

A nighttime photograph of a dam and pumping station. The scene is illuminated by several tall, slender light poles that cast long, bright beams of light across the dark sky. In the foreground, a river flows through a wooded area, its surface reflecting the ambient light. A concrete dam structure with a metal railing runs across the middle ground. In the background, a building with a lit sign is visible. The overall atmosphere is dark and industrial.

# Lower Thames Valley Conservation Authority

“for a balanced & healthy watershed”

## 2018 Highlights

*Our values, programs, trends & challenges*

*February 24, 2018 6:27 pm*

*6th Street Backwater Dam & Pumping Station - Chatham*

# ABOUT US

## Our Vision

The LTVCA...for  
a balanced &  
healthy  
watershed

## Our Mission

Leading by example  
in environmental  
protection in  
partnership with  
the community

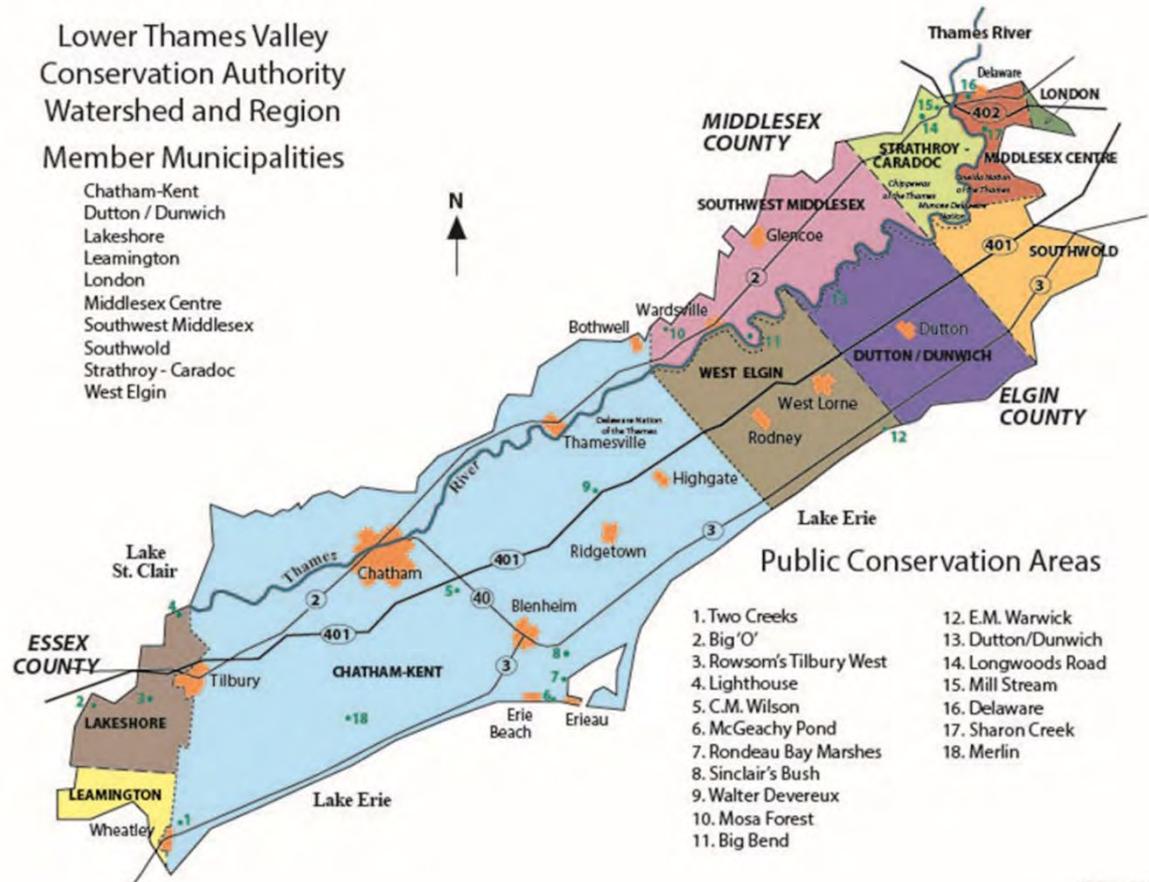
## Our Core Values

Respect, integrity,  
commitment, objectivity, &  
collaboration



# OUR AREA OF JURISDICTION

- area covers approximately 3,274 square kilometers (1,264 square miles) & is home to over 120,000 people.



