

Essex Region

WATERSHED

Report Card 2018

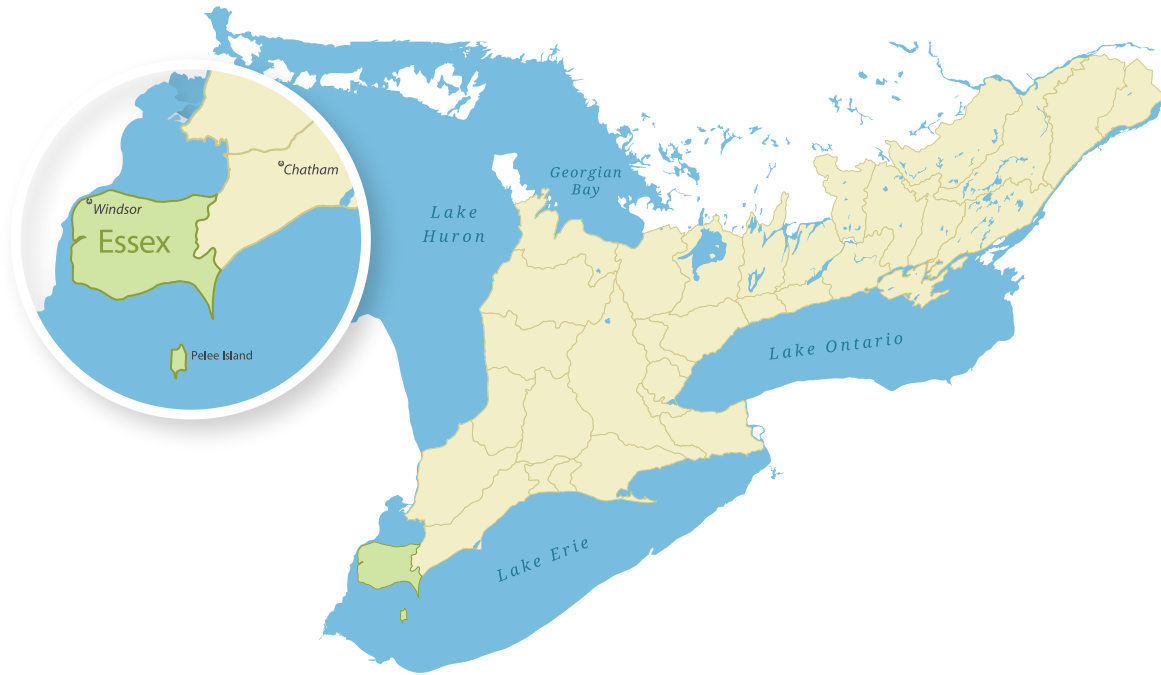


Essex Region
Conservation Authority
sustaining the place for life

Essex Region Conservation Authority has prepared this report card as a summary of the state of your forests, wetlands, and water resources.



WHERE ARE WE?



What is a Watershed?

A watershed is an area of land drained by a creek or stream into a river which then drains into a body of water such as a lake or pond. Everything in a watershed is connected. Our actions upstream can affect conditions downstream.

Why Measure?

Measuring helps us better understand our watershed. We can target our work where it is needed and track progress. We measured:



Groundwater Quality



Surface Water Quality



Forest Conditions



Restoration Efforts

GRADING

A Excellent
B Good
C Fair
D Poor
F Very Poor
Insufficient Data

What is a watershed report card?

Ontario's Conservation Authorities report on watershed conditions every five years. The watershed report cards use guidelines and standards developed by Conservation Authorities, Conservation Ontario and their partners.

ESSEX REGION WATERSHEDS



The Essex Region is the southern-most region in Canada. Our landscape features more rare and endangered species than anywhere else in this country. Our region is rich in agriculture, and we are located in the western basin of Lake Erie. While all of these elements contribute to the special nature of our region, in many cases, we face pressures unlike others in the province.

The scores in this report card are calculated based on five years of data collected from 2012–2016. It is worth noting that the scoring is consistently applied across the Province of Ontario, and due to various land uses and geographic realities, our watersheds will never achieve the same results as many to the north. However, ERCA continues to work with many partners across the region in an effort to improve the environmental sustainability of our region, and to make the Place for Life the best it can be.

