UPPER THAMES RIVER



June 2019

www.thamesriver.on.ca

Twitter @UTRCAmarketing



Water sampling at groundwater monitoring wells.

2019 Water Monitoring Programs Accompanied by frequent rain and high flow conditions this

Accompanied by frequent rain and high flow conditions this spring, the UTRCA's long term water monitoring programs are well underway for 2019. Water monitoring is important to better understand stream health and pollution levels, help direct new work, and measure progress towards targets in the Upper Thames watershed. The 2017 Upper Thames River Watershed Report Cards provide a recent five-year summary of environmental conditions, including results of monitoring data for the 28 watersheds in the upper Thames River. The following is a report on some of this year's monitoring programs.

Stream Water Quality

The UTRCA monitors 28 stream sites monthly for water chemistry (such as nutrients and metals) as part of the Ministry of the Environment, Conservation and Parks' Provincial Water Quality Monitoring Network. Bacteria (*E. coli*) is monitored at these same locations through a partnership with local Health Units.



Facebook @UpperThamesRiverConservationAuthority

This monitoring program has run for 50 years and gives a good measure of long term pollutant levels and emerging issues. As part of the UTRCA Environmental Targets work, additional sampling was added in 2018 to ensure all 28 subwatersheds have the same sampling regime. Winter sampling was added at five sites to better understand high pollutant levels in runoff that increasingly occurs during winter months.

Groundwater

The UTRCA has 28 monitoring wells in the Provincial Groundwater Monitoring Network (PGMN) where water levels are monitored continuously. The data is used in-house for the Ontario Low Water Response Program. These wells are also monitored for water quality to understand emerging issues in local groundwater. The UTRCA has an additional 15 monitoring wells that are sampled for water quality, in partnership with the City of London. The <u>PGMN water quality and quantity data</u> is used for plan review and is available online.



Benthic Invertebrates

Benthic invertebrates (organisms that live in stream sediments) are monitored as an indicator of water and aquatic ecosystem quality. Approximately 100 samples will be collected this year. Our first round of benthic monitoring was finally finished on June 10 after a very wet spring with extended periods of high

and fast water in many watercourses throughout the watershed. The sites included the 28 sites that contribute to Watershed Report Cards, and a set of reference (or least impacted) sites. In September, samples will be collected at additional reference sites, as well as at sites where we are monitoring urban and rural development and remedial projects.



Collecting benthic invertebrates.



The rainy spring presented some challenging in-stream conditions for both staff and aquatic health. The water quality benefits provided by trees were evident in this creek, the day after a major rain event. The creek was running clear in a well-treed headwater area (photo above), but heavily silted further downstream in an open agricultural area (photo below).



Fish Inventories

Fish sampling this year will be conducted on watercourses where fish community data is lacking, as part of a partnership with the Department of Fisheries and Oceans. Additional fish sampling is being conducted throughout the watershed for project related work.

Pesticides

The UTRCA continues to monitor for pesticides as part of an Ontario Ministry of Agriculture, Food and Rural Affairs Agricultural Pesticide Study, which started in 2004. This year, three rural stream locations (Gregory, Otter, and Reynolds Creeks) will be monitored from May to November to assess pesticide levels in these streams.



Monitoring for algae, oxygen, and temperature at Fanshawe Reservoir.

Reservoir Monitoring

The UTRCA's reservoirs are monitored for dissolved oxygen and temperature conditions to help inform reservoir management decisions, particularly during warm months when algae blooms can occur that may create low oxygen conditions for fish. Routine monitoring is conducted from June to September at Fanshawe, Wildwood, Pittock, Stratford, and Mitchell reservoirs.

In-stream Meters

The UTRCA has dissolved oxygen, temperature, and conductivity meters that take continuous readings. The meters are used to measure in-stream conditions, including measuring



Installing meters at the Medway Creek in-stream project.

the benefits of stream restoration work at specific sites. This year, natural channel restoration work through a section of Medway Creek will continue to be monitored to show the benefits of this work for aquatic life.

New Projects

Dingman Creek Water Monitoring

UTRCA was recently contracted by the City of London to complete a three year pilot monitoring program to measure environmental conditions as part of the performance evaluation of the City of London's Dingman Creek Municipal Stormwater System-wide Environmental Compliance Approval. Beginning in January 2019, water samples are taken monthly at 13 locations along the main branch of Dingman Creek. Beginning in the fall of 2018, benthic samples are collected and analyzed by UTRCA for the same 13 locations. Temperature loggers are currently being deployed at several sites on tributaries within the Dingman Creek watershed. This data will be used to confirm the thermal regime of these watercourses. In conjunction with the temperature loggers, fish sampling will be conducted later in the summer to see if the fish species captured coincide with the temperatures recorded. As part of this project, the UTRCA will also be establishing and maintaining additional flow gauging stations on the Dingman.