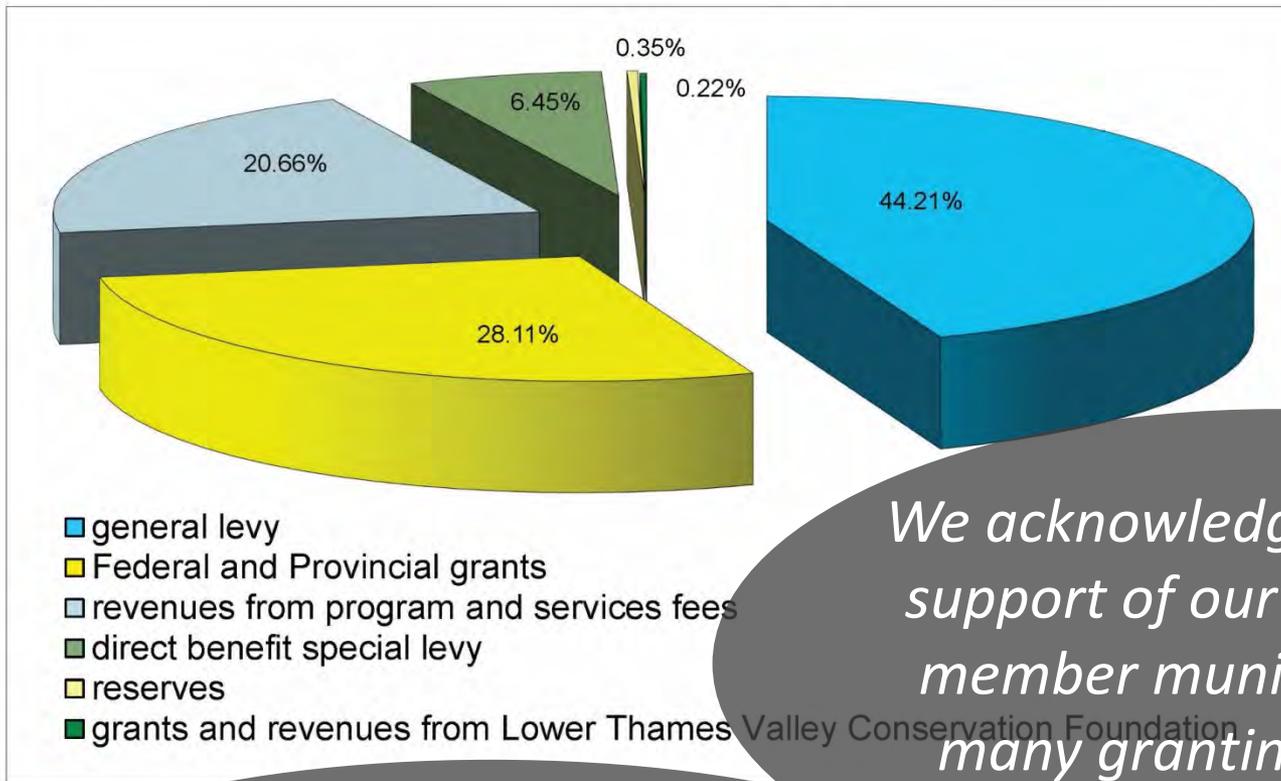
# OUR DIRECTORS & MUNICIPALITIES

- **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



*Linda McKinlay– Chair*

# \$ BUDGET \$



*We acknowledge the financial support of our 10 watershed member municipalities, our many granting partners & dedicated volunteers!*

