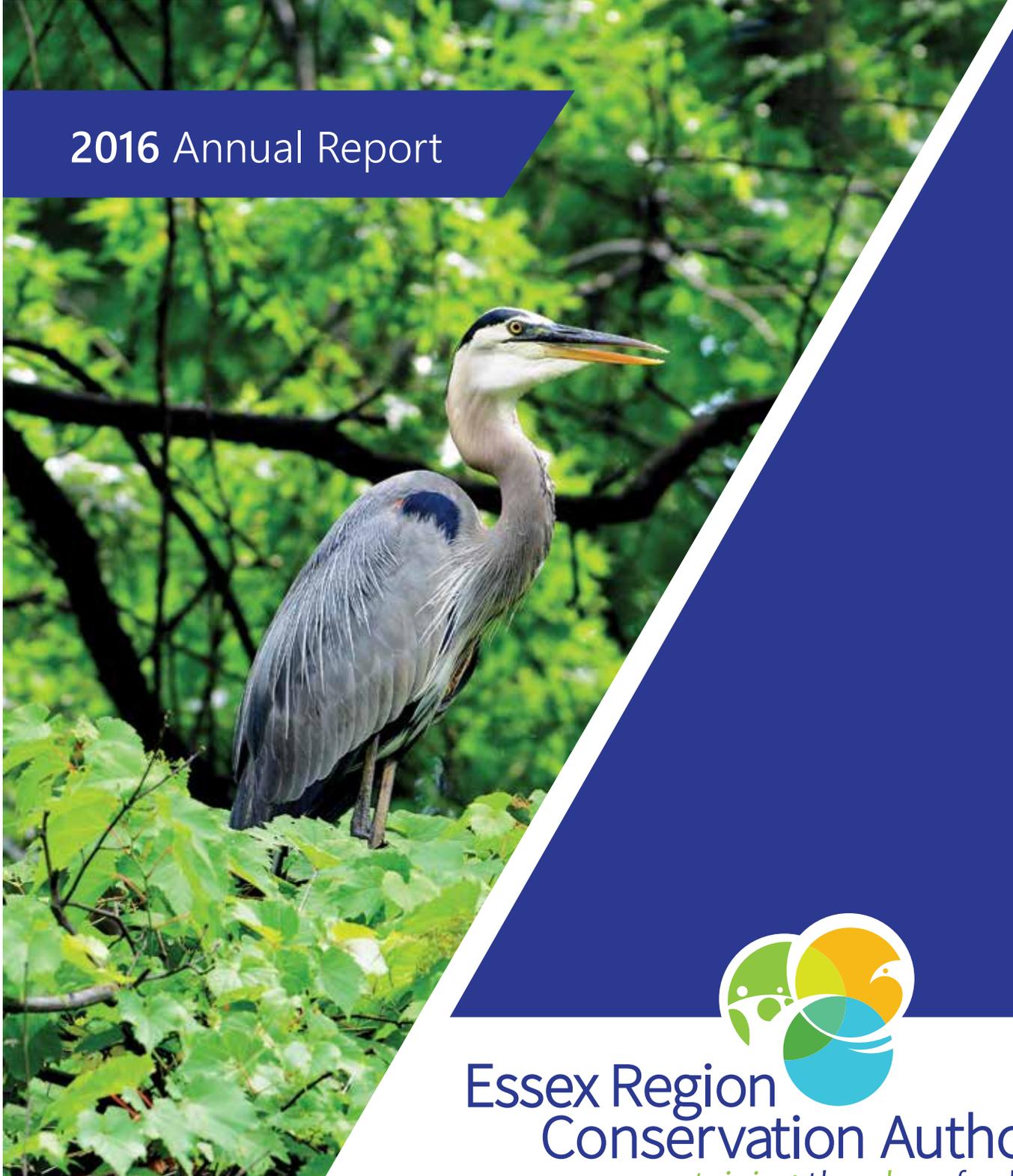




Essex Region Conservation
the place for life

2016 Annual Report



Essex Region
Conservation Authority
sustaining the place for life

2016 Annual Report - Sustaining the #PlaceforLife



Message from the Chair

Thanks to the support of many, there are great achievements to celebrate this year. The new Cypher Systems Group Greenway is being constructed, and accessibility for visitors to Kopegaron Woods and the John R. Park Homestead has been improved. We've added 103 acres of natural area to our landscape and implemented 46 projects to help improve water quality. We hosted the first Western Lake Erie Student Conference that highlighted the vulnerabilities of our Great Lakes. And, we launched the development of Regional Stormwater Guidelines, made all the more critical in the aftermath of the rainfall emergency that hit Windsor/Tecumseh/Lakeshore in September.

