



Agenda
Green Advisory Committee

June 15, 2023

5:30 pm

Municipal Operations Centre

408 James Street South, St. Marys

YouTube Link - <https://www.youtube.com/channel/UCzuUpFqxcEI8OG-dOYKteFQ>

Pages

1. **CALL TO ORDER**
2. **DECLARATION OF PECUNIARY INTEREST**
3. **AMENDMENTS AND APPROVAL OF AGENDA**

RECOMMENDATION

THAT the June 15, 2023 Green Advisory Committee meeting agenda be accepted as presented.

4. **DELEGATIONS**

- 4.1 **Upper Thames River Conservation Authority - Upper Thames River 2022 Watershed Report Cards**

3

5. **ACCEPTANCE OF MINUTES**

25

RECOMMENDATION

THAT the May 18, 2023 Green Advisory Committee meeting minutes be approved by the Committee, and signed by the Chair and the staff liaison.

6. **BUSINESS ARISING FROM MINUTES**
7. **REPORTS**

7.1 PW 41-2023 Cemetery Turf Maintenance and Threatened Bird Species (Bobolink)

28

RECOMMENDATION

THAT PW 41-2023 Cemetery Turf Maintenance and Threatened report be received; and

THAT the Green Advisory Committee does not proceed with recommending to Council the delaying of mowing activities at the St. Marys Cemetery for the purpose of creating a suitable habitat for the Bobolink bird species.

8. OTHER BUSINESS

9. UPCOMING MEETINGS

Thursday, September 21, 2023 at 5:30 p.m. (Municipal Operations Centre)

Thursday, October 19, 2023 at 5:30 p.m. (Municipal Operations Centre)

10. ADJOURNMENT

RECOMMENDATION

THAT this meeting be adjourned at _____ pm.

Upper Thames River 2022 Watershed Report Cards

St. Marys Green Advisory Committee
June 15, 2023

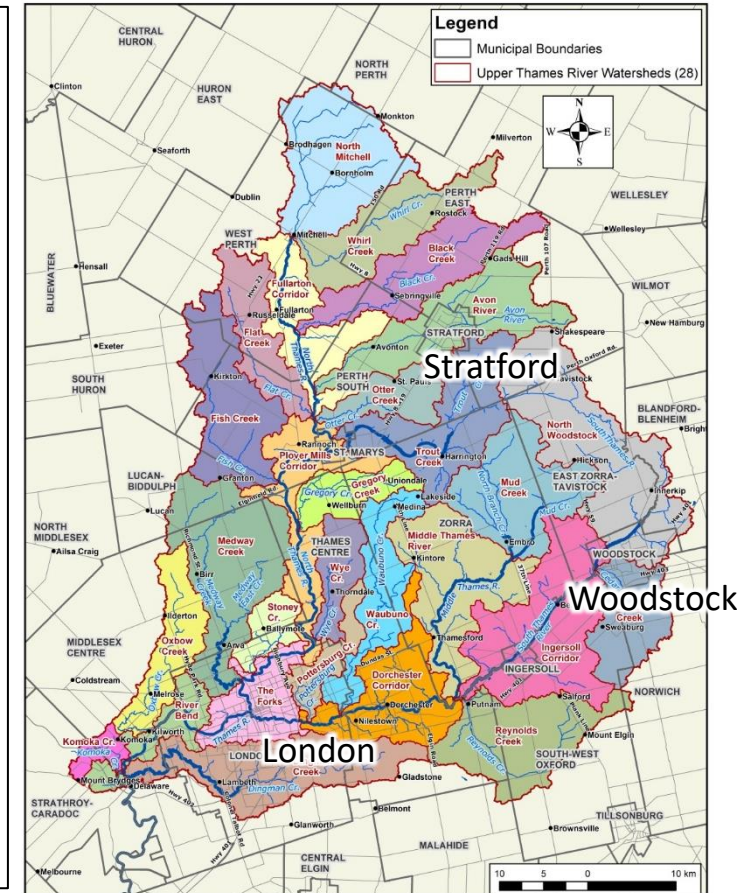
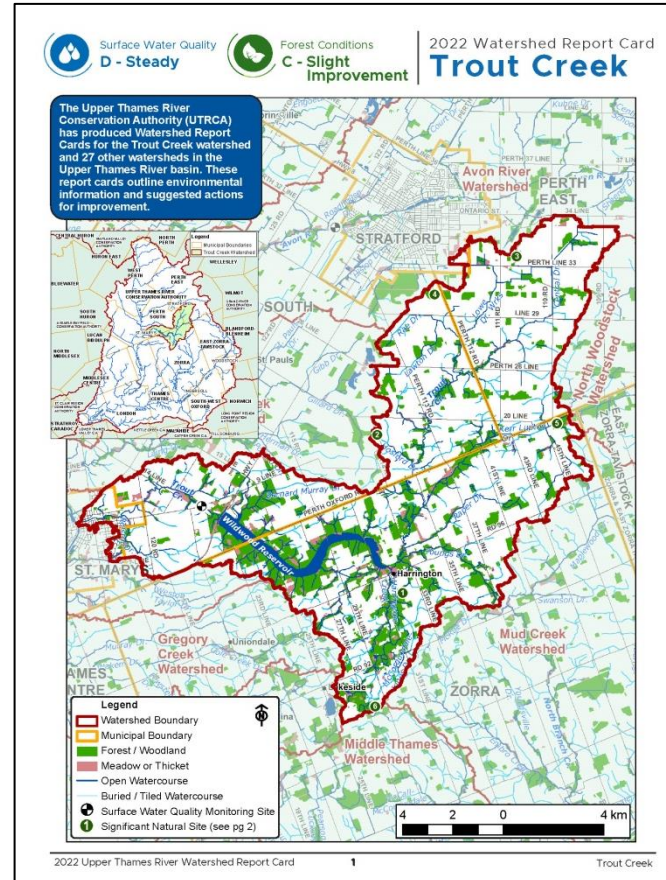
Cathy Quinlan, Terrestrial Biologist



What is a Watershed Report Card?