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

# LTVCA STAFF



*Mark Peacock –  
CAO / Secretary-Treasurer*

Staff  
24 full-time  
20 seasonal / part-time



# Happy Retirement Rose & Dan!

Rose Nicholas

Ska-Nah-Doht Village  
Education Technician  
1987-2018



Dan Brinkman

Eastern District Land  
Stewardship Technician  
2016-2018

# PROGRAMS & SERVICES

- Risk Management Plan
- Strategic Themes
  - Stakeholder engagement
  - Prioritized programs to be sustainable & connect community with natural environment
  - Innovation & Collaboration
  - Corporate Sustainability
  - Strong Team Culture
- Objectives for Program Deliverables & Initiatives
  - Customer/Beneficiaries
  - Financial
  - Internal Processes
  - Capacity Building

# PRIORITIES

- Protecting life & property
- Protecting drinking water sources
- Enhancing watershed health
- Stepping into nature
- Partnering with the community



# PROTECTING LIFE & PROPERTY

## Water Management

Conservation Authorities are on the front lines of the **Provincial Flood Forecasting & Warning Program**, & undertake floodplain mapping; modeling; monitor streamflow, rainfall & snowpacks; issue warnings; acquire floodplain lands & flood vulnerable structures; & operate dams, dikes, channels & erosion control structures.

*February 23, 2018  
12:23 pm  
Thames River in  
Chatham*



# PROTECTING LIFE & PROPERTY

## Water Management

- **Flood Forecasting & Warning**

- Most significant river flooding in several decades Feb.19-27
- Thamesville voluntarily evacuated
- Chatham had highest water levels since 1985 & highest levels without an ice jam since 1947
- Indian-McGregor Creek Diversion Channel & 6<sup>th</sup> St. Backwater Dam and Pumping Station protected south Chatham many times during year
- high lake levels on Lake Erie led to significant amounts of erosion all along the shoreline & frequent flooding



*Thames River flood in Thamesville  
February 24th*



*Lake Erie Flooding April 16*

65

flood bulletins  
issued

# PROTECTING LIFE & PROPERTY

## Water Management

- **Low Water Response Program**

- Provincial program that monitors watershed conditions to determine if the area is in a drought situation
- Adequate rainfall & river flows throughout the year left watershed in normal conditions

## Low Water Status



Normal Conditions

# PROTECTING LIFE & PROPERTY

## Water Management

- **Water quality monitoring sites**

- monitoring conducted at nine groundwater wells & 11 stream (surface) water locations for water quality indicators - dissolved oxygen, pH, conductivity, temperature & nutrients with analyses such as e-coli, metals & pesticides at select locations
- A Canada – Ontario Agreement grant added 11 more surface water locations & winter sampling
- results used towards grades reported in the Watershed Report Card

31

Provincial water  
quality monitoring  
sites operated



*Deary Upstream Water Quality Monitoring Station - phosphorus reduction program on McGregor & Jeannettes Creek*

# PROTECTING LIFE & PROPERTY

## Water Management

- **Benthic Monitoring**

- sampling for benthic macroinvertebrates (*insects, worms & crustaceans that live at the bottom of the stream*) continued at 16 locations with a partnership with the Biology Department at the University of Windsor
- sampling helps us to better understand where to target stewardship projects in areas of greatest need



# PROTECTING LIFE & PROPERTY

## Land Use Planning & Regulations

To maintain the vitality of our watersheds & protect peoples' lives and property from flooding & erosion, Conservation Authorities administer the **Conservation Authorities Act & its regulations.**