All of these projects are made possible by working together – with municipalities, private landowners, senior levels of government and volunteers. We are thankful to all of our partners for their many contributions.

ERCA is unique in that in addition to the valuable services it provides to its member municipalities, we also provide a significant financial return. Over the last decade, ERCA has received \$26.5 million in levy funding; and in return, secured more than \$35 million in grant funding for municipalities and the region. This is over and above all we do to create a future of sustainability, and demonstrates a remarkable return on investment.

It has been my honour to serve as Chair for these past two years, and I look forward to continuing to work together for years to come, to ensure that our region is the Place for Life.

Sincerely,

A handwritten signature in blue ink that reads "Ed. Sleiman". The signature is fluid and cursive.

Ed Sleiman
Chair



Message from the General Manager

The Essex Region, like other areas, is made up of places – where we live, where we work, where we gather, where we play. All elements of a place are interconnected. We recognize that natural processes contribute to the health of the places we live in, which, in turn, influence the health and integrity of our natural areas; and strengthen our regional economies.

We have a responsibility to enrich and sustain our region as a place with connected natural areas, where people are protected from flooding and erosion. A place with healthy rivers and streams, beaches we can swim in, and lakes we can fish in; greenways and trails that connect us to our landscapes and to each other. A place with productive agricultural lands. A sustainable place that is resilient and can adapt to change. We have to learn about and understand what makes our places great, how changes in our landscapes impact the places we live in, and how to respond to ensure our region is healthy and sustainable.

2016 was a very significant year for Essex Region Conservation. We launched our new strategic plan, **Sustaining the Place for Life**, which sets our priorities and directions for the next decade. Together with the Essex Region Conservation Foundation, we created a new visual identity to demonstrate the strengthened relationship between our two organizations, and our shared commitment to create a place we can be proud of and celebrate – one we can call home. For life.

The projects, programs and priorities implemented over the past year, and in fact, the past more than four decades, are critically important to ensuring that the Windsor-Essex-Pelee Island region will continue to be the Place for Life.

Yours in Conservation,

Richard J. H. Wyma
General Manager/Secretary-Treasurer

Our Vision

The Essex Region is a sustainable, resilient and vibrant place with healthy and thriving watersheds, Great Lakes and a green culture.

Our Mission

Improving our environment to enrich our lives.

J. Brush Farms

The Place for Life

In 2016, we launched our **Strategic Plan 2016-2025 – Sustaining the Place for Life**, which builds on five main areas of focus that resounded through broad consultation: climate change, Great Lakes, landscapes and habitats, sustainable communities and a strong, resilient organization. In total, fifteen strategic goals have been identified, with forty-five strategic actions outlined to achieve these goals.

We also created a new **visual identity** to demonstrate the strengthened relationship between the Essex Region Conservation Authority and Foundation. **Essex Region Conservation**, an overarching identity, promotes the Windsor-Essex-Pelee Island region as the Place for Life. As well, both the Authority and Foundation logos have been updated and modernized with unique but complementary icons and messaging that strategically portray the spirit of the Place for Life.

To build on this theme, we hosted the **#PlaceforLife** social media contest to enhance community excitement and pride in our region, and showcase all of its special places. Friends and followers submitted stories or photographs via Facebook, Twitter or Instagram to demonstrate why this region is the #PlaceforLife.

The Place for Life reinforces that all elements of a place are interconnected – our community, its environmental health, healthy lifestyles for our citizens, and our economy. Life recognizes our living, thriving, sustainable natural systems. Life refers to the people of our community; their health and protection, and our shared heritage. We embrace this place and make it our home. For life.