Pharmaceuticals in Streams

In 2018, a new partnership with the local research team at Agriculture and Agri-food Canada started with a project to test area streams for the presence of veterinary and human pharmaceutical products. An initial sampling of the 28 stream sites was done, and monthly sampling of sediment and water is continuing this year at five sites.

Contact: Karen Maaskant, Water Quality Specialist, Karla Young, Monitoring Technician, and Michelle Fletcher, Aquatic Biologist

Rural Landowner Survey Conducted After holding its annual Rural Landowners Workshop in

After holding its annual Rural Landowners Workshop in St. Marys in March, the UTRCA Conservation Services Unit conducted a survey to gather feedback from rural landowners within the Upper Thames watershed. The survey was available online through Survey Monkey, and in hard copy at the workshop.

Nearly 100 landowners responded, with most using the online survey. These landowners provided valuable feedback on the UTRCA's tree planning program and other services.

The key findings include:

- The primary barrier to planting more trees is the cost to the landowner;
- The second most common response was that there is not a barrier to planting trees and that the respondent, in fact, plants plenty of trees;
- A majority of respondents (63%) prefer tree planting to planting a prairie or grassland and/or creating a wetland on their property;
- Approximately 20% indicated being equally open to planting prairie or grassland and/or creating a wetland as planting trees.

Based on the interest indicated in the survey, the UTRCA staff plan to continue working with landowners to offer new programs in addition to tree planting. We hope, with ongoing outreach and education, that more landowners will be open to planting prairie or grassland, or creating a wetland.

Contact: Jay Ebel, Forestry Technician (Habitat)



These Grade 8 students and their teacher installed bird houses and planted native wildflowers at Jack Chambers Public School.

Spring Wildflowers & Aquatic Plants The Communities for Nature "Spreading like Wildflowers" and

The Communities for Nature "Spreading like Wildflowers" and "Aquatic Connections" programs are underway during the last part of May and June. Projects include 3600 native wildflower plugs being planted in Mitchell and at Westminster Ponds (London), Pittock Conservation Area, Jack Chambers Public School (London), Bedford Public School (Stratford), a new Low Impact Design (LID) rain garden in Ingersoll, and an LID project at Jeanne Sauve Public School (London).

As well, 3700 aquatic plants are going into Woodstock's Hodges Pond and Burgess Park, and the Thorndale stormwater management pond.

Contact: Karen Pugh, Resources Specialist

2019 Children's Water Festival

The 2019 London-Middlesex Children's Water Festival was a great success! More than 3,400 students attended the Festival and learned about water in their communities. Fifteen organizations came together to plan this excellent event which helped students better understand this precious resource. We had 600 volunteers give their time to share the water conservation, water technology and water science messages with students from across London



Thank you! to all the volunteers who helped make the Festival happen!



and Middlesex! The three "Great Lakes" Sponsors for this week-long event were the City of London, the Thames Valley District School Board, and the UTRCA.

Family Night

This year, we held the first Water Festival Family Night event in London. We invited outside organizations to partner with us to

spread their water-related messages, including the Antler River Rally, City of London, London Police Services, London Public Library, Thames River Anglers, Thames Talbot Land Trust, and many more. We also worked with the London Heritage Council to coordinate the transportation of 80 newcomers to Canada to visit the Family Night.

It was a beautiful night and we were delighted to have 1,118 people attend this free Family Night!

- Water Festival Video
- Water Festival Photos
- Festival Family Night Photos

Contact: Linda Smith, Water Festival Coordinator





The Water Festival Family Night was a hit!



Board of Directors - On the Agenda The next UTRCA Board of Directors meeting will be on

The next UTRCA Board of Directors meeting will be on June 25, 2019, at the Watershed Conservation Centre, located in Fanshawe Conservation Area. Draft agendas and approved minutes are posted on the "Board Agendas & Minutes" page at www.thamesriver.on.ca.

- 2020 Budget Concepts Memo
- Benefits Renewal Annual Renewal
- 20 Year Flood Control Capital Plan: Update
- Provincially Instigated Changes to Conservation Authorities
 Act Bill 108
- Administration and Enforcement Section 28
- Orientation Presentation: Conservation Areas
- Children's Water Festival Presentation

Contact: Michelle Viglianti, Administrative Assistant

UPPER THAMES RIVER

www.thamesriver.on.ca Twitter @UTRCAmarketing Facebook @UpperThamesRiverConservationAuthority 519-451-2800

4