

# Lower Thames Valley Watershed Report Card 2023



Lower Thames Valley 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



Wetland Conditions

## 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 Conservation Ontario guidelines and standards developed by Conservation Authorities and their partners.



# Lower Thames Valley SURFACE WATER QUALITY

GRADE  
**D**

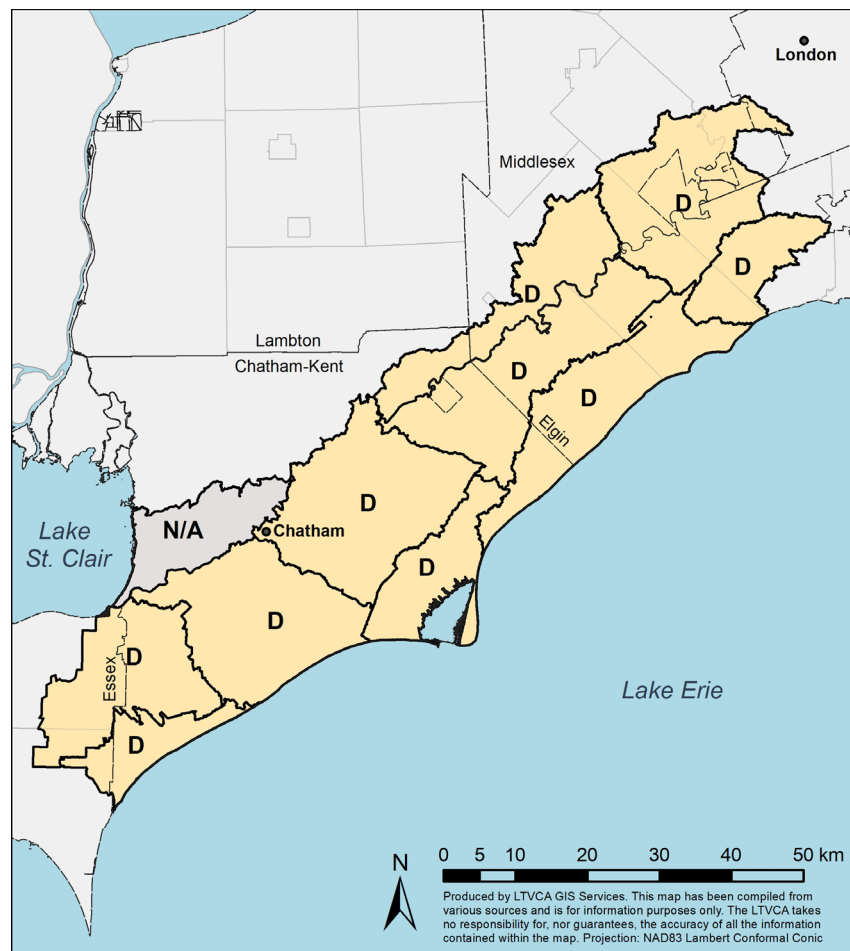
Concentrations of phosphorus and Escherichia coli (bacteria) were measured at Provincial Water Quality Monitoring Network (PWQMN) and Lower Thames Valley Conservation Authority stations. Benthic invertebrates (small aquatic animals living in the sediment) were also collected and usually used as an indicator of surface water quality but were not processed due to COVID-19.

## What Did We Find?

- Scores of D reflect that the water quality in our watercourses are not meeting the provincial water quality objectives for either total phosphorus or E.Coli.
- Most watersheds remain steady – since the last reporting period – however, there have been improvements in Wheatley-Two Creeks which could be due to missing information (Benthic) or possible watershed trends. A worsening grade in Talbot Creek subwatershed could be due to additional sampling. (Visit [ltvca.ca](http://ltvca.ca) to compare to 2013 and 2018 report cards).