2016 Watershed Highlights

2016 was a year of significant change and progress. We launched our new strategic plan and five key strategic directions to ensure our region is the Place for Life. The following highlights are a snapshot of the programs implemented to align with our strategic priorities.



CLIMATE CHANGE



We are continuing to observe a changing climate. While efforts to slow climate change must continue, we also need to help our partner communities prepare to adapt to its impacts. This year, ERCA:

- Assisted Windsor, Tecumseh and Lakeshore by mobilizing pumps, providing sandbags, and providing general emergency response assistance during the significant **rainfall emergency** of September 28.
- Launched the development of a **Regional Stormwater Guideline** in partnership with the County of Essex and all mainland municipalities. This document will address the need for a comprehensive technical guide to assist municipalities, consultants and ERCA in the design and review of stormwater facilities. It will ensure that a consistent approach is implemented,

resulting in a better understanding of regional issues and a streamlined review process. Completion of this guideline, in conjunction with the Intensity Duration Frequency Curve research, are important first steps in the development of a regional climate adaptation strategy.



Received over **1,650 planning and development requests** for review and applications for permit, to protect new development from flooding hazards while ensure environmental sustainability.

- Obtained **Water and Erosion Control Infrastructure Improvements (WECI)** funding to implement additional improvements along the **Grand Marais Drain Flood Control Channel**, furthering the City of Windsor and ERCA's ongoing efforts to provide flood protection and storm drainage outlet for this watershed. Works included the deepening and widening of

- approximately 180 metres of open channel and drain bottom improvements through the South Cameron Road culvert. These continued improvements bring the channel one step closer to attaining full flood control benefit.
- Partnered with the Town of Lakeshore and the Provincial Water and Erosion Control Infrastructure program to complete the

Belle River Flood Control Structure.

The project included the replacement of approximately 65 metres of sheet steel shore protection and the removal of one manually operated flood control gate. These works re-instate the integrity of portions of the flood control structure which provides protection to approximately 250 floodprone dwellings within Belle River.

GREAT LAKES



The Great Lakes are our most significant natural resource. Our 2012 Watershed Report Card identified failing grades for surface water quality in virtually every watershed. More must be done to protect and improve water quality, and this year, ERCA:

- Implemented 88 water quality improvement projects across the region.
- Continued partnering with the Ministry of Environment and Climate Change (MoECC) in the **Kingsville-Leamington Nutrient Study** (KLN). Fourteen streams are monitored to collect information to understand the contribution of phosphorus from greenhouses and track changes in phosphorus concentrations (mg/L) over time.



Continued water quality monitoring at 85 sites across the region. These include surface water, ground water, wet weather and benthos monitoring stations.

Partnered with the University of Windsor Great Lakes Institute for Environmental Research (GLIER) and other partners in the Great Lakes Recreational Water Security research project. This study is to better understand the types of microbial communities found at our beaches and how they relate to beach closures and harmful algal blooms.



- Worked with partners to raise public awareness about **Drinking Water Source Protection** through the installation of road signs in vulnerable drinking water areas. These signs are consistent across the province to raise awareness that our streams and rivers are connected to our sources of drinking water.

- Provided **Risk Management Services** on behalf of municipalities to implement policies in the Source Protection Plan. Began approving Risk Management Plans to mitigate risks associated with the handling and storage of large volumes of liquid fuel throughout the region.



Worked with agricultural landowners to exchange knowledge and information through tours, meetings and other initiatives.

- Administered the **Great Lakes Agricultural Stewardship Priority Subwatershed** project to determine the cost of

phosphorus reduction using agricultural Best Management Practices in the eastern branch of the Wagle Creek watershed near Kingsville. In 2016, 47 cost sharing BMP projects were approved, including planting cover crops and the purchase of new farm equipment to facilitate the more precise application of fertilizer. This project was funded in part through *Growing Forward 2 (GF2)*, a federal-provincial-territorial initiative. The Agricultural Adaptation Council assists in the delivery of *GF2* in Ontario. ERCA's water quality team continues to monitor phosphorus concentrations at seven sites within the watershed to determine phosphorus reduction in this small watershed.

