. It began with a broadcast, discussing the topic of the month - biodiversity - its importance and how our department helps. The ad, focusing on biodiversity's importance for humans, played for six weeks on local Chatham-Kent stations CFCO, COOL FM and CKYS. The campaign will continue into 2022.

Plans to expand and grow the 'Imagine McGregor' program for several years are already in place, with several grant applications ready for 2022.

Aquatic Species at Risk (SAR)

Despite frequent thunderstorms and high water levels that hampered in-stream work, the SAR crew of four conducted eDNA sampling at 12 sites, seining surveys for fish at seven sites and timed searches for mussel SAR at eight sites in tributaries of the lower Thames River. A total of 27 fish and 17 mussel species were identified, including five mussel SAR (12 live individuals and 69 shells) at four sites along the Thames River. Individuals of two invasive fish species, Common Carp and Goldfish, were found at separate tributary sites, while Zebra Mussel shells were found at two Thames River locations. eDNA samples were submitted to Precision Biomonitoring for metabarcoding analysis.

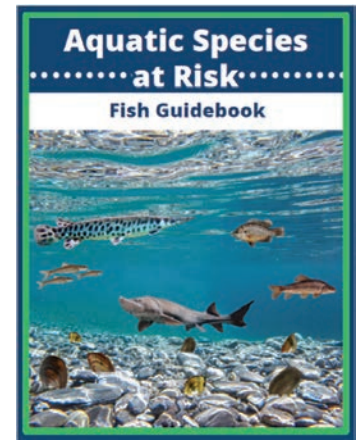
Data has been downloaded from paired data loggers installed at 10 lower Thames River sites in June 2021 to monitor light and temperature conditions for aquatic SAR.

Two days were spent removing 13 garbage bags of invasive Water Lettuce from McGregor Creek near St. Andrews and Maple Leaf Cemeteries in Chatham after it was located and identified by staff. While conducting this removal, staff located another invasive species of concern, the Chinese Mysterysnail. Both of these species can spread rapidly and are likely the result of an aquarium or water garden being emptied into the creek. Invasive Species Alert flyers have been developed to raise awareness of the damage these species can cause (clogging waterways and impacting fish communities). These flyers can be viewed at <https://www.lowerthames-conservation.on.ca/conservation-services/invasive-species/> for more information.

A SAR webpage (<https://www.lowerthames-conservation.on.ca/conservation-services/species-at-risk/>) was developed, including two downloadable guidebooks on



Chinese Mysterysnail



Fish and Mussel Guidebooks

aquatic SAR fish and mussels.

Habitat protection signs for fish and mussel SAR have been placed at Tecumseh Park, Thames Grove Conservation Area, the government dock at Jeannettes Creek, the boat launch at Lighthouse Cove and at Eelünaapéewi Lahkéewiit (Delaware at Moraviantown). Signs will also be placed at Big Bend, Dutton-Dunwich and Delaware Conservation Areas and Rondeau Provincial Park. Fish and mussel SAR interpretive signs are being designed for installation at Big Bend, Dutton-Dunwich, Delaware, Rondeau Bay marshes and McGeachy Pond Conservation Areas.

Flyers were distributed in priority subwatersheds to raise awareness of funding available to restore riparian buffers and wetlands and install livestock exclusion fencing, alternative watering sources and improved water crossings to prevent sediment and nutrients from reaching watercourses with aquatic SAR. Over the years, 33 fish and mussel SAR have been recorded within the LTVCA. Work was supported by *Fisheries and Oceans Canada's Canada Nature Fund for Aquatic Species at Risk*, *Canada Summer Jobs* and *Project Learning Tree Canada*.

Bioacoustic Monitoring of Bat and Bird Species at Risk

A Habitat Identification, Species Distribution and Management Planning for Avian and Bat Species at Risk in the Mosa Forest Conservation Area project was initiated with funding from *Environmental and Climate Change Canada's Habitat Stewardship Program*. Similar work will be undertaken in the Ashton Forest Conservation Area with funding from the *Chatham Kent Community Foundation* and *Ursuline Religious*. Information collected will inform future management plans for these sites.



Invasive Water Lettuce was found in McGregor Creek.

10,550
acres (4,270 ha)
of cover crops planted

100+
agricultural businesses
engaged

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 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 requires a 40% reduction in dissolved phosphorus and total spring loadings. If this reduction is achieved, 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 was released. The LTVCA continued to engage watershed stakeholders in 2021 through the delivery of phosphorus reduction initiatives, with the goal of reducing the Thames River's load contribution to Lake Erie.

These water samples were collected from a Jeannettes Creek Pump over a rainy December weekend.



McGregor & Jeannettes Creek Phosphorus Reduction Program

This year marked the final year of the McGregor and Jeannettes Creek Phosphorus Reduction Program. The main goal of the project was 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 subwatershed Best Management Practice (BMP) incentive program provided \$82,316 to 39 agricultural producers to implement agronomic BMPs in McGregor and Jeannettes Creek. This resulted in the planting of 2,276 acres (921 ha) of cover crops, grid or zone soil sampling of 5,205 acres (2,106 ha) to assess soil fertility and health, 3,374 acres (1,365 ha) of alternative phosphorus application practices, 1 buffer strip planting, and the completion of 1 erosion control project. Furthermore, the LTVCA sustained environmental monitoring operations in both subwatersheds. This data is collected to assess how effective the implemented BMPs are at reducing nutrient loads and improving water quality. The project is funded in part by the *Environment and Climate Change Canada Great Lakes Protection Initiative* and the *Canadian Agricultural Partnership*.