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# Lower Thames Valley FOREST CONDITIONS

GRADE

D

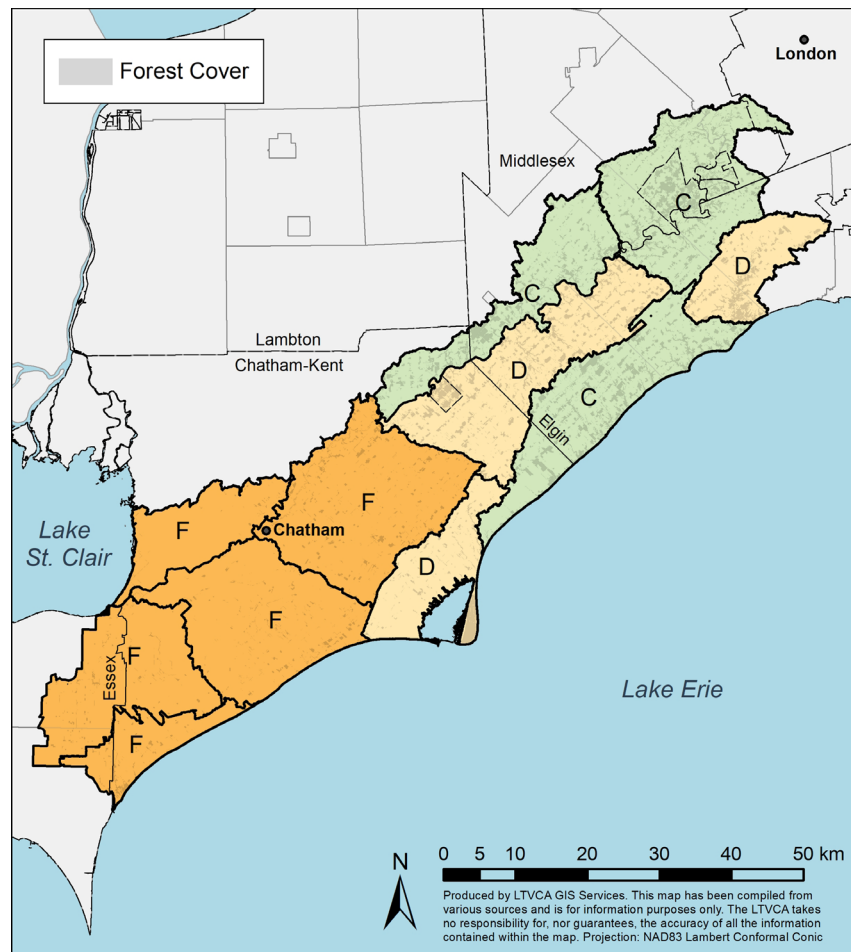
The percentages of forest cover, forest interior, and streamside cover were measured with Geographic Information Systems (GIS). Forests are an important indicator of watershed health as they provide terrestrial habitat, moderate climate and protect aquatic habitat, among other things.

## What Did We Find?

- In subwatersheds, the grades range from C to F, with D as the average grade.
- In multiple areas, we see a worsening grade from C to D. Tree Planting continues to balance forest losses but new plantings cannot replace the ecology that a mature forest contains for many years.
- Forests grow slowly, but environmental benefits begin as soon as trees are planted. Changes in forest cover will be noticed in five years or more.