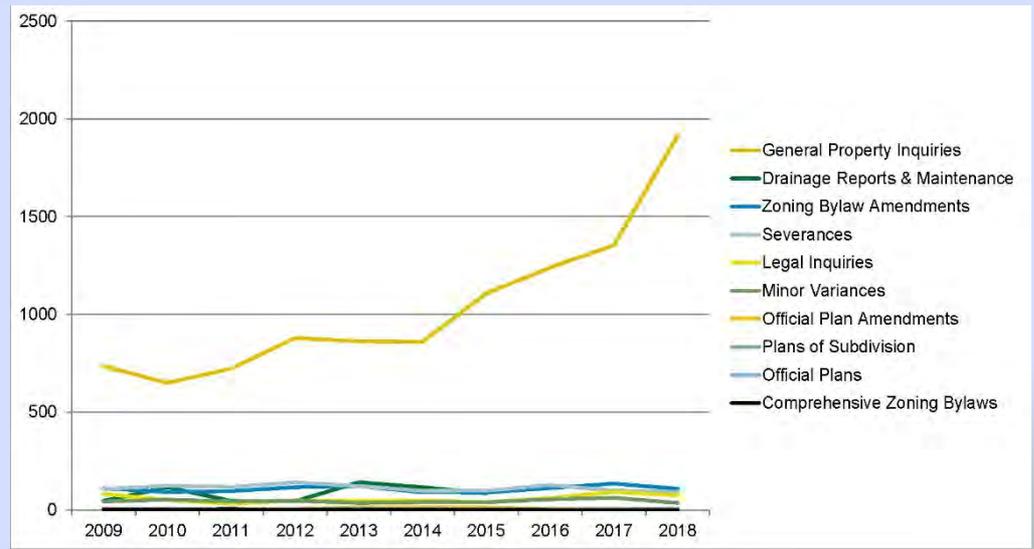
*April 16,  
wind event along  
Lake Erie*

# PROTECTING LIFE & PROPERTY

## Land Use Planning & Regulations

- **Municipal Plan Review & the Development, Interference with Wetlands & Alteration to Shorelines & Water Courses – Ontario Regulation 162/06**
  - Staff reviewed 287 applications under this regulation
  - Regulate development in or beside river & stream valleys, lake shores, hazard lands & wetlands to maintain & protect peoples' lives & property from flooding & erosion

**2,520**  
regulatory &  
municipal plan  
review services



Starting in 2016 'Drainage Reports and Maintenance' stats included in Regulation Permits Report

# PROTECTING LIFE & PROPERTY

## Land Use Planning & Regulations

- **Chatham-Kent Lake Erie Shoreline Study**
  - LTVCA, Chatham-Kent, the Province, Gov't of Canada, International Joint Commission, Zuzek Inc. obtained a Natural Resources Canada grant for a comprehensive Lake Erie shoreline study in CK
  - To reduce coastal risks, increase the resilience of the shoreline and beaches & wetlands
  - Will produce updated 100 year erosion rates, estimates of changes in ice cover, & storm frequency & severity information



# PROTECTING LIFE & PROPERTY

## Water Management

- **Thames River Clearwater Revival**

- multi-agency partnership to improve the Thames
- drafting of a Shared Waters Approach intended to update the 1975 Water Management Plan
- supporting the Antler River Guardians from the 4 Directions: First Nation Youth Stewardship Program



The purpose of the provincial Clean Water Act (CWA) 2006 is to protect existing & future sources of drinking water. Protecting water at the source – municipal wells & water intakes – is the first barrier in a multi-barrier approach to providing safe, clean supply of water.



## Highlights of the Year

- First annual Progress Report on the progress of the Thames-Sydenham & Region Source Protection Plan submitted for 2015 – 2017
- Plan is progressing well with 845 significant drinking water threat policies implemented
- Over half of the drinking water threats have been addressed through policy implementation or they no longer exist
- 41 risk management plans regulate threats in the Region
- 7 committee members were selected to replace expiring positions to 2021
- [www.sourcewaterprotection.on.ca](http://www.sourcewaterprotection.on.ca)

# ENHANCING WATERSHED HEALTH

## Tree Planting, Restoration, Stewardship

The responsible care of our natural resources on a watershed basis is essential to balancing human & economic needs against the needs of our natural environment. Conservation Authorities have a long history working with landowners in the planning & delivery of watershed stewardship initiatives.

Staff provide opportunities for local projects, which protect & restore species & habitats, encourage a sense of ownership of environmental rehabilitation efforts, & protect our water resources.