Lower Thames Valley Soil Health Program

The LTVCA successfully launched a watershed Soil Health Program for agricultural producers. The program is currently funded by the *Environment and Climate Change Canada Great Lakes Protection Initiative*. The Soil Health Program provides financial incentives to farm businesses to plant cover crops and to conduct grid or zone soil sampling. The primary objective of the project is to assist watershed farm businesses with implementing agricultural BMPs to improve soil health and water quality. The program provided \$115,295 to 63 agricultural producers to plant 8,274 acres (3,348 ha) of cover crops and to complete grid or zone soil sampling of 4,631 acres (1,874 ha) in the LTVCA watershed.

On-Farm Applied Research & Monitoring (ONFARM) Program

The LTVCA continued to conduct environmental and agricultural monitoring to support the objectives of the ONFARM program. During the 2021-2022 fiscal year, the program will provide \$201,535 to the LTVCA to support monitoring and agricultural research operations in the Jeannettes Creek study subwatershed. To learn more about the project, the following YouTube video was produced: <https://www.youtube.com/watch?v=TON9EreMDXM>. The LTVCA has been monitoring this 20km² area of Jeannettes Creek since 2016. The goal of the project is to support the agricultural sector to strengthen environmental stewardship, enhance water quality, and improve soil health. The project is administered by the *Ontario Soil & Crop Improvement Association* and is funded by the *Canadian Agricultural Partnership*.



This July drone shot is of the Jeannettes Creek ONFARM study subwatershed, near the Dauphin Pump Station. Credit: Neil Pothier.

ALUS - Alternate Land Use Services

ALUS Middlesex

Field season was challenging with shortages of native plants and trees and extreme weather events associated with climate change – extreme heat during spring and record-breaking rainfall during late summer. These issues highlight the need for restorative environmental and resource management. ALUS projects demonstrate how natural restoration projects can mitigate effects of changing climate, benefitting both the community and environment.

With strong interest from the agricultural community, ALUS Middlesex enrolled 133 new acres (54 ha) into the program, the highest acres per year the program has enrolled to date. Working with 18 new farmers, we strengthened relationships with local partners and established projects in all of the County's five watersheds. Partner funding was leveraged and we participated in projects totaling over \$160,000, helping to build critical natural restoration projects on the landscape.

133 New Acres Enrolled in ALUS Middlesex



With loosened summer restrictions, we were able to gather and engage with the community through different outreach events. A strong desire from the community in playing an active part in restoring the landscape resulted in two prairie-planting days. Volunteers from *Antler River Rally*, *Chippewas of the Thames First Nation*, *Heeman's Garden Centre*, *London Environmental Network*, and *LTVCA*, established over 2,000 prairie plants. Planted along the Thames River, these native grasses and wildflowers will diversify the area, provide food for pollinators, and help stabilize fragile shoreline.

The work that is being accomplished in Middlesex County is attracting new partnerships in academia. We hosted a co-op student from the *Sustainable Agriculture* program at *Fanshawe College*. Assisting with GIS and digitizing reports onto the cloud-based system, this student learned new skills. We also worked with *Western University's Community Science Class*. This class offered students the opportunity to embark on a semester-long project that analysed the natural features of Middlesex County and created an inventory of species at risk in the area.

ALUS Chatham-Kent

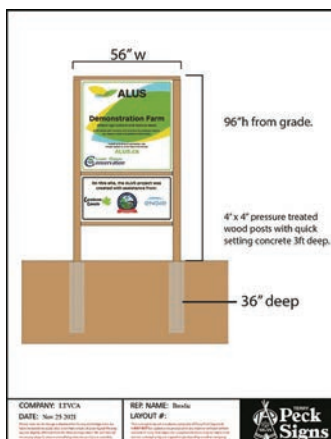
A total of 87.6 new acres (35.5 ha) was established in restoration projects. Grasslands made up a significant portion of that number, with 73.2 acres (30 ha). Tree habitat established was 11.9 acres (4.8 ha) and wetlands were 2.5 acres (1 ha).

A total of \$171,033 was received from our funders to establish projects and cover annual payments for landowners.

87.6 New Acres Enrolled in ALUS CK Restoration Projects



The highlight during the year was the Groenewegen project - a 45 acre (18 ha) prairie established along a tributary to Rondeau Bay. Funders for this project included Grasslands Ontario as well as World Wildlife Federation Canada & the Ridge Landfill Community Trust.



A demonstration sign will be installed for an ALUS prairie project acknowledging our funders. We hope this sign will help to bring awareness to the program and engage more farmers.

341

acres (138 ha)

of new ALUS restoration
projects in 3 counties

ALUS Elgin

ALUS planted its roots in Elgin County in 2012. Since then, the ALUS Elgin program has expanded its reach through the establishment of restoration projects throughout Elgin. This year, ALUS Elgin established 120 new acres (49 ha) of restoration projects across the County, bringing the grand total of acres enrolled into the program to 623 acres (252 ha). We collaborated with 28 farmers to improve the environment and leveraged \$146,500 in partner funding to support farmers in their sustainability efforts. Restoration projects include establishing tall grass prairies, planting native trees and shrubs, reducing field erosion and restoring critical wetland habitats, which close the gap between agriculture and the environment.



This image, taken during our annual site monitoring, shows the present state of an established wetland. The wetland was constructed in 2019 and has become a haven for local wildlife. (St. Thomas, ON)

Working with students and researchers from local institutions such as the *West Elgin Secondary School*, *Western University* and the *University of Guelph* has increased the scientific-bases of the nature-based solutions ALUS Elgin implements. The program's growth is also supported by financial grants from the *Ontario Trillium Foundation*, and the *Government of Canada*. With scientific results and collaborative efforts and investment from landowners, community members, and conservation partners, ALUS Elgin is expecting continued growth in the future.