Report on environmental information every 5 years

- 2001, 2007, 2012, 2017, 2022
- Scientific data for 28 subwatersheds
- Track changes and motivate community action
- Follow standardized guidelines for Watershed Report Cards in Ontario





Environmental Indicators



Surface Water Quality



Forest Conditions

| | |
|--|---|
| Total Phosphorus | % Forest Cover |
| <i>E. coli</i> Bacteria | % Forest Interior |
| Benthic Macroinvertebrates | % Riparian Zone Forested |
|  |  |

- Relate to land use
- Part of UTRCA monitoring
- Letter grade A to F
- Environmental measure of effectiveness of programs to protect water quality and preserve and manage natural areas
- Province-wide grading system, generally higher grades in areas with less development and/or less intensive land use

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



Environmental Indicators – Surface Water Quality



Surface Water Quality

Total Phosphorus

***E. coli* Bacteria**

Benthic Macroinvertebrates



Total Phosphorus

- found in fertilizers, detergents, waste
- contributes to excess algae, low oxygen

E. coli Bacteria

- Fecal coliform bacteria found in human and animal waste
- Strong indicator of potential for other disease-causing organisms in water

Benthic Macroinvertebrates

- aquatic bugs that live in stream sediments
- good indicator of water quality and stream health





Surface Water Quality Results

Watershed Grades and Trends since 2017 WRCs

- 14 Cs and 14 Ds
- 5 improved, 21 steady, 2 declined
 - Trout: D Steady Plover Mills: C Steady

Highest Grades

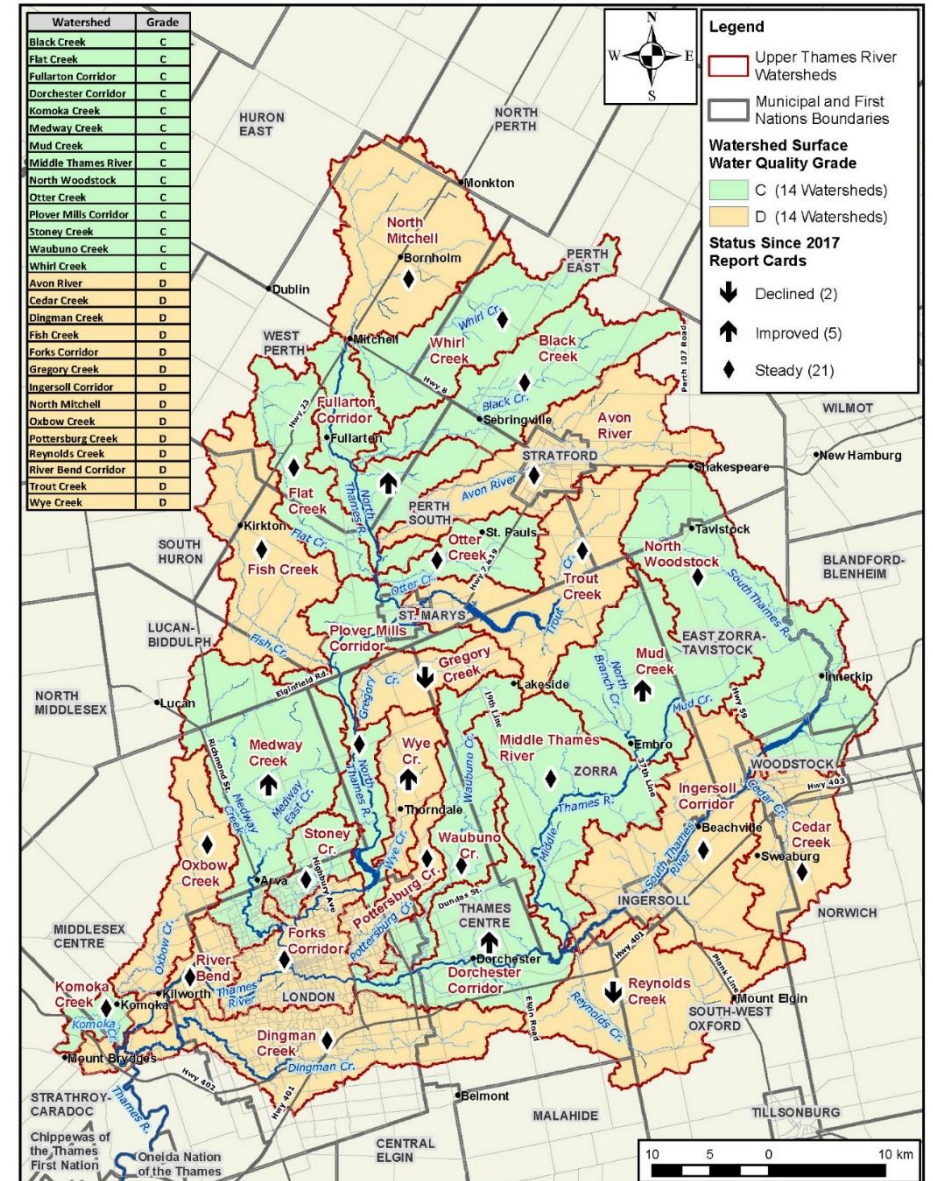
- Komoka, Fullarton, Plover Mills, Middle Thames

Lowest Grades

- Reynolds, Cedar, River Bend

Indicator Grades Overall

- Phosphorus = D
- Bacteria (*E. coli*) = C
- Benthic invertebrates = D
- Overall grade for UTR watershed = D





Surface Water Quality

- Many factors combine to influence water quality
- Some long term improvement seen
- Storm events deliver highest amounts of pollutants (more extreme weather)
- Good stream-side vegetation improves water quality



Extreme flood in St. Marys, Feb. 2018



Grab water samples collected during a storm event



Tree planting along the North Thames River near Fullarton creates a well buffered river corridor

Environmental Indicators – Forest Conditions



Forest Conditions

% Forest Cover

% Forest Interior

% Riparian Zone Forested



% Forest Cover

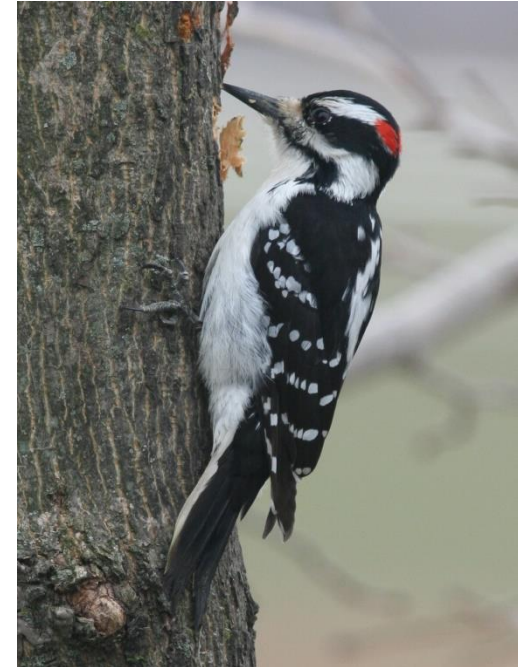
- % of the watershed that is forested/wooded
- 30% needed to sustain species, watershed health