WHAT ARE THE KEY ISSUES IN OUR WATERSHEDS?

Non-Point Source Pollution:

- Comes from many sources.
- Occurs when rain or snowmelt runs off fields, streets, parking lots, or backyards.
- Carries soil particles and pollutants to water bodies and groundwater.

Low Natural Area Cover:

- Only 8.5% of our region is covered by natural areas.
- 95% of our region's original wetlands have been lost.
- 99% prairie habitat loss.

What Actions Can You Take?

- Inspect and pump out your septic system every three to five years.
- Apply nutrients to crops at rates and times that reduce the risk of runoff.
- Dispose of chemicals properly at household waste drop-off locations.
- Control soil erosion through the use of grassed waterways, berms, cover crops and crop residue.
- Avoid applying fertilizer to mature lawns.
- Plant native trees, shrubs and pollinator plants on your property.

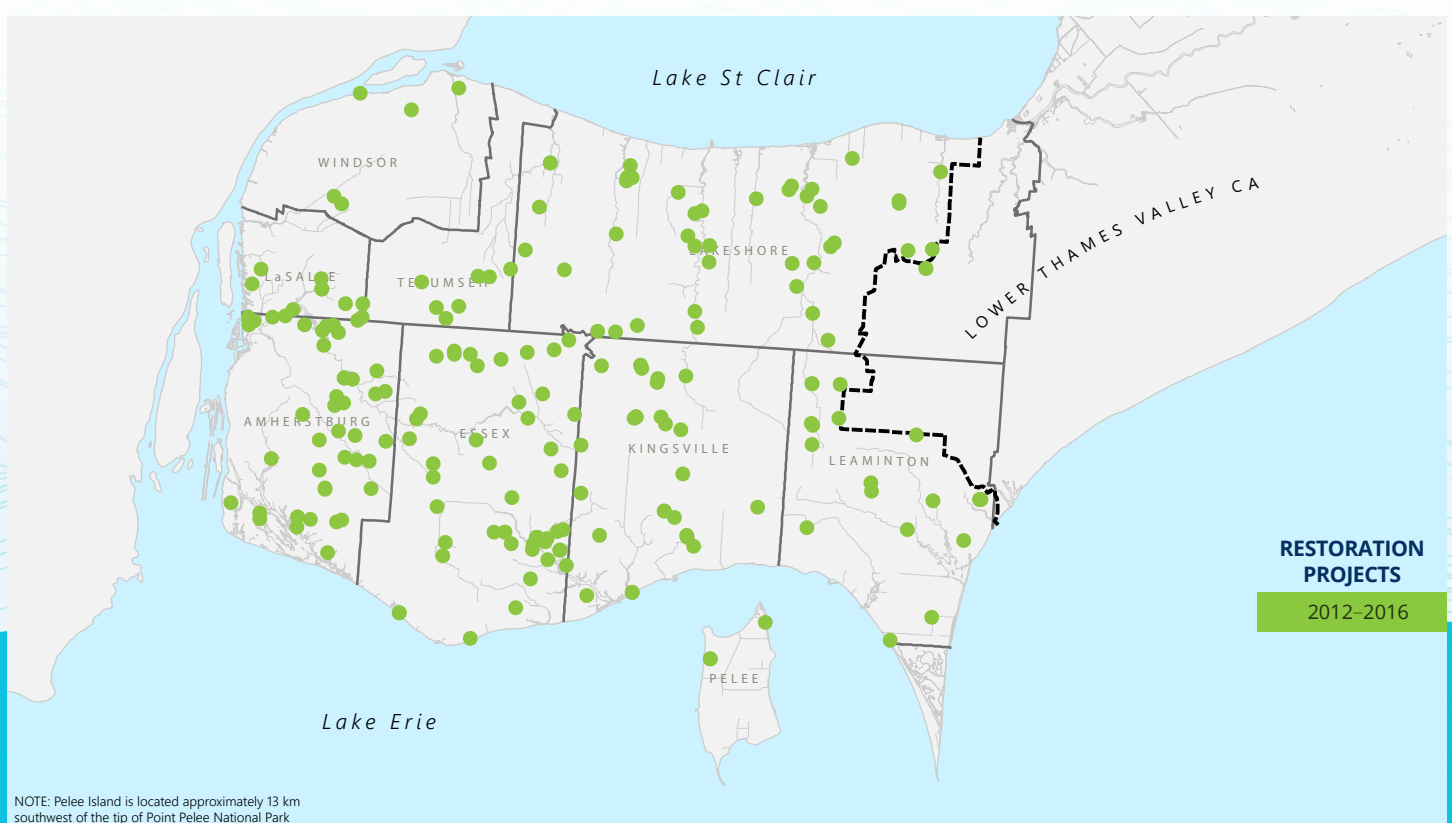
RESTORATION EFFORTS

Together with our community, ERCA has made great strides to protect and restore our natural environment. Each year, we work with many partners to plant trees, build wetlands, create prairie habitat and improve water quality.

What Local Actions Have Been Taken Over the Past 5 Years?

- 644,900 trees have been planted and distributed.
- 11 wetlands, totaling 13.75 acres, have been created.
- 234 community tree plantings, stream cleanups, schoolyard naturalizations and outreach events have been held.
- 199 water quality improvement projects have been implemented.

The challenge ahead of us is significant, yet rewarding, as the people in the Essex Region appreciate and value our local environment. Change takes time, and we recognize that we need to increase the scale and intensity of the projects that are being implemented. Together, with enhanced investment and opportunity, we can create a sustainable future in the Place for Life.