Here an established cool season grass buffer strip is planted along a field edge as a transition zone between the forest and field. This grassland planting provides vital habitat to at-risk bird species (e.g. Bobolink) and, by intercepting field runoff, protects water quality of the creeks that run through the forest. (Fingal, ON)

Every project aims to address local environmental issues, which are prioritized by the farmers themselves and Elgin County as a whole. Issues like Lake Erie water quality, shoreline erosion, and biodiversity & habitat loss are what drive decision making. It was a year of many visible benefits on farmland – with a noticeable decrease in the sediment loading of waterways and an increase in wildlife sightings on multiple ALUS Elgin projects.

ALUS Elgin continues to strengthen its connection to the community by developing and maintaining partnerships, increasing its social media presence, and hosting events. Through this work, ALUS Elgin has reached over 8,000 community members during this year – thereby increasing awareness of the program while engaging farmers and the public in the work that is being done to restore and protect Elgin County.

'ALUS on the THAMES' Field Tour / Speaker Series



Before harvest season, ALUS Middlesex collaborated with ALUS Chatham Kent and ALUS Elgin to hold the 'ALUS on the Thames' event – a field tour and speaker series. Located at the Old River Farm, a century cattle farm located along the bank of the Thames and an ALUS Middlesex demonstration farm, 60 members from the community attended the event and had the opportunity to see multiple restoration projects. Speakers from OMAFRA, Chippwas of the Thames First Nation, and ALUS communities provided insight and shared knowledge on the exciting intersections of environmental conservation and agriculture. The event was made possible by Ontario Trillium Foundation and WWF Canada.

AWARDS & SPONSORSHIPS

84 volunteers
gave 360 hrs

'Volunteer Heroes'

These awards honour and recognize those in the community for their outstanding volunteer time and services towards conservation activities that educate about or improve our natural environment and ultimately the health and quality of life in the Lower Thames watershed and region.

We recognize those whose time, energy and resources help the LTVCA make the Lower Thames watershed a great place to live through their work in environmental education, special events or board and committee work. Certificates and customized pins were awarded for their years of service.



*Pat Lavin - 2020
- for his donation of land at
Big O Conservation Area

- providing residents and visitors
to the property with a greater
education of the importance of our
green space for years to come*



*Murray Hebblethwaite - 2020
- for his donation of funds towards
McGregor Creek

- actively seeking further support
for 'Imagine McGregor' project by
approaching AGRIS and Dowler Kam*



*London Canoe Club - 2020
- summer operations for 11 years.
at Sharon Creek CA

- encourage and inspire public
in conservation and respect for
environment

- demonstrated leadership in
paddle sports in London area

- added improvements like docks
and increased visitation*

'Environmental Awards'

This award honours and recognizes an individual or organization in the LTVCA watershed for their outstanding work towards environmental stewardship on their own land or in the community.

A customized wooden plaque was awarded for their efforts towards improving the environment through stewardship projects such as tree planting, reforestation, tallgrass prairie restoration, and wetland creation.

- *Outstanding Individual*



*Michael Smith - 2020
- initiatives in CK and with LTVCA
including new subdivision tree
plantings

- Thames Grove Tallgrass
maintenance

- Henry Smyth Park Tallgrass
Pollinator project

- community outreach for volunteer
recruitment*

Graduation Award LTVCA Sponsorship 2021



*- LTVCA awarded \$500 for
the Academic Proficiency -
Environmental Management
Diploma to Ethan Musclow
(University of Guelph - Ridgetown
Campus)

- the university was unable
to hold a spring in person
Graduation 2021 event due to the
COVID-19 pandemic*

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. Julie Welker was the Source Protection Coordinator.

Highlights

December 31st, 2020 marked five years since our Source Protection Plan first took effect. In that time, significant progress has been made to implement the policies contained in the plan, and address the activities that were identified as posing a risk to our municipal drinking water supplies. To date, 80% of the policies in the plan that address significant drinking water threats have been fully implemented, with the remaining 20% progressing well.

On May 1st, 2021 the Thames-Sydenham and Region submitted their fourth Annual Progress Report on the implementation progress of the Source Protection Plan. This report reflected implementation efforts made in 2020 and showed that 100% of the source protection plan policies addressing significant drinking water threats have been implemented, or, are progressing well. A total of 62 risk management plans have been established across the Region since the Plan took effect. These plans are in place to manage activities that pose a significant threat to municipal drinking water supplies.

Risk Management Officials and Inspectors throughout the Thames-Sydenham and Region reported that 2020 was a challenging year to try and engage people to negotiate risk management plans due to the COVID-19 Pandemic. Most RMO's and RMI's had to suspend in-person site visits when the pandemic was first declared in March 2020, with limited site visits that included extra safety precautions, resuming in the summer and fall of 2020. Despite the challenging year, six new Risk Management Plans were agreed to in 2020.



These signs are appearing across Ontario to raise awareness about the vulnerability of our municipal drinking water sources. Governments at the local and provincial level are placing signs along roadways where a pollution spill could have a negative impact on our drinking water sources.

The road signs also act as reminders to notify water treatment plant operators and the Spills Action Centre, available 24/7 at 1-(866)-663-8477, of spills and pollution.