**2 bus tours**  
**7 farm events**  
**Highlighted stewardship efforts**

# ENHANCING WATERSHED HEALTH

## Tree Planting, Restoration, Stewardship

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 & Oceans Canada (DFO)  
Forest Gene Conservation Association  
Forests Ontario

**30+**  
**stewardship partners**

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 & District Leaders  
TD Bank  
Thames River Phosphorus Reduction Collaborative  
Union Gas  
Wildlife Management  
Neighbouring Conservation Authorities

**179** landowners  
**\$1.3 M**  
**benefited from**  
**in stewardship grants**

# ENHANCING WATERSHED HEALTH

## Tree Planting, Restoration, Stewardship



**83** hectares  
naturally restored  
across the watershed

# ENHANCING WATERSHED HEALTH

## Tree Planting, Restoration, Stewardship



**20** hectares  
tallgrass prairie  
planted



# ENHANCING WATERSHED HEALTH

## Tree Planting, Restoration, Stewardship

- Forests Ontario - \$66,000 for 26 tree planting projects
- Ontario Power Generation - \$24,651 for 12 projects

**92,189**  
trees planted

**49**  
hectares reforested



# ENHANCING WATERSHED HEALTH

## Tree Planting, Restoration, Stewardship

- **Wetlands**
  - \$88,091 Ducks Unlimited Canada
  - \$17,355 Elgin Stewardship Council

**13 hectares of  
wetlands created**



# ENHANCING WATERSHED HEALTH

## Tree Planting, Restoration, Stewardship

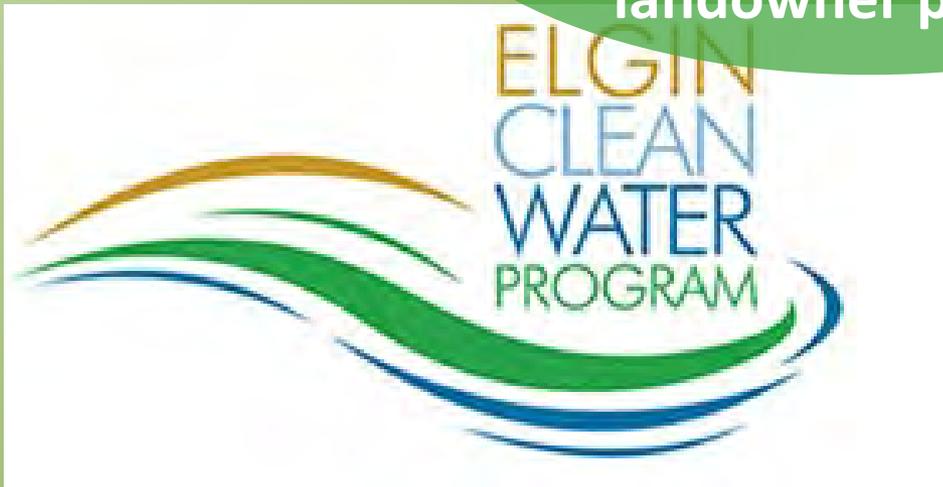
- **The Elgin Clean Water Project**

- a cooperative program between the Catfish Creek, Kettle Creek, Long Point Region & Lower Thames Valley Conservation Authorities
- assists landowners with projects to improve & protect water quality in Elgin County

**\$37,804**

towards

**17 clean water  
landowner projects**



# ENHANCING WATERSHED HEALTH

## Tree Planting, Restoration, Stewardship

- **Species at Risk (SAR)**

- Drafted a Section 11 Conservation Agreement under the Species at Risk Act with DFO to help aquatic species at risk
- Organized a freshwater mussel identification workshop with local First Nations
- Studied effects of road salt-impacted winter meltwaters on freshwater mussels
- Developed social media campaign
- Completed fisheries & flow assessments on drains
- Installed SAR road signs & developed a reptile education program



**\$84,954**

**Habitat Stewardship  
Program from DFO**



# ENHANCING WATERSHED HEALTH

## Tree Planting, Restoration, Stewardship

- **Phosphorus Reduction Initiative**

- western & central Lake Erie, Thames River identified as a priority watershed that need to see a 40% reduction in dissolved phosphorus & total spring loadings