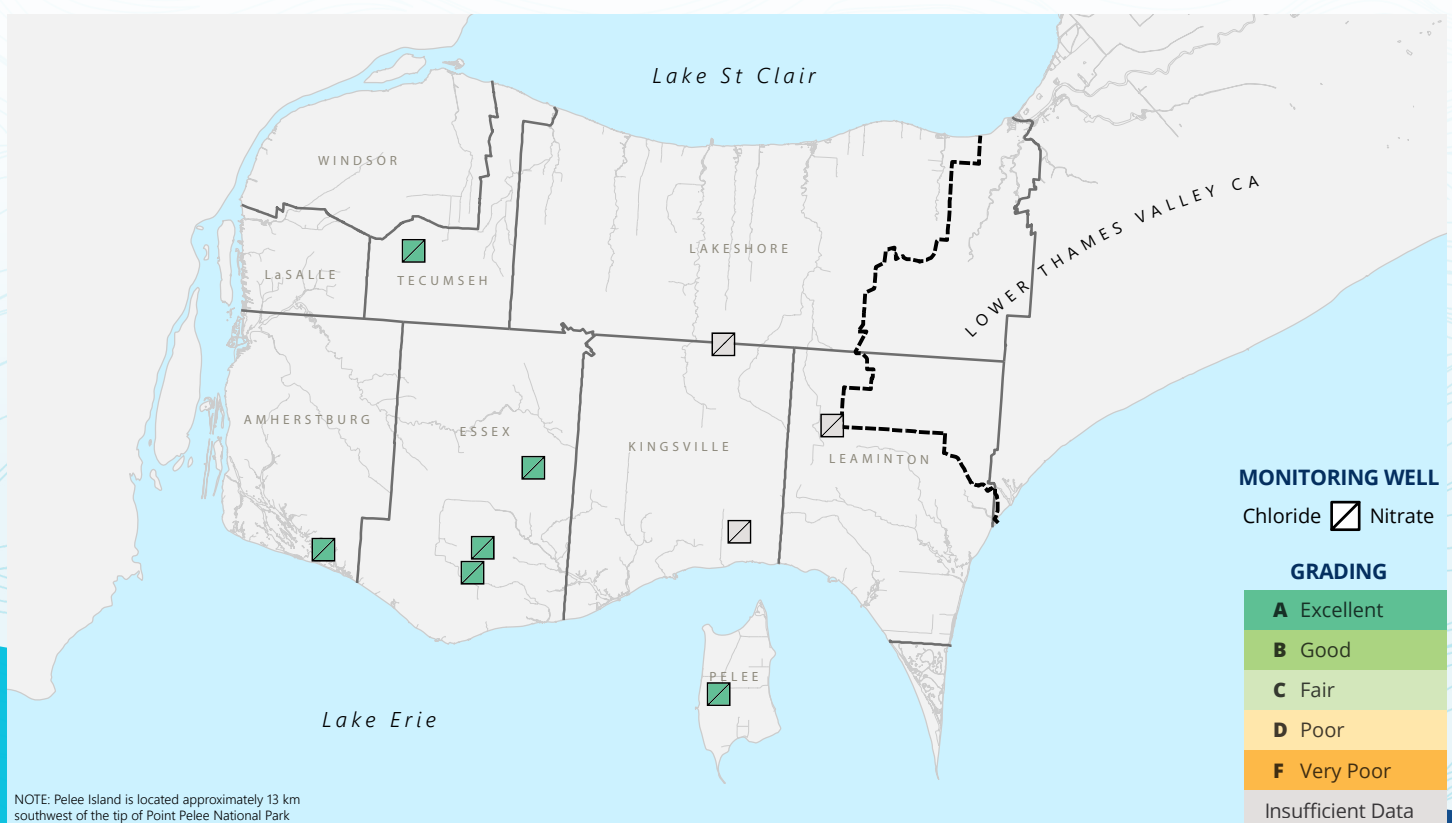


GROUNDWATER QUALITY

Concentrations of nitrate and chloride were measured at 7 wells in partnership with the Ontario Ministry of the Environment monitoring. Nitrate is an indicator of sewage or organic waste while chloride concentrations could increase due to issues such as road salt or leachate from landfills.

What Did We Find?

- All of our groundwater wells received the highest rating on the Provincial scale.
- Most of Essex County's ground water is protected by a thick layer of clay, but sites with sandy soils are more vulnerable to infiltration of pollutants.
- Drinking water for municipal systems in the Essex Region comes from surface water intakes in Lake St. Clair, Lake Erie and the Detroit River. Some private residents rely on groundwater to supply their drinking water wells.