### GRADING

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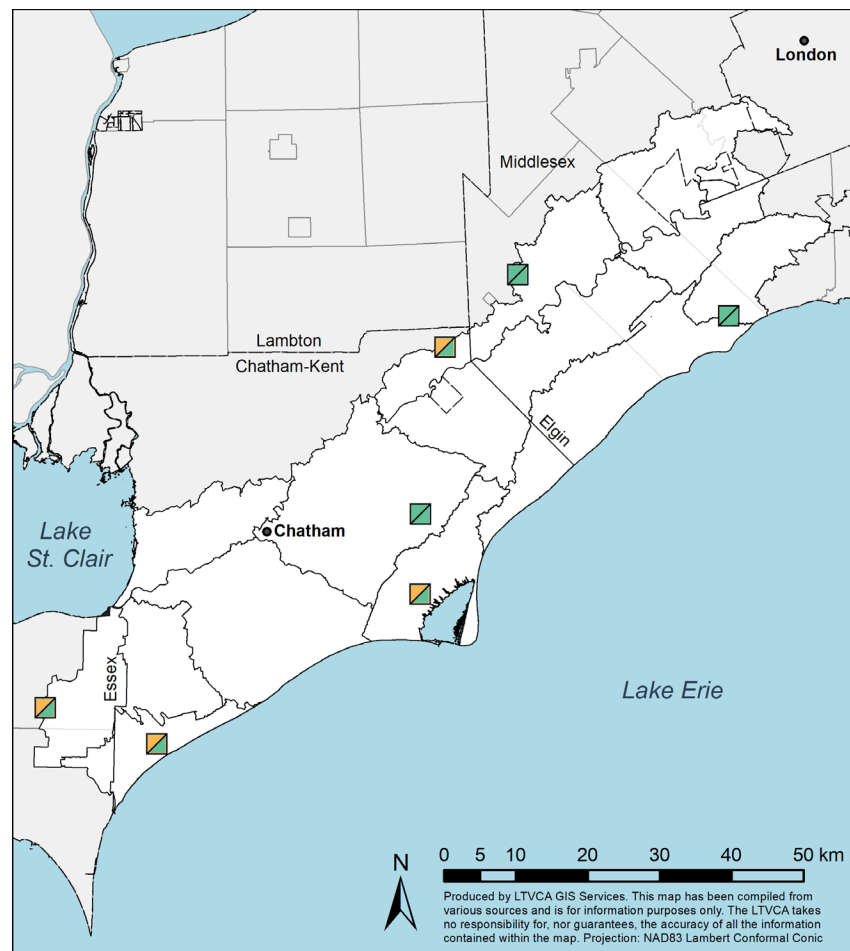
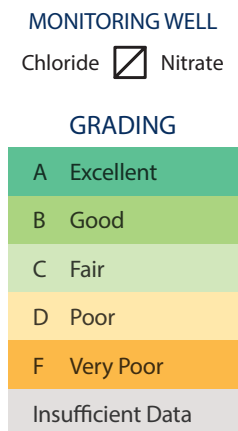
# Lower Thames Valley GROUNDWATER QUALITY

GRADE  
**B**

Concentrations of nitrate and chloride were measured at 7 Provincial Ground Monitoring Network (PGMN) wells. (Learn about groundwater at [sourcewaterinfo.on.ca](http://sourcewaterinfo.on.ca)).

## What Did We Find?

- Groundwater scoring has generally remained unchanged since 2018. Chloride concentrations have improved from a B grade to an A grade at one well.
- Those wells which scored a F for chloride reflect that the water quality is not meeting the drinking water guideline. Besides these failing grades for chloride, the remaining groundwater scores for chloride and nitrate are considered excellent.
- The quality of your well water may vary from that of the monitoring wells. In some instances, the location of wells was chosen to monitor local issues.