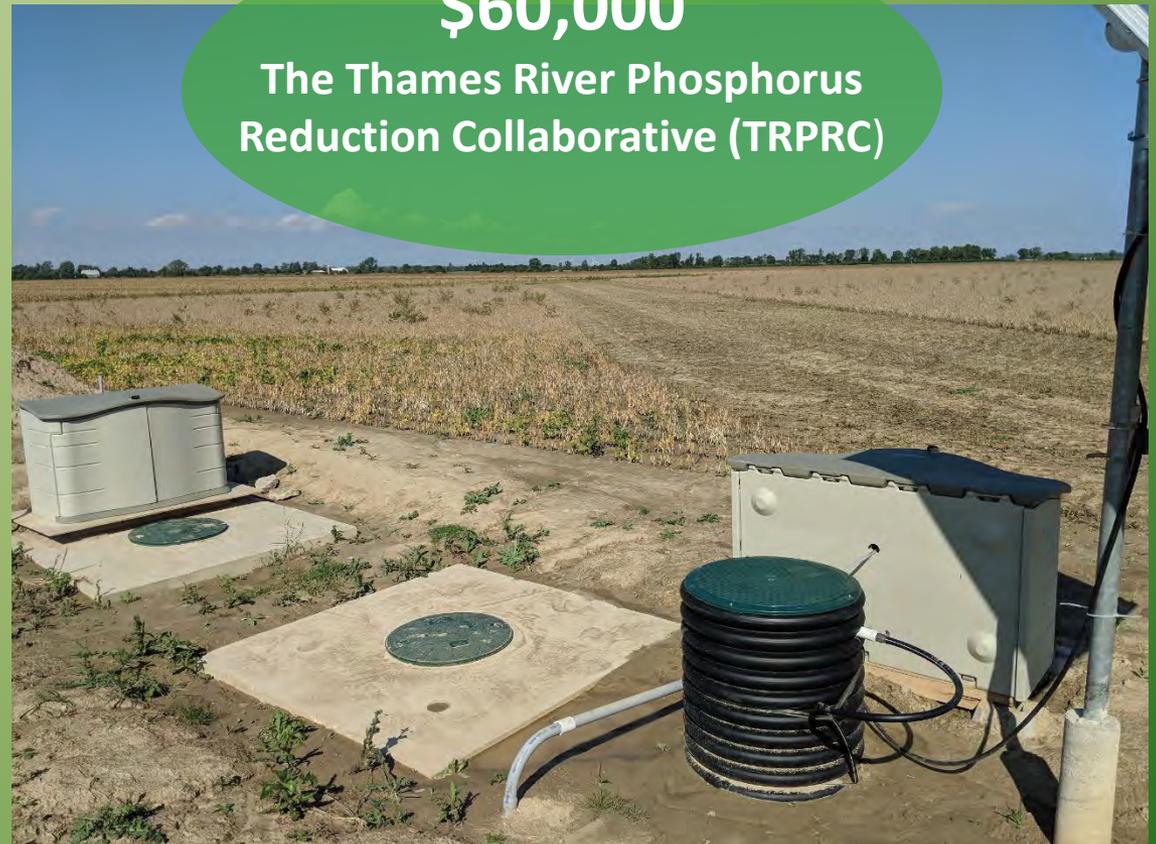


*Blue-green algae blooms on Thames*

# ENHANCING WATERSHED HEALTH

## Tree Planting, Restoration, Stewardship

- received funding for water quality monitoring services at a phosphorus filter tank pilot site SE of Chatham
- monitoring the technology for its efficacy at reducing phosphorus loads from agricultural subsurface tile drainage systems.
- will continue to 2022.



*Phosphorus filter tank pilot project*

# ENHANCING WATERSHED HEALTH

## Tree Planting, Restoration, Stewardship

- Funds for monitoring & research from **Agricultural Adaptation Council – Canadian Agricultural Partnership (CAP) Organization & Collaborations Program** (2018-2020).
- Environment & Climate Change Canada funding from the **Great Lakes Protection Initiative** for monitoring, research & BMP incentives for farmers (2018-2022).
- incentives to agricultural producers to improve soil health & reduce agriculturally sourced phosphorus entering the waterways.



**\$884,962**

**McGregor & Jeannettes Creek  
Phosphorus Reduction  
Program**

*Installation of the Filtrex Canada EnviroSoxx<sup>®</sup>, with NutriLoxx<sup>®</sup>, which is being tested at the TRPRC phosphorus filter tank pilot project site.*

# ENHANCING WATERSHED HEALTH

## Tree Planting, Restoration, Stewardship

**LTVCA Agricultural  
Improvement Fund \$21,450**  
Provided money to 9  
agricultural landowners  
for projects to improve  
soil health, water & air  
quality.