LANDSCAPES & HABITATS



Our landscapes and habitats are among the most significant in Canada, and while we have planted more than 6 million trees and achieved 8.5% natural areas coverage, more action is needed to reach our 12% target. This year, ERCA:

- Created 5 acres of new **wetland habitat**. Wetlands improve water quality, filter surface runoff, provide groundwater recharge, reduce flooding and erosion, and maintain soil moisture during drought conditions
- Engaged **1800 volunteers** to take action to improve environmental sustainability by participating in 36 tree planting, stream

cleanup, invasive species removal, citizen science and other **outreach events**.

- Introduced a **full service restoration program** option for landowners interested in tree planting and other habitat creation programs, without undertaking site preparation and long term maintenance. This new turn-key operation hopes to result in more landowners wanting to participate in habitat creation projects, contributing to a future of sustainability for us all.



Planted and distributed **101,000 trees**, and restored nearly **87 acres of forest habitat** and **11.5 acres of prairie habitat**.

- Undertook a pilot project to **Restore Wetlands through Phragmites Removal** at Hillman Marsh Conservation Area, a managed 117-acre wetland cell. This multi-phase project included GPS mapping of phragmites, specialized herbicide application, hand-removal and monitoring activities. As well, an educational video was created, and a workshop hosted in partnership with the Windsor-Essex County Environment Committee Green Speaker series.
- Initiated a **significant restoration project at Spring Garden Natural Area**, in partnership with the MTO and the City of Windsor. Prairie habitat will be restored as a result of this multi-year project to remove invasive Autumn Olive and allow the native species to flourish.

Conducted a Low Complexity Prescribed Burn at Hillman Marsh Conservation Area to revitalize and maintain the tallgrass prairie ecosystem and allow rare plants and animals to flourish.



SUSTAINABLE COMMUNITIES



Our urban areas will continue to grow and expand: ERCA will need to continue to work with all partners to plan sustainable communities that reduce urban sprawl, are walkable, have a healthy food supply and incorporate green infrastructure.

- Conducted significant **natural heritage inventory** work on behalf of the Towns of Tecumseh and Lakeshore to aid these municipalities in protecting natural heritage features through their Official Plan Amendments.
- Drafted **Environmental Impact Assessment (EIA) Guidelines** for the region to help our regional municipal partners consistently apply decisions regarding natural heritage protection.
- Provided significant advice and input to the **Official Plan updates** in four municipalities – Lakeshore, Tecumseh, LaSalle and Kingsville.
- Constructed the **Cypher Systems Group Greenway**. Thanks to a significant gift of \$250,000 from Cypher Systems Group, and support from the Federal government, the Town of Essex and many corporate and individual donations, the Essex

Region Conservation Foundation's *Trail On!* campaign raised over \$1 million to develop this trail. This property stretches 26 kilometres from the urban centre of Essex to the Town of Amherstburg and intersects with the existing Chrysler Canada Greenway in McGregor.

- Rebuilt the **Kopegaron Woods Boardwalk** to improve accessibility, environmental sustainability and visitor services. In total, nearly 600 metres of boardwalk have been replaced, and the balance of the gravel and woodchip trail resurfaced to improve walkability. The boardwalk is constructed of red cedar instead of pressure treated wood, to eliminate the use of man-made preservatives.

- Hosted the first **Western Lake Erie Student Conference**. Presented with funding from the Ontario Ministries of Environment and Climate Change and Education, 150 secondary school students from across the region participated to learn more about the challenges and issues surrounding the most vulnerable of our Great Lakes, and a variety of related career opportunities.



Connected nearly **300 new Canadians to nature** through snowshoeing and safe canoeing experiences, with support from the Ministry of Culture, Sport and Recreation.

Engaged nearly 10,000 students in **outdoor and conservation education programs**, to provide curriculum-based experiences that teach young people about the importance of protecting our environment and preserving our heritage.