# Lower Thames Valley WETLAND COVER

GRADE

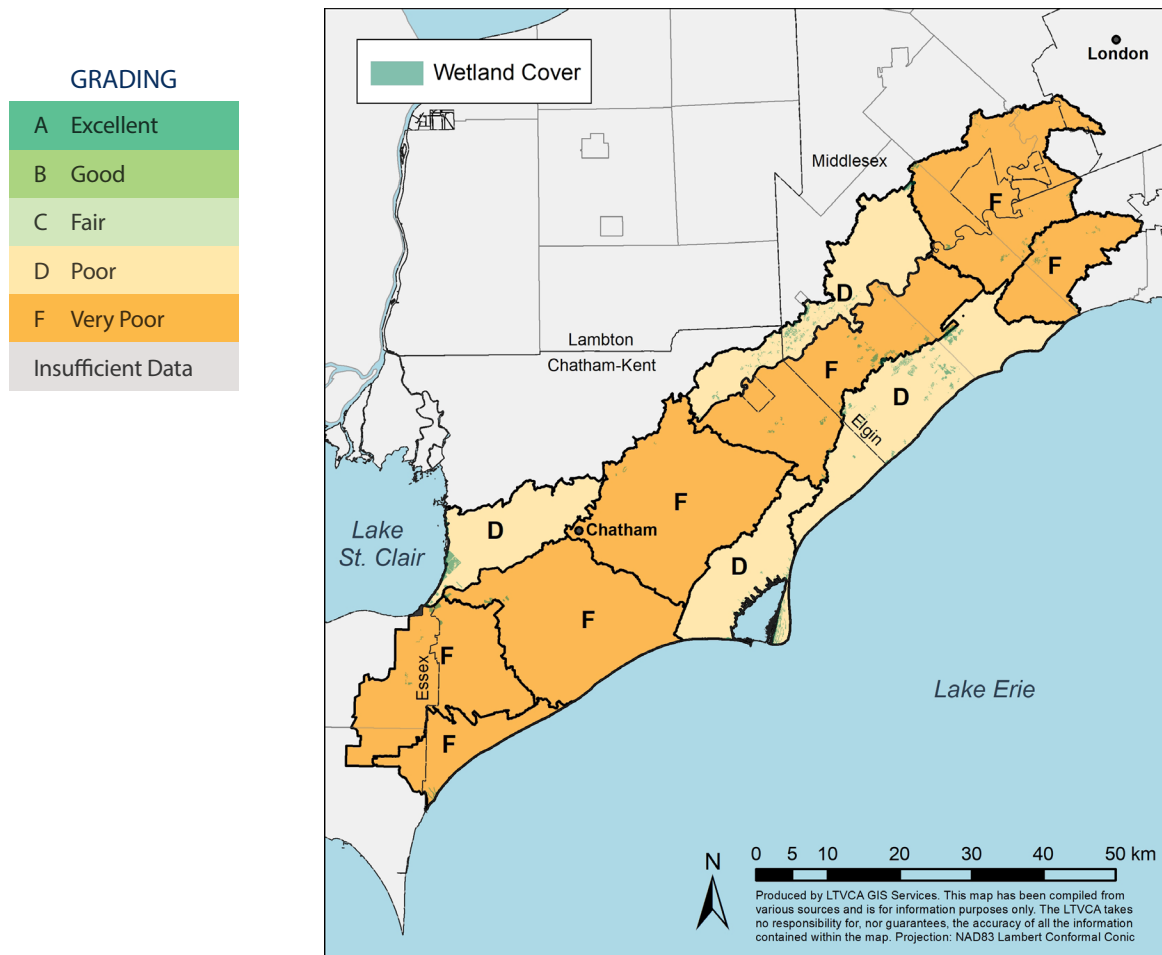
F

The data was obtained from an Ontario Ministry of Natural Resources and Forestry dataset. Wetlands can filter sediment and nutrients from groundwater and it can hold surface water in heavy rainfalls before entering watercourses.

## What Did We Find?

- In subwatersheds, the grades range from D to F, with mostly F grades.
- More wetlands are needed in strategic locations across the watershed.

Lower Thames Valley Conservation Authority offers a wetland program to private landowners across the watershed and has been well received.



# WHAT IS OUR WATERSHED'S KEY ISSUE?



## Non-point source pollution:

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

## What actions could you take to reduce non-point source pollution?

- Conserve and connect existing woodlands.
- Create natural landscapes to filter stormwater.
- Control soil erosion through the use of grassed waterways, berms, cover crops, and crop residue.
- Apply nutrients at rates and times that optimize crop uptake.
- Dispose of chemicals properly through household hazardous waste days or drop-off locations.
- See the back panel for more actions to reduce non-point source pollution.

## What local actions have been taken?

- Stewardship across the watershed that includes tree planting, wetland restoration and grassland planting.
- Focus on 11 environmentally sensitive watersheds including the Thames River, McGregor Creek, Rondeau Bay and Sharon Creek (For a full list check out [ltvca.ca](http://ltvca.ca)).
- Cover Crop program to reduce phosphorus runoff.
- Priority on buffer strips when water is adjacent to farm fields to help control runoff.
- Visit our website, [ltvca.ca](http://ltvca.ca) to learn more about our initiatives.



# HOW CAN WE ENHANCE THE WATERSHED?



## What Can You Do?

- Plant native trees and shrubs.
- Inspect and pump out your septic system every three to five years.
- Create wetlands to maintain water balance during wet and dry periods.
- Reduce the amount of household chemicals you use and store – such as antifreeze, paint, lawn chemicals, detergents, and cleaners.
- Ensure manure storage facilities are adequate.
- Plant rain gardens with native plants.
- Use rain barrels to collect water.

## What Can Your Community Do?

- Support ongoing improvements to municipal infrastructure.
- Direct development away from areas of environmental significance.
- Support local initiatives to monitor water quality and quantity.

## What Can Agencies Do?

- Protect wetlands.
- Green their operations.
- Evaluate the effectiveness of environmental programs.





Do you have questions not answered by this summary document?  
Visit [ltvca.ca](http://ltvca.ca) for the full report or contact us for more information:

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The Watershed Report Card is available online and in other formats upon request.