Conservation Areas

The LTVCA has protected 1,713.584 acres (703.58 ha) of environmentally sensitive lands, wetlands, culturally unique features and significant biological, ecological and scenic qualities through its conservation areas program. Out of the 31 LTVCA owned lands, 1,145.704 acres (463.65 ha) have been preserved at 18 conservation areas for public use in the watershed. The remaining are set aside as nature reserves.

We promote our objectives through recreational and educational opportunities in the conservation areas, providing places to actively experience the natural world and increase environmental awareness through interpretive signage and special events.

Randall Van Wagner – Manager, Conservation Lands and Services along with Adam Gibb – Western District Supervisor; and Vance Stark - Eastern District Supervisor developed and maintained these sites with the assistance of seasonal and short-term contract lead hands and rangers. Our Safety Committee toured the 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 areas were enhanced by annual donations of funds and volunteer time from local individuals, companies, conservation clubs and organizations.

Some New Upgrades and Developments



A new accessible boardwalk replaced a 34 year old walkway on the Millstream Trail at Longwoods Road Conservation Area.

Our conservation areas receive regular maintenance and new developments to provide accessible facilities that are safe, durable and attractive. Maintenance crews worked safely to construct new trails and campsites, repaired existing structures and created some new amenities too!

Surplus funds generated went back in to upgrades to roads, a new parking area for Sharon Creek Conservation Area, new fuel tanks and road sander for Longwoods Road Conservation Area, and a BBQ for E. M. Warwick Conservation Area.

With its close proximity to the City of London, Sharon Creek Conservation Area upheld the demand with visitors hiking the trails, exploring the reservoir with kayaks, paddleboards and canoes. The *London Canoe Club* members continued to use this property as a home base over the summer months.

New interpretive signage was designed and installed at Two Creeks, Longwoods Road, Sharon Creek and Rowsom Conservation Areas.

Many nature trails were upgraded at Longwoods Road Conservation Area.

C.M. Wilson Conservation Area had another busy camping season with over 65 seasonal campers.

1,146

acres (464 ha)

preserved in 18 public
conservation areas

26

acre (11 ha)

forest donation
'Ashton Forest'

Staff are working on improving the Mosa Forest/Skunks Misery property. A new boardwalk was installed to lessen the negative impacts of off road vehicles and to improve the trail system. Property boundary signs were installed to mitigate hunting where our property abuts the Middlesex County forest.

Ward and Ashton Conservation Areas had Managed Forest Tax Incentive plans developed and approved for tax reductions.

The previous year's donation of Big O land gave staff the opportunity to naturally restore adjacent land. A tall grass prairie was drill seeded by *Ontario Native Scape*, along with the planting of 40 bur oak. A trail is planned to allow visitors added access and birding opportunities at this unique property in the Municipality of Lakeshore.



Matt Laprise and Adam Gibb installed new signage at Rowsom Conservation Area.



A new Sharon Creek Conservation Area sign was installed by Vance Stark.

Land Donation

The *Ashton* family generously donated a 26 acre (10.5 ha) forest in east Chatham-Kent. The Managed Forest Tax plan inventory found a diverse mix of species including Sassafras, Shagbark Hickory, Sugar Maple, Red, Bur and Black Oak, as well as species at risk Butternut and a unique Buttonbush Swamp. We are considering opening this property up to the public by creating a new trail through the forest.



Sassafras is one of many Carolinian tree species growing at Ashton Forest Conservation Area.

Prescribing Nature...Outdoors is Good For You!

The LTVCA's conservation areas provided plenty of space and facilities for safe, social distancing this past year. Visitors were grateful to have water and trees to surround them, providing much needed time to reflect and recharge from the world's pandemic. Picnicking, fishing, paddling, birding, hiking, camping, and experiencing an outdoor concert or drive-through event were activities enjoyed by thousands. We were pleased to do our part and be able to continue our operations to the best of our abilities during this time for the pleasure of our watershed residents and visitors.

Conservation Area Events

Conservation areas are full of adventure and just waiting to be explored! Public events encourage us to 'Step into Nature'. However, with the ongoing COVID-19 pandemic, some events were cancelled. Much to the delight of our visitors, we were able to provide several events on our properties that adhered to local health unit and government safety protocols. Some of these experiences have also been noted throughout this Annual Report in the education section.

- Red Barn Tour at Walter Devereux Conservation Area
- Nature Reserve tour of Ward Conservation Area
- Deep Southwest concerts at C.M. Wilson Conservation Area
- Red Barn Brewery tasting for seasonal campers at C. M. Wilson Conservation Area
- Skakel Conservation Area McKinlay Memorial Forest ceremonial tree planting
- Ashton Forest Conservation Area Earth Day event
- Wednesday Wanders at Sharon Creek Conservation Area'
- Turtle Talk and Critter Catch at Big Bend and C.M. Wilson Conservation Areas
- Paths and Palisades at Longwoods Road Conservation Area

Perhaps the largest event ever held at Longwoods Road Conservation Area took place November 19, 2021 - January 2, 2022. LTVCA played host to 'Magic of Lights'. Well over 35,000 vehicles drove through the conservation area to view the evening Magic of Lights display. Being one of four Magic of Lights events in Canada - our venue was number one!



Children and the young at heart enjoyed the Magic of Lights display at Longwoods Road Conservation Area.



Deep Southwest performed at C.M. Wilson Conservation Area.

67,788

recorded day use
& camping at 5 areas

Annual Conservation Area Guidebook

Our second Conservation Area Guidebook generated \$7,000 in sponsorships, including such businesses as *Red Barn Brewery*, real estate agents, and other like-minded businesses. Funds generated from these advertisements offset the costs of their printing. Over 9,000 guidebooks were distributed during the year, promoting our programs and conservation areas.