# ENHANCING WATERSHED HEALTH

## Tree Planting, Restoration, Stewardship

- **LTVCA Watershed Awards**



Mike Hentz – ‘landowner’ Environmental Award



Montessori – ‘organization’ Environmental Award



Don Hector – Award for Volunteer Heroes



Andrew Van Maele – U of Guelph Graduation Award

# STEPPING INTO NATURE

## Conservation Areas – *Be Active! Be Healthy!*

- **270 Conservation Areas in Ontario!**

- Safety Committee regularly inspects our CA's

- 1 land donation totaling 10.5 hectares "Ward-Heward Conservation Reserve"

**18**

**public conservation areas**

**463 hectares**

**LTVCA**

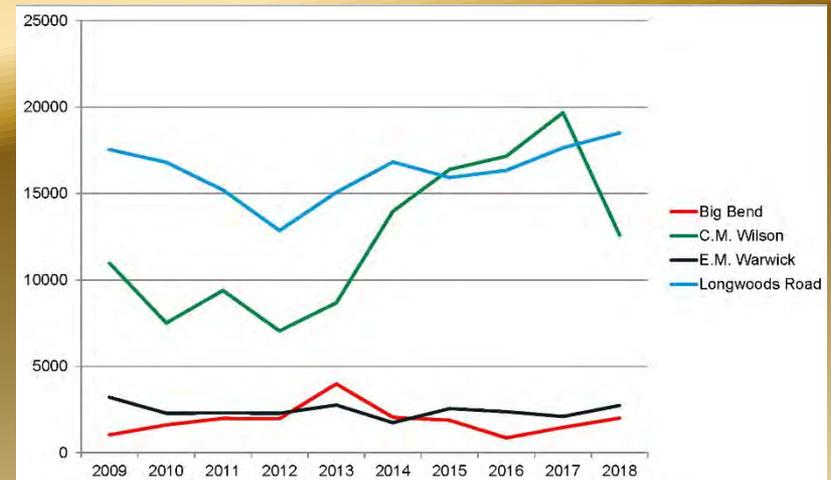
**695 hectares**

**protected wetlands, forests,  
tallgrass prairies, lakefront &  
habitat restoration sites**



# STEPPING INTO NATURE

Conservation Areas – *Be Active! Be Healthy!*



# STEPPING INTO NATURE

## Conservation Areas – *Be Active! Be Healthy!*

- **Some New Developments**



New docks at Sharon Creek



New Thames River campsites at Big Bend



*Mackay Pay phone app for day use & to purchase annual day use permits*

# STEPPING INTO NATURE

Conservation Areas – *Be Active! Be Healthy!*



New highway sign for E.M. Warwick



Paddle shed at C.M. Wilson



Accessible walkway at C.M. Wilson

# STEPPING INTO NATURE

## Conservation Areas – *Be Active! Be Healthy!*

- the Municipal Enforcement Unit (MEU) continued to patrol problem areas like Skunk Misery to reduce infractions on area regulations



# STEPPING INTO NATURE

## Education Programs – Take Learning Outdoors!

- in Ontario over 410,000 students participate annually in CA outdoor education programs which meet curriculum expectations of the Ontario Ministry of Education
- 37 Interpretive Centres operated by Conservation Authorities in Ontario

We teach children about local & global environmental issues, explore linkages between humans & natural environment, & instill a greater appreciation & understanding of nature.