% Forest Interior

- % of the watershed that is forest interior, the protected core 100 m inside a woodlot
- some bird species require to nest successfully

% Riparian Zone Forested

- amount of forest cover within 30m of all open watercourses
- supports high numbers of species and protects water



Hairy Woodpecker





Forest Conditions Results

(Based on 2015 aerial photography)

Watershed Grades and Trends since 2017 WRCs

- 5 Cs, 22 Ds, 1 F
- 10 slight improvement, 13 steady, 5 slight decline
 - Plover Mills: D slight improvement
 - Trout Creek: C slight improvement

Highest Grades

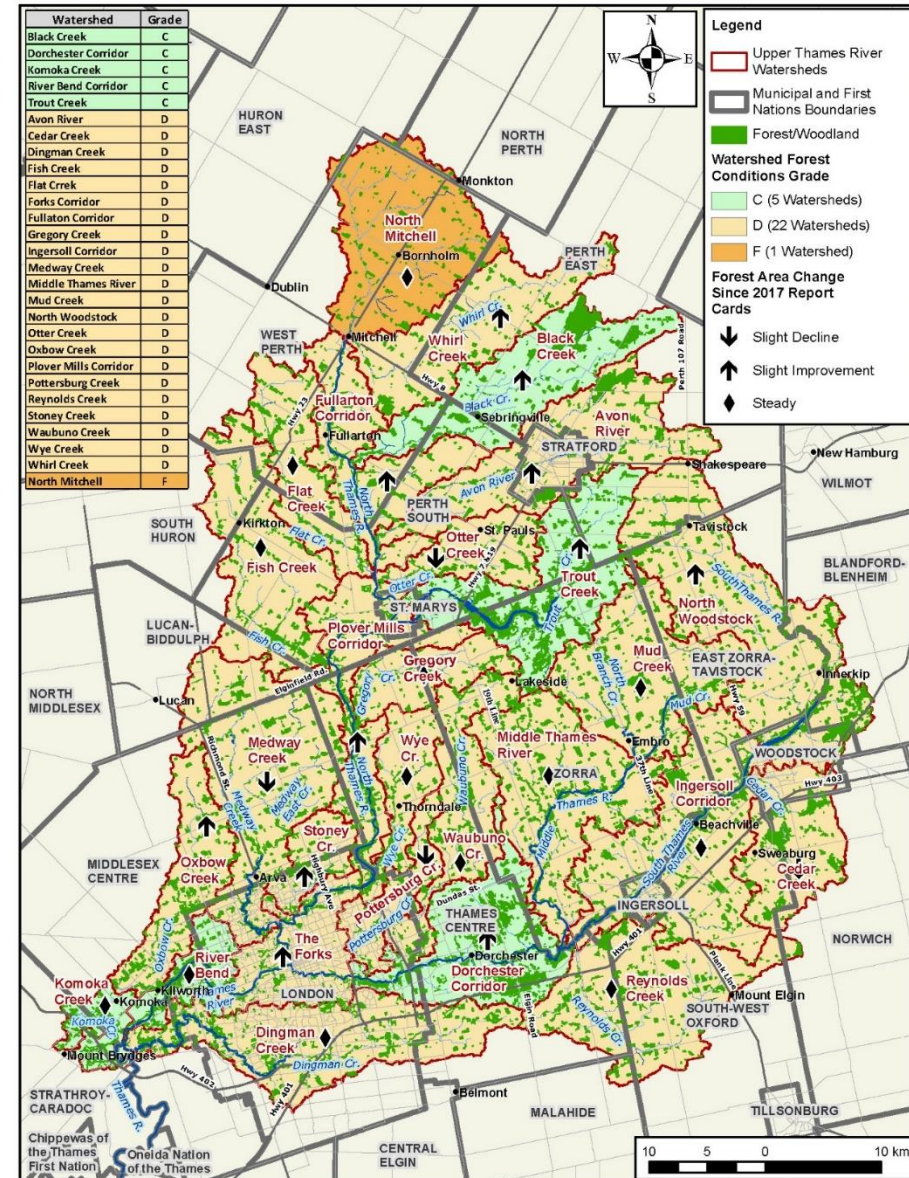
- Dorchester, Black, Trout, Komoka, River Bend

Lowest Grade

- North Mitchell

Indicator Grades Overall

- 11.3% forest cover = D
- 1.5% forest interior = F
- 35.7% riparian zone forested = C
- Overall grade for UTR watershed = D





Forest Gain and Loss across the Watershed, 2010-2015

Gain

- 781 ha
- Due to forest succession from thickets and young plantations
- Extensive tree planting in the 1970s and 1980s; trees now reaching maturity
- Tree planting rates have slowed over time

Loss

- 353 ha
- Converted to urban or rural land uses
- A little here and there, especially urbanizing watershed
- Previous losses:
 - 227 ha (2006-2010)
 - 471 ha (2000-2006)



Trout: Gain 55 ha, Loss 11 ha (33 ha loss from previous 10 years)

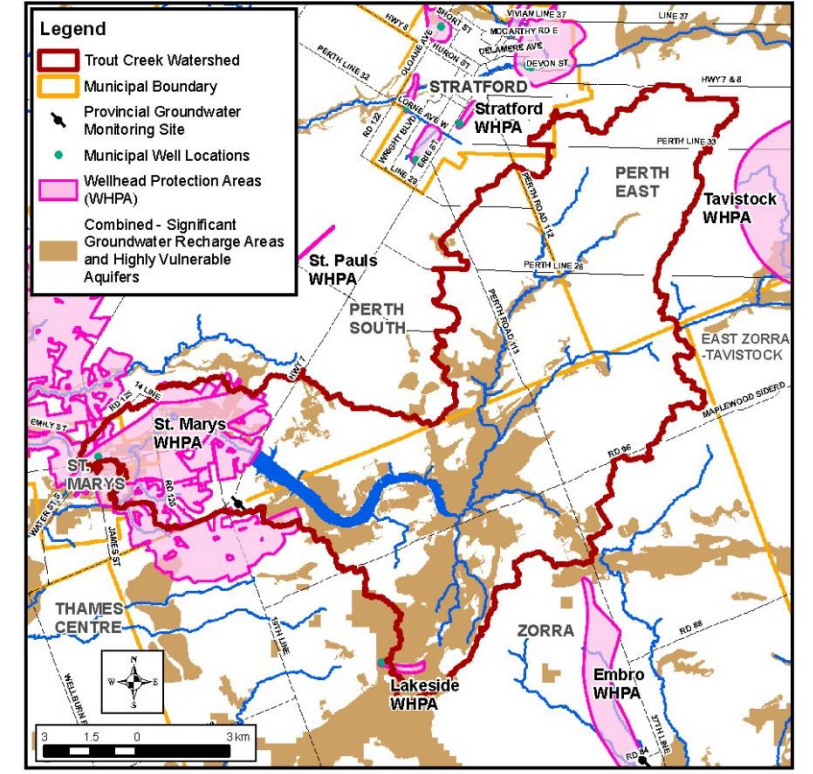


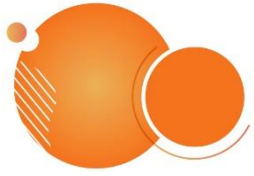


Groundwater Information

Information on local water supplies, groundwater monitoring, and protecting sources of drinking water