Conservation Area Attendance

Our conservation areas continue to be popular retreats as citizens turn to the outdoors for recreation, nature appreciation and the health benefits of being outside. Our decision was to keep our conservation areas open safely, for day use and camping during the pandemic. Campgrounds were busy as area residents stayed close to home and looked to our conservation areas as a healthy option. Day use attendance was also high, including visitors hiking, picnicking, paddling, bird watching, dog walking and simply stretching legs to get some fresh air.

It was another record year for the sale of LTVCA parking passes. Over 472 sold, equating to \$26,430 of revenue generated for our conservation areas.

Recorded overall attendance at five of our 18 public conservation areas is as follows:

Longwoods Road - 10,480 (day use) plus 35,000 vehicles attending Magic of Lights event
C.M. Wilson - 23,295 (includes 2,868 campers)
Big Bend - 3,114 (campers)
Sharon Creek - 1,916 (day use)
E.M. Warwick - 983 (campers)

Employment Programs

The *Oneida of the Thames First Nation* workplace program was a great success with three people assisting our Eastern District Supervisor for eight months. Projects included the planting of 150 trees, creation of three new river campsites and development of a new trail connecting the boat launch area to the upper campground at Big Bend Conservation Area. The Oneida workers were instrumental with the tear down and rebuild of the 700 foot (213 m), Millstream Trail boardwalk at Longwoods Road Conservation Area, along with many other projects throughout the Eastern District watershed.

Ontario Job Creation Program has been challenging, however we have a goal of increasing trails and upgrading our conservation areas with their assistance in the future.



Conservation Lands staff planted tallgrass prairie plugs at E.M. Warwick Conservation Area.

PARTNERING WITH COMMUNITY

60^{vs}

Communications, Outreach & Education

Communication, outreach and education efforts enhance awareness and an understanding of the goals and programs of the LTVCA for watershed audiences, enabling them to support and enjoy our facilities and services. Through accurate, consistent and clear messaging, staff reached out to as many people as possible. This year, Bonnie Carey – Manager, Communications, Outreach and Education was assisted by Agnes Vriends – Clerk with communications and education projects. Education staff included Jerry DeZwart – Community Conservation Educator, and Karen Mattila – Ska-Nah-Doh Village / Museum Curator who was succeeded by Alison Klages.

Programs informed the 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 and visitors, media, users of LTVCA facilities and services, partners including the LTVCA Foundation and potential partners, were additional vital audiences. Through regular

updates on social media and the production of literature, our goals and objectives were broadcast regularly across the watershed. As we have adhered to COVID-19 safety guidelines, education programs, public events and tours were hosted when possible, and staff safely initiated and assisted with local environmental projects. Displays were designed, arranged and created for local fairs and conferences when feasible. Meeting facilitation, fund-raising with the Lower Thames Valley Conservation Foundation, supervising employment programs and contributing to conservation committees and working groups, all supported the LTVCA's vision and mission. Fostering partnerships and collaboration with organizations, volunteers and other stakeholders were priority, and helped to further the conservation of our watershed resources. The number of volunteers remained low this year due to the pandemic, however we appreciated the 84 volunteers who did dedicate 360 hours of time for activities at events, doing research, tree planting, cleanup of our waterways and fund raising.

Communications & Outreach Highlights

The year began with the creation of the LTVCA's annual report and its presentation to the Board of Directors at the Annual General Meeting, along with an Awards presentation in February. COVID-19 pandemic messaging continued, including regular website updates as new safety protocols were set in place for the public use of our conservation areas and campgrounds. Daily department briefs were posted with increased views to our Facebook page (2,865 followers), Twitter (1,219 followers) and Instagram (912 followers) by year-end. In addition, there were posts and media releases shared on our social media and website from other organizations associated with the LTVCA. Mid-year saw the launch of our new website. Over 24 media releases were issued sharing information about campgrounds, stewardship programs, parking passes, species at risk and invasive species, boardwalk openings, soil health initiatives, our 60th anniversary, a new memorial forest and online webinars. Six reports for Directors' meetings were prepared, and LTVCA publications were reviewed and produced. Several public events were conducted at Sharon Creek, Big Bend, C.M. Wilson and Longwoods Road Conservation Areas over the summer months. Assistance with other department events and activities was ongoing throughout the year, including development of a communications plan for the 'Imagine McGregor' project, and the design of some conservation area interpretive signage.



400+

social media posts
on 3 platforms

24

media releases

228

engaged in
field trip programs

Education Programs

Education programs provide on-site opportunities and in-class presentations to school groups and community members. Education staff help facilitate an understanding and appreciation for our natural resources and local heritage, thereby complimenting the efforts of stewardship partners, service clubs, schools, community groups, volunteers, and members of the public.

With the continuation of the pandemic, the Education team continued to adapt in response to school and community group regulations and needs. Projects were also supported by short-term contract staff through employment programs.

Field Trips to Longwoods Road & Ska-Nah-Doht

As many school boards implemented safety plans that restricted field trips throughout the year, the Education team focused efforts on reaching private schools, homeschoolers, and community groups.

In the fall, public and separate school groups began to return for programming as some local school boards allowed outdoor field trips. The trails, woodlots, meadows, pavilion, Ska-Nah-Doht Village, and Longwoods Road Conservation Area grounds provided classes the opportunity to engage in a safe, outdoor learning experience. Teachers remained positive about the impact of our programs on the learning taking place in their classroom, and their ability to instill a small sense of normalcy for their students.