# STEPPING INTO NATURE

## Education Programs – Take Learning Outdoors!

- Longwoods, C.M. Wilson, Ska-Nah-Doht Village, Chatham-Kent & Lambton Children's Water Festival, inclass programs

**5,482**  
children & their chaperones  
received education programming



# STEPPING INTO NATURE

## Education Programs - *Conservation*

- Organize community expo's & fairs

### Lake Erie High School Student Conference

- 60 Secondary school students from LKDSC

Board attended 6 workshops led by community experts

Fish – Friend or Foe



Species at Risk



Healthy Soils...Healthy Waterways



Shipwrecks of Lake Erie



People Park Relations



# STEPPING INTO NATURE

## Education Programs - *Conservation*

- River & Creek Safety Program sponsored by local service clubs



275  
grade 2's

# STEPPING INTO NATURE

## Native Studies at Ska-Nah-Doht Village



### OUR MISSION

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

### OUR VISION

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

# STEPPING INTO NATURE

## Native Studies at Ska-Nah-Doht Village

- Ontario Curriculum based education program



# SKA-NAH-DOHT VILLAGE & MUSEUM

- Ska-Nah-Doht Village welcomes tourists from over 24 countries around the world
- The Turtle Trail Gift Shop
- \$22,992 from the Ministry of Tourism, Culture & Sport through the Community Museum Operating Grant



**Canada Summer Jobs**  
summer student grant

**Special Events**

# COMMUNITY RELATIONS

## – *A Part of All Programs*

Communications enhance awareness & understanding of the goals & programs of the LTVCA for our target audiences, enabling them to support & enjoy our facilities & services. We use social media, literature, advertising, media releases, special events, watershed tours, festivals, speaking engagements & displays to relay our messaging.

**Directors & Committee Members**  
**Member Municipal Councillors / Staff**  
**Government Agencies**

**CA Staff**

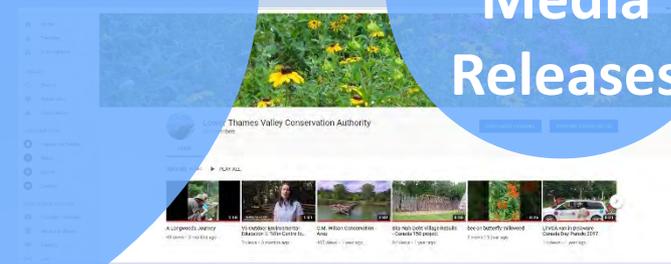
**Watershed residents**

**Media**  
**CA Visitors**

**Project partners...**

**28**

**Media  
Releases**



# COMMUNITY RELATIONS

- **Some Highlights**



*International Plowing Match  
Conservation Authority Tent Exhibit*



*"Go Wild Grow Wild" Expo in  
London & Other Displays*



*Publications and Presentations*

# COMMUNITY RELATIONS



30  
public events hosted year round  
in our conservation areas

# COMMUNITY RELATIONS



Fund  
Raising



CA  
Maintenance

Thanks to the

**370**

Dedicated volunteers who  
provided **950 hours**  
of their time for conservation in  
**2018!**



Habitat  
Restoration



CA  
Events



Tree  
Planting



# COMMUNITY RELATIONS

Agricultural Adaptation Council - Canadian Agricultural Partnership Organization & Collaborations Fund

ALUS Canada

Canada Summer Jobs

Community Partnership Fund

CORDA Proposal/Mihtukw Business Plan

Delaware Lioness Club

Ducks Unlimited Canada

Elgin Clean Water Program

Elgin Stewardship Council

Environment & Climate Change Canada - Great Lakes Protection Initiative

Fisheries & Oceans Canada

Forests Ontario

Glencoe District Lions Club

Great Lakes Guardian

Green Jobs

Habitat Stewardship Program

Ontario Ministry of the Environment, Conservation & Parks

Ontario Ministry of Tourism, Culture & Sport

Ontario Power Generation

LTVCA Agricultural Improvement Fund

Rodney Lions Club

Royal Canadian Legion Caradoc Branch 251

TD Tree Days

Thames River Phosphorus Reduction Collaborative

West Elgin Mutual Insurance

Wildlife Habitat Canada

Applauding the  
inspired partners that provided  
**\$1.55 M** to support  
watershed conservation!

# CONTACT US!

Lower Thames Valley Conservation Authority

100 Thames Street, Chatham, ON

N7L 2Y8

Tel: 519-354-7310 Fax: 519-352-3435

[info@ltvca.ca](mailto:info@ltvca.ca)

[www.ltvca.ca](http://www.ltvca.ca)

The details are in our  
Annual Report, posted  
on our website.  
Thank You!