- 70 municipal wells
- 18,000 private wells
- UTRCA samples 28 wells at 22 sites
- 24% of UTR watershed within Significant Groundwater Recharge Areas (SGRA) and Highly Vulnerable Aquifers (HVA)
 - SGRA - areas important for recharging aquifers, HVA – areas vulnerable to contamination





Watershed Features

Population

- 54,000 increase (10%) between 2016 and 2021 censuses
 - Trout: 3,390; Plover Mills: 6,740

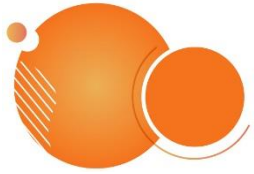
Dams and Barriers

- 617 across watershed
 - Trout: 29, Plover Mills: 18
- Barriers include perched culverts, beaver dams, stormwater ponds

Wetland Cover

- 5.2% overall = D grade
- A grades: Komoka (13%), Dorchester (12%)
 - Trout: 7.3%, Plover Mills Corridor: 0.8%





Watershed Features

Fish Species

- 80 species
 - Forks: 63 species, Trout: 41 species
- Good diversity in all watersheds

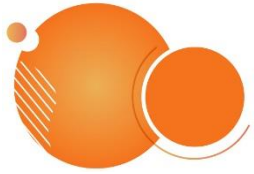
Freshwater Mussels

- 30 species
- 9 species-at-risk

Watercourses

- 5,976 km
- 30% natural, 39% channelized, 31% buried
 - Trout: 38% natural, 30% channelized, 32% buried





Spills Reported

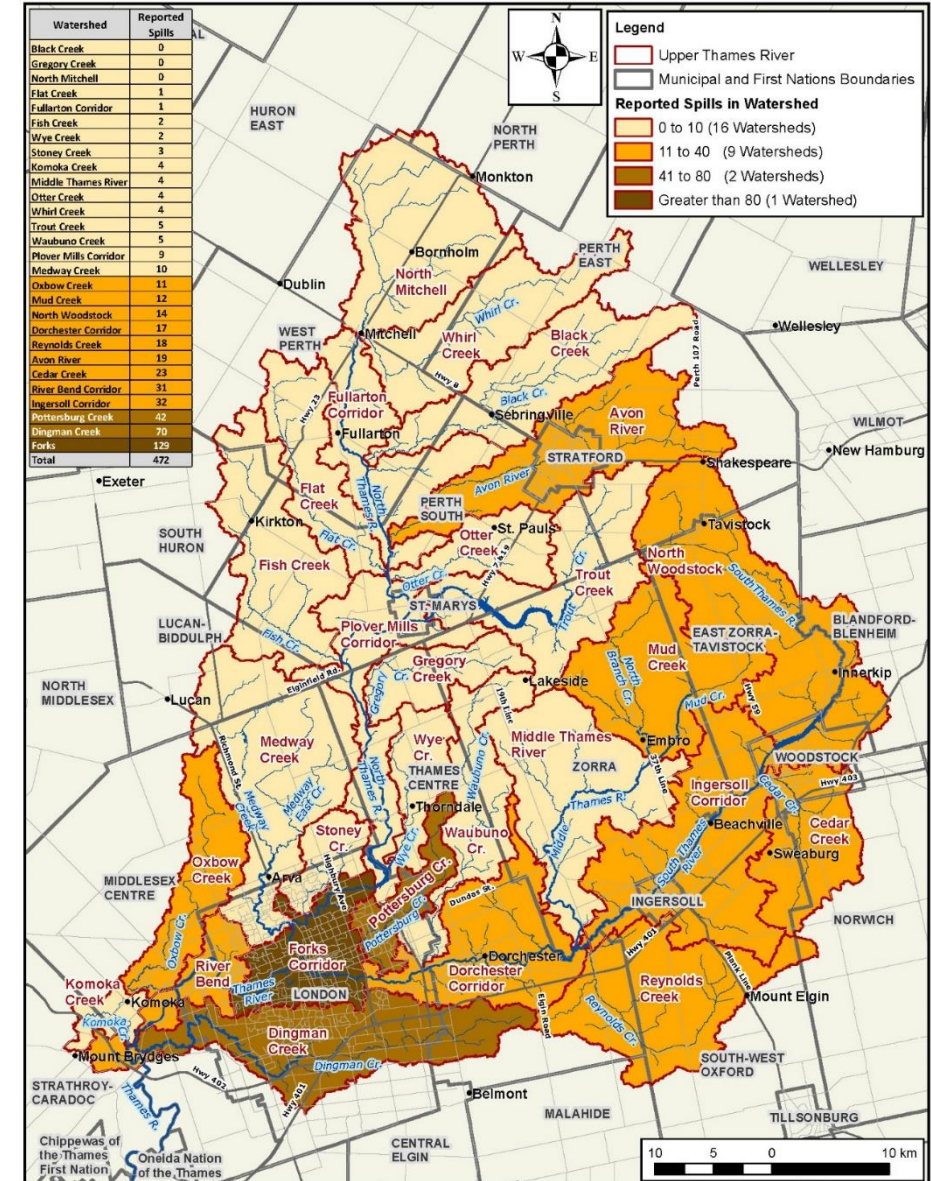
Numbers Increased

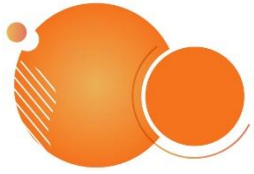
- 472 spills (2016-2020), up from 390 spills (2011-2015)
- Plover Mills: 9, Trout: 5

Material Type

- 52% industry chemical
- 26% fuels
- 14% sewage (mostly WWTP bypass)
- 6% industry food
- 2% manure

Most spills in urban areas





Great Lakes Connections

What happens upstream affects the downstream

Water Flow

- It takes 4-10 days for water from Upper Thames River watershed to reach Lake St. Clair