- Partnered with the Greater Essex County District School Board and the Ministry of Environment to offer the first **Great Lakes Innovation-Creativity-Entrepreneurship** training session, aimed at finding solutions to local challenges with Lake Erie. 40 students participated, and 5 were chosen to present the collective proposals at the provincial Great Lakes Summit in October 2016.
- Doubled capacity in our **Teen Ranger Program**, providing 40 youth aged 12 - 15 with unique opportunities to connect with and take action for the environment. Participants graduated with an increased appreciation for the world and people around them; better team-building skills; and greater awareness of themselves and their abilities.



Certified 205 secondary school **Special High Skills Major** students with specialized training in a variety of subject matters to permit them to graduate with these specializations, while achieving our goal of helping to educate the next generation of conservationists.

- Restored the **Smokehouse** at the John R. Park Homestead, thanks to a grant from Questers International. As well, ERCA replaced 6 windows at the Homestead to ensure the museum's historical and architectural integrity.
- Unveiled the '**Waterbirds of Hillman Marsh' interpretive sign** to augment birding tourism in the Place for Life. Created with support from the Ontario Field Ornithologists, Pelee Wings Nature Store,

Friends of Point Pelee and Essex County Nature, the sign profiles 36 species of water birds, and adds another tourism amenity to the Shorebird Habitat, which is unique in North America.

- Improved safety and accessibility along the shores of Lake Erie at the John R. Park Homestead as the boardwalk was removed and a limestone pathway installed. Accessibility at Hillman Marsh and Holiday Beach outdoor classrooms were also improved this year with significant upgrades.
- Improved visitor services at **Holiday Beach Conservation Area with the creation of a rental cottage**. This beautiful, private three-bedroom facility on the shore of Lake Erie, just steps from the beach, will be available for rental in 2017. A utility hub was also created at the park to better serve those renting the facility for weddings and other events.

A STRONG RESILIENT ORGANIZATION



ERCA is a sustainable, resilient and valued agency. Since 1973, ERCA has been striving to achieve a state of sustainability for the Essex Region. In 2016, we worked toward organizational sustainability in the following ways:

- Demonstrated significant return on investment. Over the last ten years, ERCA has received \$26.5 million in levy funding between 2007 and 2016; and in return, secured more than \$35 million in funding to municipalities and the region. This is a net benefit to Essex Region of almost \$10 million, and is over and above in-kind contributions from partners, and the programs and services that we implement to benefit our regional environment.
- Improvements were made to the existing **Property and Information database**, which

- improves processing time and ultimately reduces turnaround times for permits and planning applications. The Authority continues to make system enhancements to accommodate the demand for digital exchange of information with applicants and consultants.



Implemented a new database to **facilitate customer tree orders** and to track outcomes of tree plantings and naturalization projects. By understanding project outcomes and plant survivability, resources can be directed to projects with better cost - versus - benefit ratios.

ERCA Accountability 2016

The following provides a three-year 'by the numbers' comparison of achievements.

CLIMATE CHANGE



	2014	2015	2016
Permits Requested	-	753	983
Permits issued	588	560	808
Clearances Issued	-	100	97
Request for Information Letters Issued	-	242	273
Permits to Take Water Applications	-	3	4
Appeals	-	13	15
Appeals in CA favour	-	13	15
Violations Issued	6	14	19
Average Response time for permits: Minor Development	8.24 days	15 days	10 days
- Major Development	29.35 days	30 days	21 days
- Alteration to Waterways	11.32 days	15 days	9 days
# of structures located in the floodplain	-	10,000	10,000
# of kms of Watercourses with floodplain mapping completed	-	609	609
# of hectares (area) digitally mapped delineating the CA Regulation Limit	-	38,304	38,304
# of hectares (area) digitally mapped delineating the flooding hazard limit (flood plains)	-	38,304	38,304
# metres of shoreline protected from flooding and erosion	140 m	250 m	245 m
\$ Value of Water/Infrastructure Contributions to Municipalities	494,000	772,500	287,500
Flood Messages: Watershed Conditions	-	6	2
- Flood Watches	-	10	7
- Flood Warnings	-	3	3
- Wind Warnings	-	0	0