Year end numbers were 5 half day and 6 full day classes that took part in field trips to Longwoods Road. This equates to 76 half day students and 128 full day students. Twenty-four teachers and adult chaperones joined the students.

Public Events

With safety front-of-mind and capacity restrictions in place, our event calendar adapted to a programming model. Summer saw the Education team encouraging visitors to explore Longwoods Road Conservation Area in family groups Thursday evenings during 'Paths and Palisades'.

To reach more communities in the watershed and bring educational opportunities to more of our spaces, the Education team took programming on the road during the summer. The team traveled to three other conservation areas: Big Bend in Southwest Middlesex, Sharon Creek in Middlesex Centre, and C.M. Wilson in Chatham-Kent. We hosted a guided walk and a critter catch, and partnered with our friends the Everetts and Snapper for 'Turtle Talks'. In total, the team reached approximately 70 people.



Matthews Hall Independent School
@MHLondonOntario

Grade 3 took their learning outside to the Ska-Nah-Doht Village and Museum last week @LTVCA Another successful field trip!



2:34 PM · Oct 12, 2021 · Twitter Web App

Grade 3 students from Matthews Hall Independent School enjoyed their day exploring at Ska-Nah-Doht Village.

We also collaborated with the Middlesex Centre Library system to provide one of their story times. The Curator brought one version of the Sky Woman story (written for us by a former staff member) to life during an online puppet show enjoyed by many youth.

Chuck, Hank, and mom joined Jerry DeZwart for a 'Wednesday Wander' at Sharon Creek Conservation Area.



Some New and Returning Education Initiatives!

LTVCA connected with watershed schools through the 'Western Lake Erie Student Summit', funded by a *Ministry of the Environment, Conservation and Parks* grant. The virtual summit, a partnership with Upper Thames River, St. Clair Region, Catfish Creek, Kettle Creek, and Essex Region Conservation Authorities, provided 250 high school students with an awareness of the current challenges facing Lake Erie. The summit encouraged participants to utilize their research and problem-solving skills to address these challenges.

The Community Educator collaborated with the Essex Region and St. Clair Region Conservation Authorities to develop the 'Great Lakes Virtual Field Trip: Huron Erie Corridor'. The 'Huron-Erie Corridor Virtual Field Trip' aims to increase awareness of the role the Great Lakes have in our everyday lives. The Virtual Field Trip introduces students to the Huron-Erie Corridor portion of the Great Lakes shoreline. The online learning tool, includes an interactive 'clickable' Google Slide presentation filled with local content. The program aims to share an Indigenous view of water and a western science observation of the 'Great Problems' faced by the Great Lakes.

The Education team received \$4,782 from Ontario's *Digital Capacity Grant* to support the 'Education Video Project'. This funding allowed us to purchase photographic equipment and digital editing packages to produce higher quality video productions for educational purposes. Ska-Nah-Doht Village and Museum, making use of this support and the expertise of the Community Conservation Educator, participated in the 'London Regional Heritage Fair'. We offered a 'Fireside Chat' video to classes. The video was an introduction to the importance of Wampum Belts and Storytelling. As internet service continues to be a limiting factor at the Longwoods Road Conservation Area Resource Centre and Museum, alternatives to live virtual programming are being considered to supplement the return of on-site field trips and community programs. The equipment funded through the *Digital Capacity Grant* will enable us to continue to refine our offerings and stay competitive with our peers, as teachers continue to look for varied learning opportunities.

The 'River and Creek Safety Program' was offered through an online video in 2021. This video has been viewed 108 times over its lifetime.

Unfortunately, the 'Chatham-Kent & Lambton Children's Water Festival' could not be held again in 2021, but we are optimistic for its return in 2022!



Two hundred and fifty high school students increased their awareness of the current challenges facing Lake Erie during a virtual student summit in June.



Some of our happy 'Camp-in-a-Bag' participants showed off their crafts!

Summer's 'Camp-in-a-Bag' returned thanks to the support of *Canada Summer Jobs*. The program was facilitated by a Conservation Area Interpreter, who created fun activities and crafts on conservation topics and local First Nations heritage and culture. As more camp options were available to families this summer compared to 2020, sales were lower. However, the response was overwhelmingly positive from those that participated!



Ska-Nah-Doht Village & Museum

OUR MISSION

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.

OUR VISION

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 VALUES

Innovation: We are leaders in heritage interpretation through research and experimentation.

Inclusivity: Our museum is for the whole community; families, educators, researchers, visitors both local and through tourism.

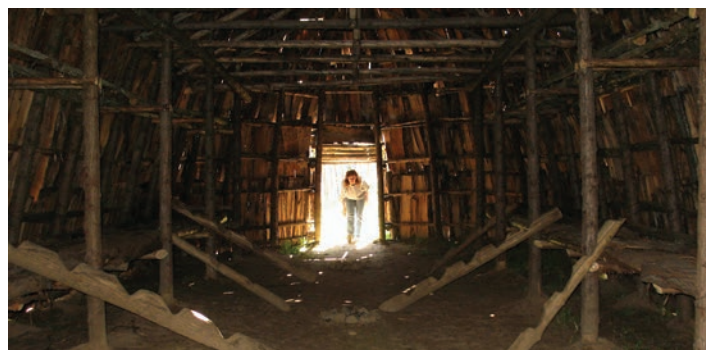
Stewardship: We are committed to preserving important cultural resources.

Excellence: We strive to meet the highest standards of the cultural heritage profession.

Ska-Nah-Doht Village and Museum Curator of 27 years, Karen Mattila, retired in May of 2021. Alison Klages joined the team as the new Curator in June. The Curators managed the \$98,228 expense budget and \$55,492 revenue targets of Ska-Nah-Doht Village and Museum.