Shared Waters Approach

- Updated Thames River water management plan
- Consideration from First Nations, federal and provincial governments, municipalities, and two Conservation Authorities
- Implementation is underway



THE THAMES RIVER (DESHKAN ZIIBI)
SHARED WATERS APPROACH TO
WATER QUALITY AND QUANTITY



Written and published by the Thames River Clear Water Revival





Local Actions for Improvement

List of actions for each watershed based on most current technical information



Use **Low Impact Development** techniques such as rain gardens to reduce stormwater runoff



Establish **cover crops** to reduce runoff and soil erosion



Continue to **plant trees along streams** and to connect riverside woodlands





Highlights of Progress since 2017

Land Protection and Restoration

- Tree Power programs expanded from London to Stratford, St. Marys, and Perth South
- Pollinator gardens planted in St. Marys with students, Town, UTRCA



Sewer and Infrastructure Projects

- Wastewater treatment plant upgrades (e.g., Stratford, Woodstock, London)
- Continued installation of new separated storm and sanitary pipes



City of London
project photo

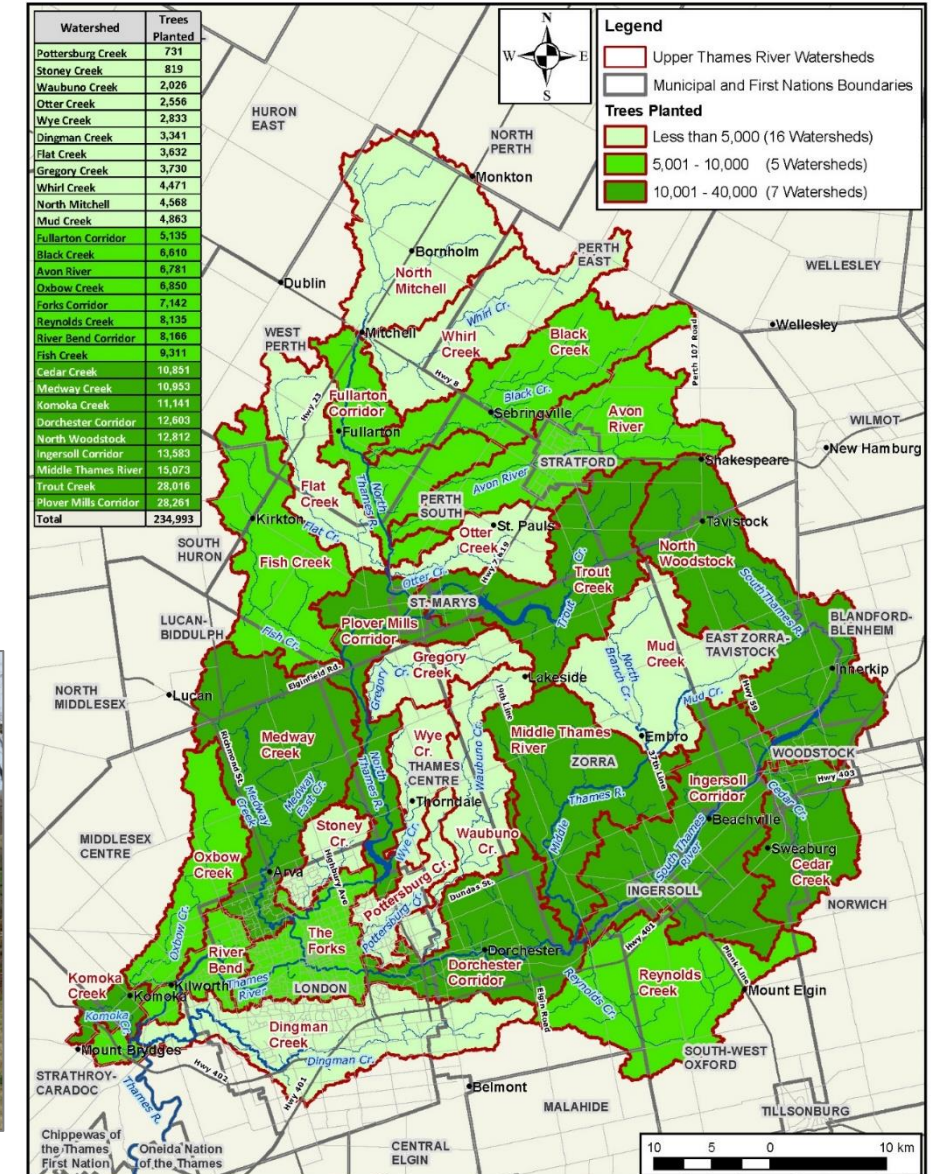




Tree Planting Programs

UTRCA Programs (2016-2020)

- 235,000 trees, 146 ha, 500 sites
- 19,000 students and community members involved
- Trout: 24,000 trees planted at 27 properties under UTRCA Private Land Reforestation Program





Turning Information into Action

Create awareness about local watershed conditions

- Workshops to inform landowners about stewardship programs
- Funding to assist with tree planting, erosion control projects, etc.



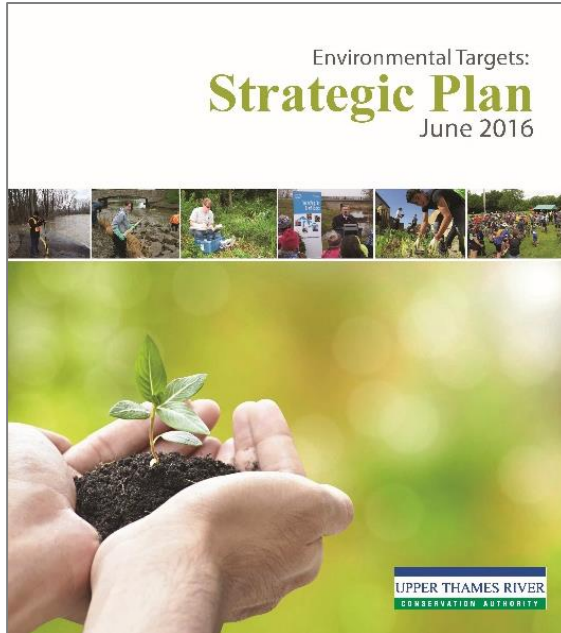
Promote best management practices (BMPs) to improve soil health and water quality

- Cover crop program
- Erosion control structures
- Constructed wetlands





Turning Information into Action



In 2016, UTRCA developed **Environmental Targets**:

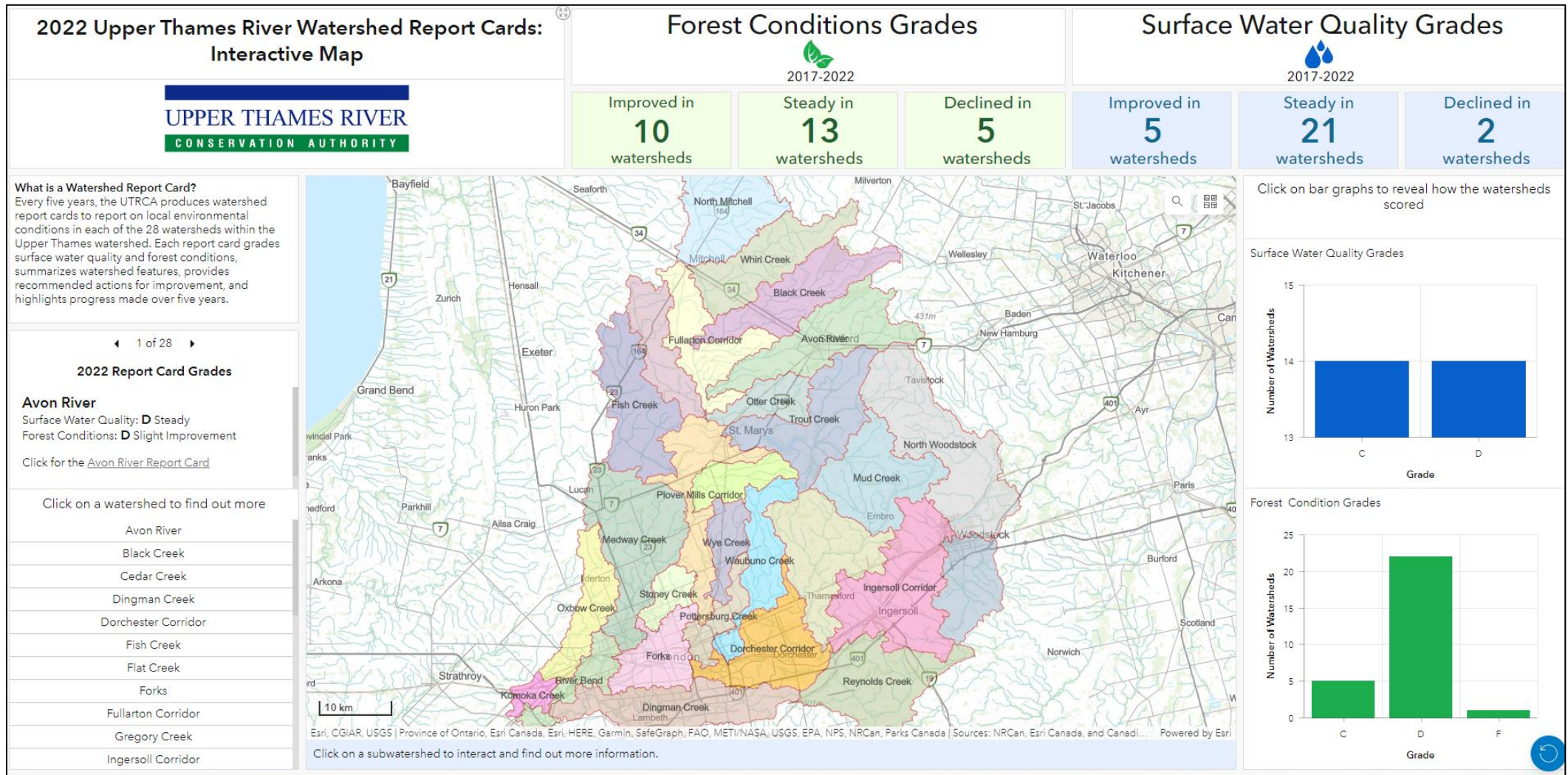
- Improve each subwatershed's water quality score by one grade, by 2037
- Establish and restore 1,500 ha of natural vegetation cover, windbreaks, and buffers, by 2037

Report Cards are **information resource** for planning and education for:

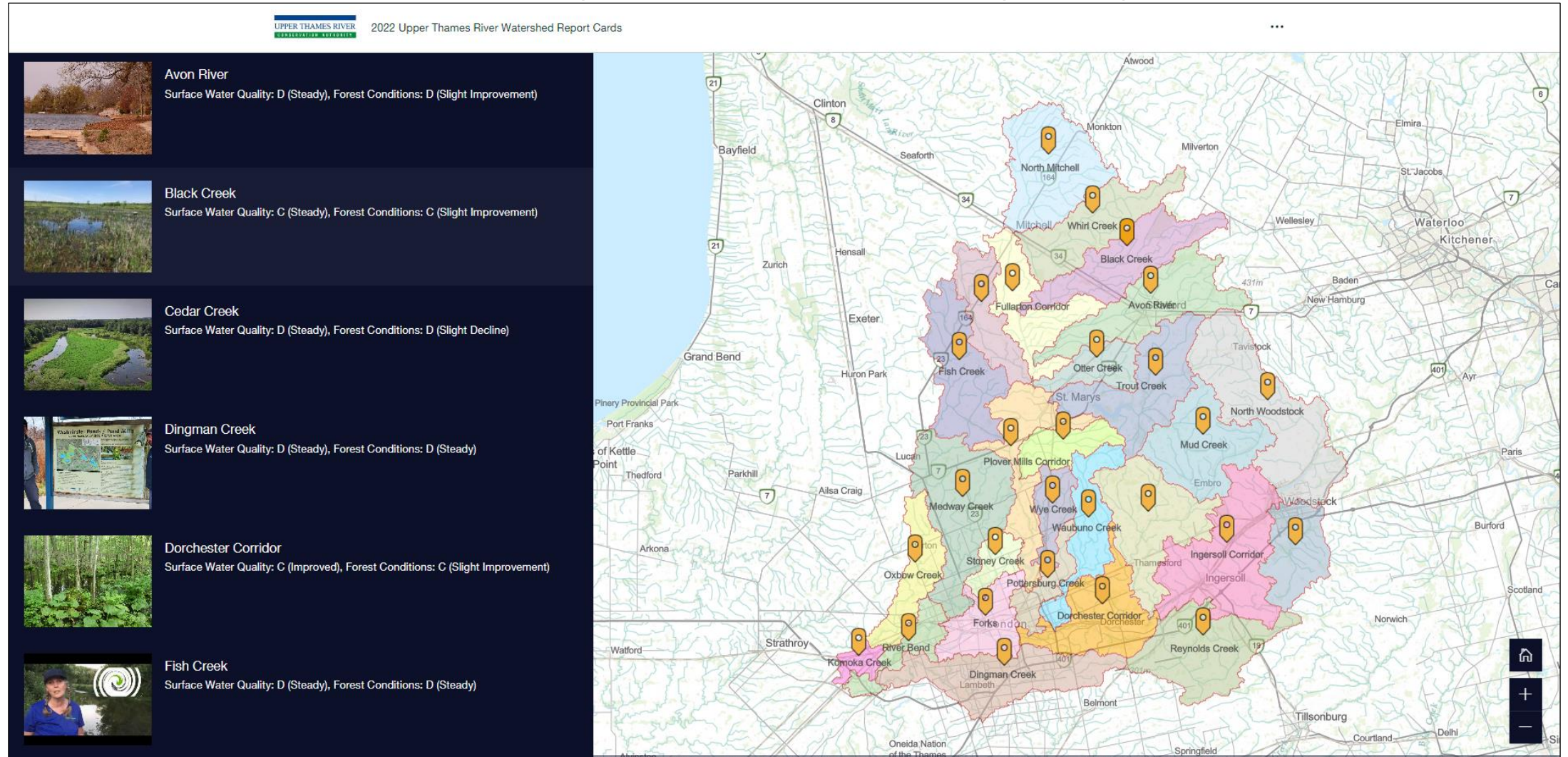
- UTRCA staff
- Municipalities and agencies
- Public
- Partners
- Researcher