GREAT LAKES



	2014	2015	2016
# of Water Quality Improvement projects (total)	20	26	88
- Agriculture/Other			
- Detroit River Watersheds	8	6	10
- Lake Erie Watersheds	8	10	19
- Lake St. Clair Watersheds	4	10	12
- Great Lakes Agricultural Priority Subwatershed Stewardship Initiative			47
# of wells decommissioned	-	4	9
# of landowners participating	-	30	58
- Agriculture/Other			
# of surface water quality monitoring stations	19	71	77
# of ground water quality monitoring stations	9	8	8
# of benthos monitoring stations	-	15	8

LANDSCAPES & HABITATS



	2014	2015	2016
Total Landholdings (Hectares)	1,628	1,669.6	1,669.6
Hectares of recreational land owned and managed	-	1,036.8	1,036.8
Total # of hectares under forest management plans	-	44.39	44.39
Total Taxes for CA Landholdings	-	\$49,166	\$75,290
Land Acquisition in Reporting Year (in acres)	0	51	0
Value of acquisitions (Fair Market Value)	na	\$508,000	0
Total Acres of Habitat Restored	152	142.5	103.5
Number/Acres of Trees	134,000 trees	125,450 trees 115 ac	101,000 trees 87 ac
Number/Acres of Wetlands	-	4 wetlands 5 ac	5 wetlands 5 ac
Number/Acres of Prairie	-	8 sites / 22.5 ac	11.5 ac
# of landowners involved in restoration	-	209	
Trees planted by volunteers	-	2,912	3,858
Native plants planted by volunteers	-	1,669	3,858

SUSTAINABLE COMMUNITIES



	2014	2015	2016
Planning Services - transactions/year	588	597	689
Kms of Trails owned & managed	79.6	79.6	95.1
# of volunteers	2,612	2,580	1,904
# of outreach events	38	33	35
# of schoolyard naturalization projects	11	7	3
ERCA Hosted Special Events	29	38	36
# of schools	-	78	96
# of unique education programs	-	285	294
# of students	7,314	9,538	9,986
# of public meetings/workshops	16	16	19
Day Use Visitors to JRPH	12,993	10,895	
Day Use Visitors to HBCA	5,426	5,985	
# of seasonal campsites purchased	65	72	69

A STRONG, RESILIENT ORGANIZATION



	2014	2015	2016
Area of CA Jurisdiction		1,681.3 sq km	1,681.3 sq km
Watershed Population	332,380	332,350	326,105
Staff (full time/LTC)	30	34	36
Staff (seasonal/STC FTEs)	12	9	8
Average FT staff length of service	10	9	10
# of local ABCs with ERCA representation	21	25	
# of Provincial ABCs with ERCA representation	18	26	
# of research studies with ERCA involvement		8	8
# of unique visitors to our website		55,000	68,591
Increase in social media followers		1,688	
# of facebook followers			2,424
# of twitter followers			2,428
# of instagram followers (launched October 2016)			90
# of youtube video views			2,134 views 4,334 min

2016 Financial Review

2016 At a Glance

Great places don't just happen...



101,000

Trees have been planted to increase green space.



1,904

Awesome **Volunteers!**
Thank You.



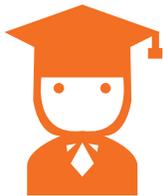
88

Projects to improve water quality have been implemented.



71

Events hosted to connect people with the place for life.



9,986

Students have been educated through outdoor education programs about the importance of preserving our heritage and conserving our environment.



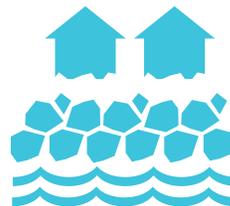
10

Average **permit response times** for minor development is 10 days.



103.5

Acres of forest, tall grass prairie, and wetlands have been restored.



245

metres of shoreline protected from flooding and erosion.



808

Permits requested and reviewed to ensure landowner protection



15.5

kms of **trails** were developed to connect communities to the natural landscapes around them.



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www.youtube.com/TheEssexRegionCA

Contact us

360 Fairview Avenue West
Suite 311, Essex, ON, N8M 1Y6

P: 519.776.5209

F: 519.776.8688

W: www.essexregionconservation.org



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