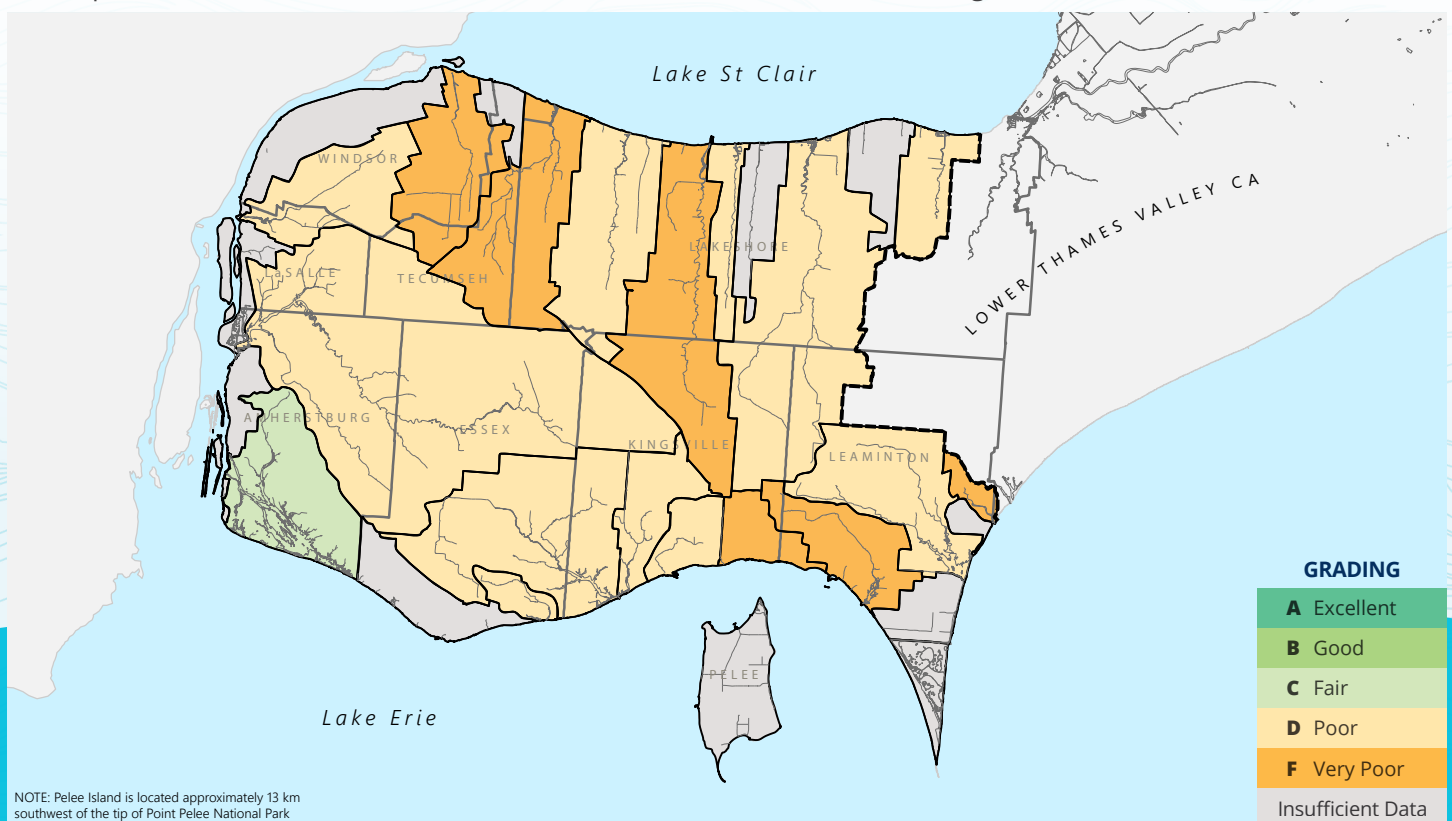


SURFACE WATER QUALITY

Concentrations of total phosphorus and *Escherichia coli* (*E. coli* bacteria) are measured in almost every watershed in the Essex Region. ERCA has improved its monitoring program over the past 5 years to make this information more accurate, and have started to incorporate benthic invertebrates (small aquatic animals like insects and worms living in the sediment). The species and number of these invertebrates in the streams are reflective of water quality. These monitoring enhancements have allowed us to report on more watersheds in our region with greater accuracy.

What Did We Find?

- Grades range from C to F, with mostly D grades.
- Decreases in surface water quality grades from the previous report card in 2012 are due to increased *E. coli* levels in some streams and the inclusion of benthic invertebrate data in others. These new data lowered the grades as they provided an additional layer of understand of water quality issues.
- *E. coli* in some streams may have increased for many possible reasons including timing and intensity of rain events, new or increased sources of *E. coli*, such as faulty septic systems, and manure storage and applications. ERCA is currently partnering with the University of Windsor and other research partners to improve understanding of sources of *E. coli* contamination as well as possible mitigation measures.
- The species of benthic invertebrates found in our streams are tolerant to poor water quality conditions, which results in a low score for this component of the overall surface water quality grade. Because this is the first year we have included these data, some of the overall grades in our watersheds have been lowered relative to past records.
- Phosphorus sources have remained constant and reflect land uses in our region.