We graciously acknowledge the following financial supports: \$22,992 from the *Ministry of Culture* through the *Community Museum Operating Grant*; \$19,453 from the *Department of Canadian Heritage* through the *Reopening Fund for Heritage Organizations* under the *Museum Assistance Program*; and \$10,000 from *Southwestern Ontario Tourism* through the *Tourism Adaptation Fund*. Short-term contract staff also supported programs this year.

The museum's online presence grew to 2,250 page likes and 2,340 followers on Facebook. An Instagram account was started on July 12, 2021 and has grown to 200 followers.



Thank you to Karen Mattila for her many years of service to the Lower Thames Valley Conservation Authority.

Artifact Case Project

This project initiated the previous year, neared completion with further support from a *Canada Summer Jobs* Community Conservation Educator position in the fall. These cases were donated to local schools (including Antler River School and Standing Stone School) as part of the museum's work towards Truth & Reconciliation. Artifacts were mounted, educator documents were prepared and local schools were contacted to organize the donation of the cases. Educators were thrilled to receive the cases and look forward to their students being able to make use of these hands-on resources when restrictions allow.

2 film
crews enjoyed
Ska-Nah-Doht
for production site

60 yrs

Action! Filming On-Site

Two film crews joined us at Longwoods Road Conservation Area. *Learn with Ranger Em* is a local Rogers TV production available through cable and online. *Ranger Em* toured Ska-Nah-Doht with Curator Alison Klages. The episode aired on September 30, National Day of Truth and Reconciliation, also known as Orange Shirt Day.

On November 2, many tremendously talented performers had a long day of filming on-site of DJ Shub's *War Club* music special, premiering on *CBC Gem* on January 21, 2022. This special features music, dance, and cinematic pieces. The project is part of CBC's commitment to support Indigenous artists. It is designed to speak to what has happened and continues to happen to Indigenous youth and their navigation of modern society.



The nighttime set-up for filming of the special was a unique experience!



Ranger Em and Alison Klages - Curator, chatted in the Village.

Pop-Up Exhibit Program

With the support of *Visit Middlesex* and *Lower Thames Valley Conservation Foundation*, the Curator developed three pop-up exhibits, which will travel around the watershed to local businesses, organizations, and community spaces. These exhibits centre on the building of relationships with nature, understanding what a watershed is and what conservation authorities do, the history of Ska-Nah-Doht, and how longhouses are built in the 21st century.



Exhibits will help amplify our presence across our communities.

Ska-Nah-Doht Museum Reopens for Public Hours

Following a reorganization of exhibits, repainting of the entrance, and the installation of Personal Protective Equipment (PPE), Ska-Nah-Doht Museum began welcoming visitors back through our doors on October 19, (not including Education Program visitors). Response from visitors was wholly positive, and we have heard from many others expressing their excitement that they will be able to visit the indoor portion of Ska-Nah-Doht Village and Museum again while enjoying Longwoods Road Conservation Area.



Museum exhibits were updated and relocated to facilitate safe visits.

Ska-Nah-Doht Village and Museum Curator Retires

Karen Mattila retired in the spring of 2021, after a 27-year career as Curator. Karen's 'special mentions' ...

Is an archaeologist extraordinaire!
Broadened our horizons with film and gift shop opportunities.

Fund-raised for the Village.

Engaged local community at unique special events.
Staged many Ska-Nah-Doht anniversary celebrations.

Ensured the Village stayed standing.

Appreciated our many volunteers.

Received provincial tourist attractions award.

Offered an amazing education program.

Mentored youth.

Shared knowledge.

Used her creative flair.

Loved to entertain!

Optimistic through COVID-19!

We wish you all the best Karen! Thank you for all the amazing work you have done over the years. Enjoy your retirement & hope you visit lots!



LOWER THAMES VALLEY CONSERVATION FOUNDATION

Highlights of the Year



\$103,164

provided to LTVCA for
conservation projects

The Lower Thames Valley Conservation Foundation (LTVCF) is a not-for-profit, federally registered charity, governed by a volunteer Board of six Directors. Tax receipts are issued for all donations. The Executive – President Dan McKillop, Vice-president Ken Brooks and Secretary-Treasurer Don Pearson are recognized for their dedication and support in 2021.

The LTVCF 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 approximately \$1M for natural and cultural heritage conservation. Over \$14,500 dollars were raised this year for watershed conservation projects through its memorial forest program, and private donations.

The Foundation assists volunteer organizations with their fund raising efforts and manages the Sharon Creek Trust Fund, initiated by the original Friends of Sharon Creek group. LTVCF supports projects like the Carey Carolinian Arboretum and Trail and the Lower Thames Valley Conservation Foundation Bursary. Since the beginning of the Foundation's Memorial Forest Program, 9,331 trees have been planted in partnership with the Conservation Authority, local funeral homes and horticultural societies across the lower Thames region – funded by private and funeral home donations. The Foundation submits funding applications to corporations, government agencies, service clubs and other philanthropic organizations to undertake projects and programs, which assist the Conservation Authority and watershed region.

With the continuance of the COVID-19 pandemic, Directors' meetings were held virtually. The four annual memorial forest tree dedication services were cancelled, however a virtual service was pre-taped by the McKinlay Funeral Homes Ltd. at the new Skakel McKinlay Woodlands Memorial Forest located southeast of Thamesville. A small onsite groundbreaking and tree planting followed for its official recognition as a memorial forest. Work finally commenced on the Longwoods Road Conservation Area boardwalk replacement project, funded in 2019 by a \$94,000 Ontario Trillium Foundation grant awarded to the Foundation. Upon completion, an official recognition ceremony was held at the site in November with local dignitaries and partners present. The Foundation continued to work towards undertaking the Longwoods Road Resource Centre redevelopment fund-raising campaign.