New Watershed Report Cards Interactive Map



New Watershed Report Cards StoryMap





UPPER THAMES RIVER
CONSERVATION AUTHORITY

Explore all 28
Watershed Report Cards
and the full report at
www.thamesriver.on.ca





Minutes

Green Advisory Committee

May 18, 2023

5:30 pm

Municipal Operations Centre

408 James Street South, St. Marys

YouTube Link - <https://www.youtube.com/channel/UCzuUpFqxcEI8OG-dOYKteFQ>

| | |
|----------------|--|
| Member Present | Katherine Moffat, Chair Councillor Aylward Teresa Barresi Lynette Geddes Fred Stam Steve Vivian |
| Staff Present | Jed Kelly, Director of Public Works Morgan Dykstra, Public Works and Planning Coordinator |

1. CALL TO ORDER

The Chair called the meeting to order at 5:35 pm.

2. DECLARATION OF PECUNIARY INTEREST

None declared.

3. AMENDMENTS AND APPROVAL OF AGENDA

Moved By Lynette Geddes

Seconded By Fred Stam

THAT the May 18, 2023 Green Advisory Committee meeting agenda be accepted as presented.

Carried

4. DELEGATIONS

None.

5. ACCEPTANCE OF MINUTES

In response to the minutes of the previous meeting, Lynette Geddes commented that the Municipality of Saugeen Shores has launched an electronic home composter pilot project and asked if Town staff have considered a similar pilot project.

Jed Kelly responded that the company running the pilot project had reached out to the Town to gauge the Town's interest in launching a similar pilot project, however, they did not provide a submission in response to the Town's Request for Proposal for Organics Diversion.

Moved By Fred Stam

Seconded By Lynette Geddes

THAT the February 22, 2023 Green Advisory Committee meeting minutes be approved by the Committee, and signed by the Chair and the staff liaison.

Carried

6. REPORTS

6.1 PW 37-2023 Consideration of Future Naturalization Areas

Morgan Dykstra and Jed Kelly spoke to the report and responded to questions from the Committee.

Moved By Councillor Aylward

Seconded By Fred Stam

THAT PW 37-2023 Consideration of Future Naturalization Areas report be received; and

THAT staff investigate the details of Option A and Option C as presented in PW 37-2023 Consideration Future Naturalization Areas report and bring further information back to the Committee.

Carried

7. OTHER BUSINESS

7.1 Protection of the Bobolink (bird species) at the St. Marys Cemetery Site

Lynette Geddes advised the Committee that Bobolink is an endangered bird species, and that the Town could help protect the species by providing an unmowed grass area for the birds to nest and reproduce.

The Committee was of the consensus that further research is required before a recommendation to Council can be made.

Moved By Lynette Geddes

Seconded By Teresa Barresi

THAT staff investigate the feasibility of one section of the St. Marys Cemetery be left unmowed until the end of July each summer, and report back to the Committee at the next meeting.

Carried

8. UPCOMING MEETINGS

Thursday, June 15, 2023 at 5:30 P.M. (Municipal Operations Centre)

9. ADJOURNMENT

Moved By Teresa Barresi

Seconded By Fred Stam

THAT this meeting be adjourned at 6:15 pm.

Carried

Katherine Moffat, Chair

Jed Kelly, Committee Secretary

FORMAL REPORT

| | |
|-------------------------|--|
| To: | Chair and Members of the Advisory Committee |
| Prepared by: | Morgan Dykstra, Public Works and Planning Coordinator |
| Date of Meeting: | 15 June 2023 |
| Subject: | PW 41-2023 Cemetery Turf Maintenance and Threatened Bird Species (Bobolink) |

PURPOSE

The purpose of this report is to explore the feasibility of delaying mowing activities within a dedicated area at the St. Marys Cemetery to allow for the protection of and encouraged breeding of the Bobolink bird species, which is as “threatened” bird species.

RECOMMENDATION

THAT PW 41-2023 Cemetery Turf Maintenance and Threatened report be received; and

THAT the Green Advisory Committee does not proceed with recommending to Council the delaying of mowing activities at the St. Marys Cemetery for the purpose of creating a suitable habitat for the Bobolink bird species.

BACKGROUND

The Ontario Government has labelled the Bobolink (*Dolichonyx oryzivorus*) bird as a “threatened” species, meaning that the species is not endangered, but is likely to become endangered if steps are not taken to address factors threatening it. It is estimated that between 2003-2013 that the Bobolink population had declined by an average annual rate of 4%, which corresponds to a cumulative loss of 33%.

The Bobolink relocates to North America during its breeding season between mid-April to late July, often beginning its migration to South America in August. Typically, the Bobolinks habitat is North American tallgrass prairie, open meadows and hayfields, often building their small nests on the ground in dense grasses. Over time the Bobolink population has declined due to the loss of breeding habitat.

The loss of habitat in Ontario can be attributed to:

- Pasturelands and hayfields which have either been abandoned outright or have been converted to other crop types.
- Changes in hayfield composition and management that affect habitat quality (e.g., a decrease in the proportion of grass cover as a result of an increase in the amount of alfalfa planted, because of its higher nutritional value to livestock).
- Declining reproductive output, when the mowing period of hayfield overlaps with the peak of the birds breeding season.