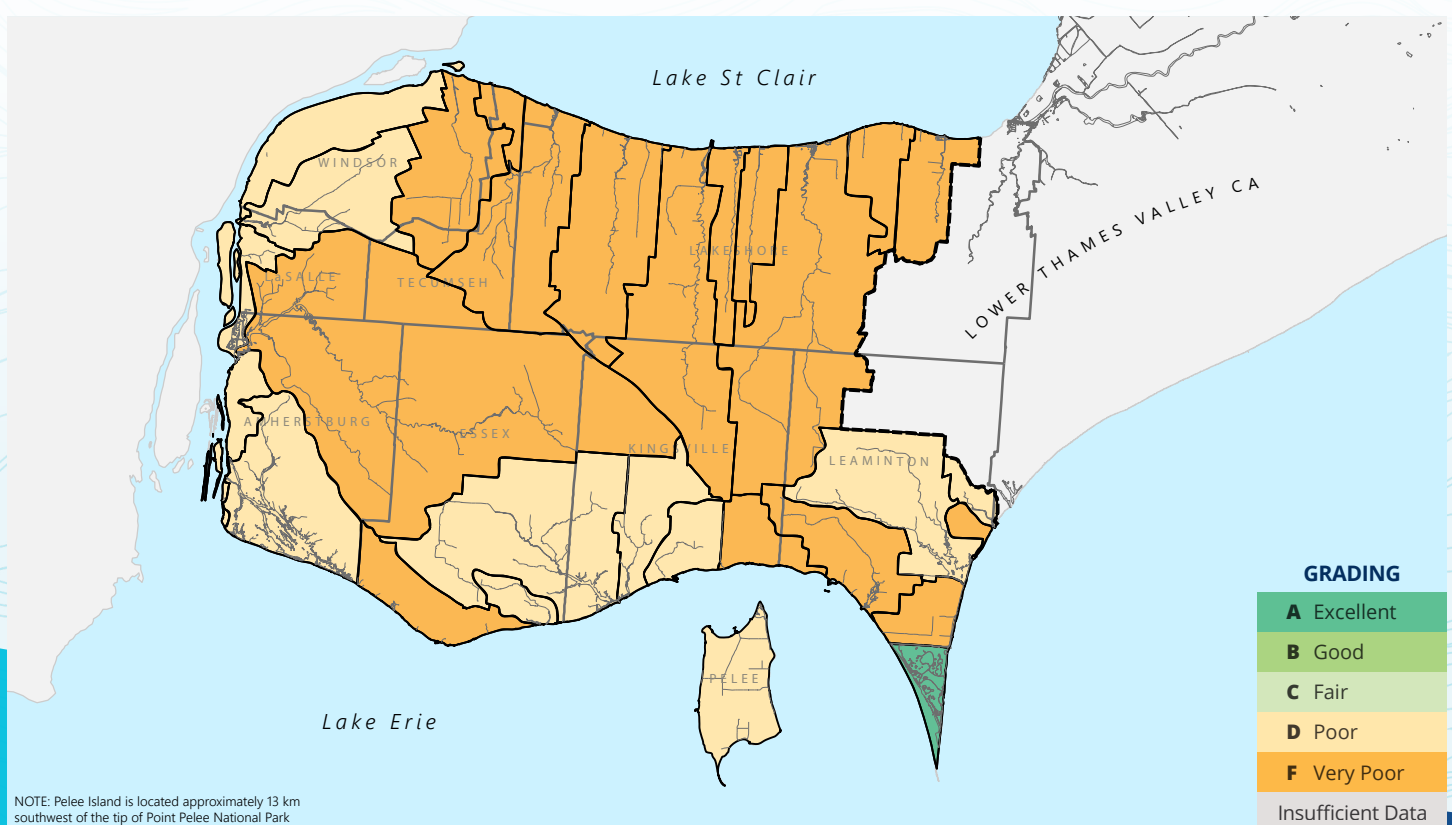


FOREST CONDITIONS

The percentages of forest cover, forest interior, and streamside cover were measured with Geographic Information Systems (GIS).

What Did We Find?

- Grade ranges were mostly Ds & Fs.
- Grade decreases were seen in some watersheds due to more stringent measurement standards, as opposed to loss of forest habitat.
- Although ERCA has planted hundreds of acres of tree, the impact is minimal using these grade differences.
- When initially measured in 1973, our region's forest cover was less than 4%, the lowest in Canada.
- Current forest cover throughout our region is 5.7%. To achieve a C rating would require a 15.1% forest cover. It is important to note that the standards of measurement are set across the province and would be difficult to achieve within our highly agriculturally-based watershed landscape.



HOW CAN WE ENHANCE THE WATERSHED?

What Can You Do?

- Disconnect your downspouts.
- Pick up after your pets.
- Choose natural alternatives for lawn maintenance.
- Create a natural pollinator garden in your yard.



What Can Your Community Do?

- Support ongoing improvements to municipal infrastructure.
- Direct development away from areas of environmental significance.
- Conserve and connect existing woodlands—and advocate your municipality to do the same!
- Support local initiatives to monitor water quality and quantity.

What Can Businesses Do?

- Develop environmental policies.
- Become more energy efficient.
- Reduce waste.
- Offset paper use or carbon footprint through support of tree planting.
- Support environmental efforts by volunteering or donating.

*Do you have questions not answered by this summary document?
Please contact us for more information:*



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