The Foundation recognizes the ongoing support of R. Carey to the Carey Carolinian Arboretum and Trail with his \$2,000 donation in the year. As well, Nathan McKinlay of the McKinlay Funeral Homes Ltd., is thanked for the continued funding towards and promotion of the memorial forest program for well over 20 years.

In 2021, the Foundation helped fund several Lower Thames Valley Conservation Authority initiatives:

- 331 memorial trees \$4,716 (cost of tree, planting and maintenance)
- Carey Carolinian Arboretum and Trail \$4,143 (maintenance)
- Longwoods boardwalk replacement \$94,000
- Pop-up Exhibits \$305



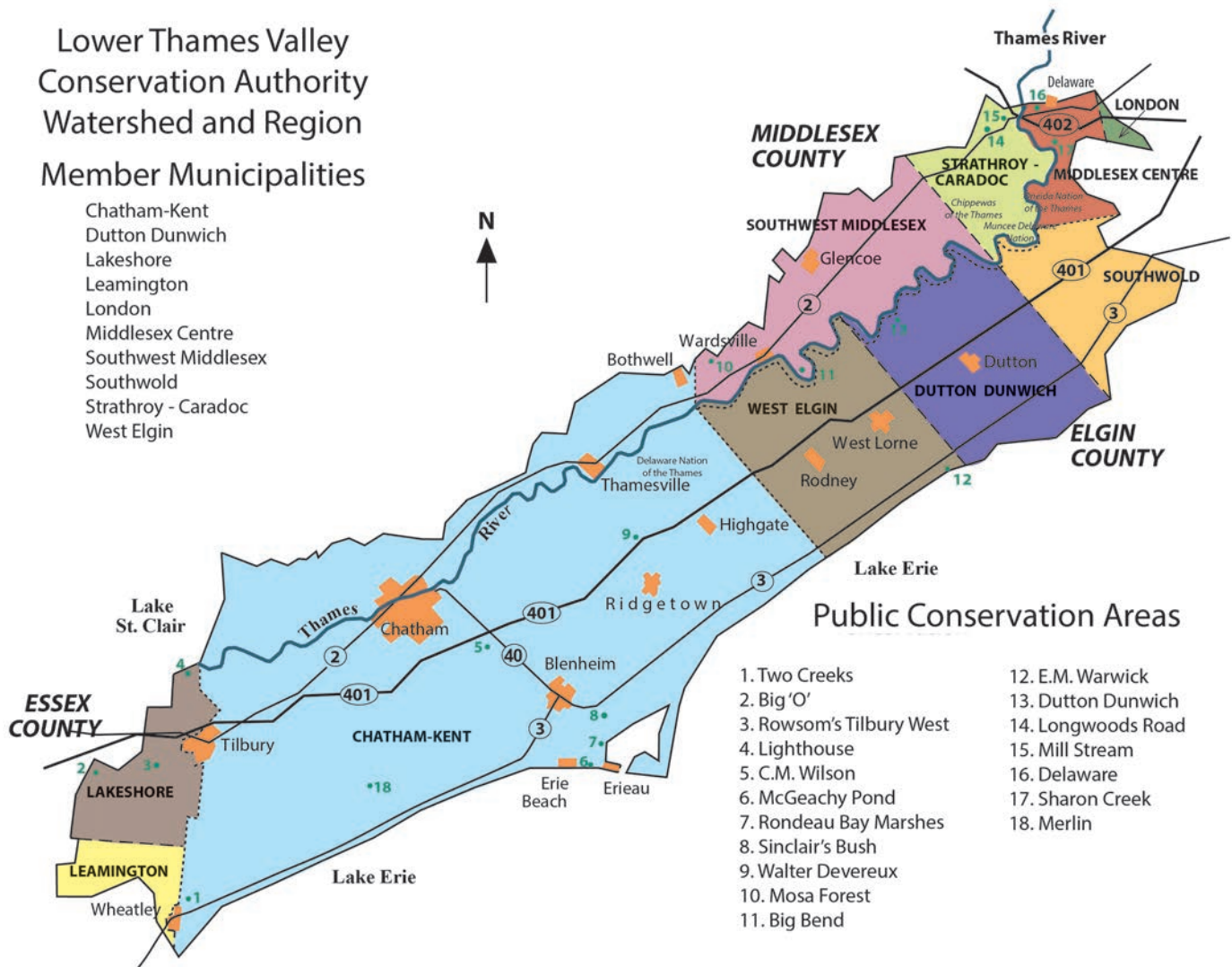
On August 24, a ceremonial tree planting took place at the new Skakel McKinlay Woodlands Memorial Forest.



The official ceremony recognizing the Ontario Trillium grant and partners of the new Longwoods boardwalk project was held on November 19.

Lower Thames Valley Conservation Authority Watershed and Region Member Municipalities

Chatham-Kent
Dutton Dunwich
Lakeshore
Leamington
London
Middlesex Centre
Southwest Middlesex
Southwold
Strathroy - Caradoc
West Elgin



Revised Jan. 2017

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 kilometres (1,264 square miles) and is home to nearly 100,000 people.



LOWER THAMES VALLEY CONSERVATION AUTHORITY



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

www.ltvca.ca

The Thames River celebrated its 21st year as a
Canadian Heritage River.

60
yrs