The Ontario Government has prepared a recovery plan that includes improving nesting productivity and habitat quality while also increasing and maintaining habitat supply of native grassland. One of the

recommendations for achieving these goals is to delay the mowing of hayfields/pasturelands/open space until the breeding period has been completed, and the young birds are able to fly.

The Province has seen some successes since implementing the recovery strategy, by creating and implementing the Grassland Stewardship Initiative and the Made-In-Ontario Environment Plan. The Made-In-Ontario Environment Plan that seeks to improve the resilience of natural ecosystems by strengthening and expanding grassland habitats via the 'Grassland Stewardship Initiative (GSI)' which supports on-farm conservation activities to benefit grassland birds at risk. The GSI offers financial incentives to landowners to create, maintain and enhance grassland habitats. Between 2018 and 2019, the GSI project supported the restoration of 420 hectares of grassland habitat. In addition is the Species at Risk Stewardship Program which has also contributed to the protection and recovery of the Bobolink and has reportedly enhanced nearly 4,000 hectares of habitat that will benefit multiple species at risk.

At the Committee's last meeting, the Committee discussed the feasibility of the Town delaying its mowing activities until late-July at the St. Marys Cemetery to provide a grassland area that will facilitate the protection and breeding of the bobolink species.

The Committee passed the following resolution:

Moved By Lynette Geddes

Seconded By Teresa Barresi

THAT staff investigate the feasibility of one section of the St. Marys Cemetery be left unmowed until the end of July each summer, and report back to the Committee at the next meeting.

Carried

The purpose of this report is to discuss the feasibility of delaying mowing at the St. Marys Cemetery.

REPORT

The Town owns and operates a cemetery within the east ward of St. Marys, the cemetery is approximately 50 acres in size, 18 acres of the site have been developed while the remaining acreage is comprised of natural heritage features (such as woodlot, and pollinator gardens), community gardens, and open space. The Town maintains the turf in existing and future internment areas from April to October of each year, with the expectation that the turf shall be maintained to a maximum height of 3".

The Green Advisory Committee has identified the cemetery lands west of the Charles Street entrance as an opportune location for establishing a grassland for the purpose of protecting and facilitating the breeding of the Bobolink species. This area is approximately 3.9 hectares (9.8 acres) in size, and buffers residential lands. Currently, there are no internments in this area nor are there immediate plans for internments.



In 2014, the provincial government tasked Kristen M. Diemer & Joseph K. Nocera with preparing a report that discusses habitat selection and use for the Bobolink, the following is a summary of their findings:

- Habitat selection is dependent on landscape features, macro and micro-habitat characteristics, prey availability, and inter- and intraspecific interactions.
- When selecting a habitat for breeding, Bobolink places more emphasis on habitat quality rather than habitat size. However, the study primarily focused on a minimum habitat size of 3 hectares (7.41 acres). Generally, the smaller habitats offer a higher quality habitat rather than the larger habitats.
- Territory settlement is described as a “neighbourhood model”, in which older males hold smaller territories clustered in regions of higher quality habitat and younger males with less breeding experience aggregated around the periphery in larger, lower quality territories.
- The Bobolink seeks established hayfields that offer a greater vegetation height, moderate litter depth, and a low proportion of bare soil, and are generally located within an open surrounding landscape.

Based on the information provided in Diemer and Nocera’s article “Associations of bobolink territory size with habitat quality” the area being considered at the St. Marys Cemetery generally offers the features the Bobolink requires when selecting a habitat, for example, the proposed size meets the minimum acreage of 3 hectares, vegetation that can grow to the appropriate height and a low proportion of bare soil.

Despite this, Town staff are not recommending that the Green Advisory Committee proceed with recommending to Council that the Town create a breeding area for the Bobolink at the St. Marys Cemetery for the following reasons:

- The cemetery borders both agricultural and residential land uses, the area proposed immediately buffers residential use, which is atypical for habitat selection, and may deter the Bobolink.
- The Bobolink seeks established hayfields (five to fifteen years) for their habitats, vegetation growth may need to take place for several years prior to the Bobolink deeming the site as a suitable habitat.
- There has been no known sighting of the Bobolink at the St. Marys Cemetery site.
- Town staff have knowledge of an existing Bobolink habitat on private lands within the Town of St. Marys borders. Generally, the Bobolink will often return each year to the same habitat site for breeding – therefore, it is unlikely that they will seek an alternative location in the immediate area.
- There are existing features in the proposed location, including the community gardens, and Hydro One power lines (with associated easements that allow for permanent access to the area surrounding the lines). Meaning disruption to the site could occur, should maintenance or repairs be required along the power lines.

Should the Committee wish to proceed with creating a suitable habitat for the Bobolink species by delaying mowing in the area, at minimum the following steps will need to be undertaken:

- Approval by Council to adjust the turf maintenance service level.
- Notification to neighbouring properties regarding the change in service level, and the reasoning for said service level change via letter and public notice (newspaper, and social media).
- Renegotiation of the Town’s turf maintenance contract with its existing contractor.

- Creation of signage for the area as public education.

In addition, ongoing monitoring will be required to determine if the Bobolink relocates to the site and ensure there are no significant adverse impacts to neighbouring properties due to the naturalization of site for an extended period of time.

FINANCIAL IMPLICATIONS

No financial implications should the Committee choose to follow's staff recommendation. However, there will be financial implications should the Committee and Council choose to delay mowing the proposed area (likely in the form of a cost reduction to a decrease in service).

SUMMARY

The Green Advisory Committee tasked staff with exploring the feasibility of delaying mowing activities at the St. Marys Cemetery to help with the protection of the Bobolink bird species. It is staff's recommendation that the Committee does not proceed for the following reasons:

- The cemetery borders both agricultural and residential land uses, the area proposed immediately buffers residential use, which is atypical for habitat selection, and may deter the Bobolink.
- The Bobolink seeks established hayfields (five to fifteen years) for their habitats, vegetation growth may need to take place for several years prior to the Bobolink deeming the site as a suitable habitat.
- There has been no known sighting of the Bobolink at the St. Marys Cemetery site.
- Town staff have knowledge of an existing Bobolink habitat on private lands within the Town of St. Marys borders. Generally, the Bobolink will often return each year to the same habitat site for breeding – therefore, it is unlikely that they will seek an alternative location in the immediate area.
- There are existing features in the proposed location, including, the community gardens, and Hydro One power lines (with associated easements that allow for permanent access to the area surrounding the lines).

STRATEGIC PLAN

☒ Not applicable to this report.

OTHERS CONSULTED

N/A

ATTACHMENTS

N/A

REVIEWED BY

Recommended by:



Morgan Dykstra
Public Works and Planning Coordinator



Jed Kelly
Director of Public Works