



2023 Annual Report



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Introduction

Mission & Vision

At Quinte Conservation Authority (QC), our **Vision** is to advance watershed knowledge and collective actions to strengthen our natural ecosystems. This is supported by our **Mission** in creating a sustainable ecosystem where people and nature live in harmony.

A message from our Board Chair

Despite monumental shifts in the manner in which Quinte Conservation (QC) and all other conservation authorities (CAs) operate in Ontario, 2023 was a year of accomplishments and adaptation. By examining some of the highlights and hurdles QC faced in 2023, we can see how a nimble approach to adaptability has become one of our hallmarks for moving forward over the past year.

It is because of the ever-changing platform upon which we have been asked to perform our legislated duties, we have come to appreciate and embrace the resiliency of our remarkable staff and partners in helping adapt to the legislative changes imposed upon us by the provincial government, such as the changes made to programs and services once O.Reg 596/22 of the Conservation Authorities Act came into effect on January 1, 2023, and Bill 23 the More Homes Built Act. QC's efforts also ensured the watershed's resilience to hydrological events in 2023, for example, monitoring the Moira River's Spring Freshet, which was higher than the previous two years.

The past year was marked by several remarkable milestones that underscored the organization's commitment to environmental stewardship and community engagement, for example, QC contributed 10,357 hectares of conservation areas and reserves towards Canada's international commitment to protect 30 percent of lands and waters by 2030. We continued to monitor the Bay of Quinte for problem areas from blue-green algae blooms and invasive species like Water Soldier, approaching the eventual de-listing from a 'Great Lakes pollution hot-spot or area of concern'.

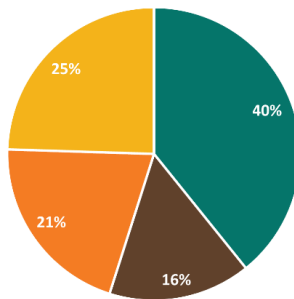
In all, 2023 can be summed up as a year of change and challenges, but not insurmountable in our ability to address the changing realities of a political climate in which our roles are required to meet those changes and challenges. We will continue, in 2024, to carry out our mandates,

help our member municipalities deal with climate change initiatives and adaptations and our key role in watershed management and stewardship.

Thank you for being our partners on the journey!

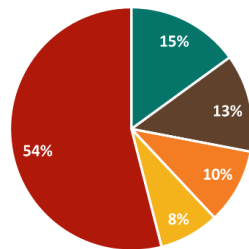
Financial Summary

2023 Revenue **\$5,850,000**



■ Levy ■ Ministry of Natural Resources and Forestry ■ Other grants & Fundraising ■ User Fees

2023 Expenditures **\$5,850,000**



■ Corporate Services ■ Land Management & Conservation Areas
■ Planning & Regulations ■ Stewardship Services
■ Watershed Management

Permits & Planning

QC's Planning and Regulations Department made significant changes to their programs and services provided to their municipal partners when O.Reg 596/22 of the Conservation Authorities Act came into effect on January 1, 2023.

The new regulation prevents QC from providing technical review and comments related to natural heritage, hydrogeology for private services, and specific aspects of stormwater management on proposals and files circulated to QC under the Planning Act (1990).

The new regulation means QC is limited to commenting only on natural hazards, Source Water Protection and stormwater quantity, while municipal partners are required to seek out private consultants to conduct these important reviews. This has resulted in additional costs to applicants and a regrettable loss of a holistic, watershed-guided review.

In addition to the new regulation, a Minister's Order was issued in December 2022 which froze all CAs fees associated with planning and permitting fees. A nominal cost of living increase is typically applied to QC's fee schedule each year, however for 2023 this was not permitted, and the Order has since been extended throughout all of 2024.

The QC Planning and Regulations Department is based on a cost recovery model from user fees, municipal levy and some Section 39 Transfer payment dollars. The freeze on fees creates an imbalance on QC's annual budget which, in 2023, had an unfortunate negative impact on the department. Despite these changes, staff adapted and continued to provide timely and informed services to ensure responsible development in the watershed.



420
Planning Applications



370
Permits Issued



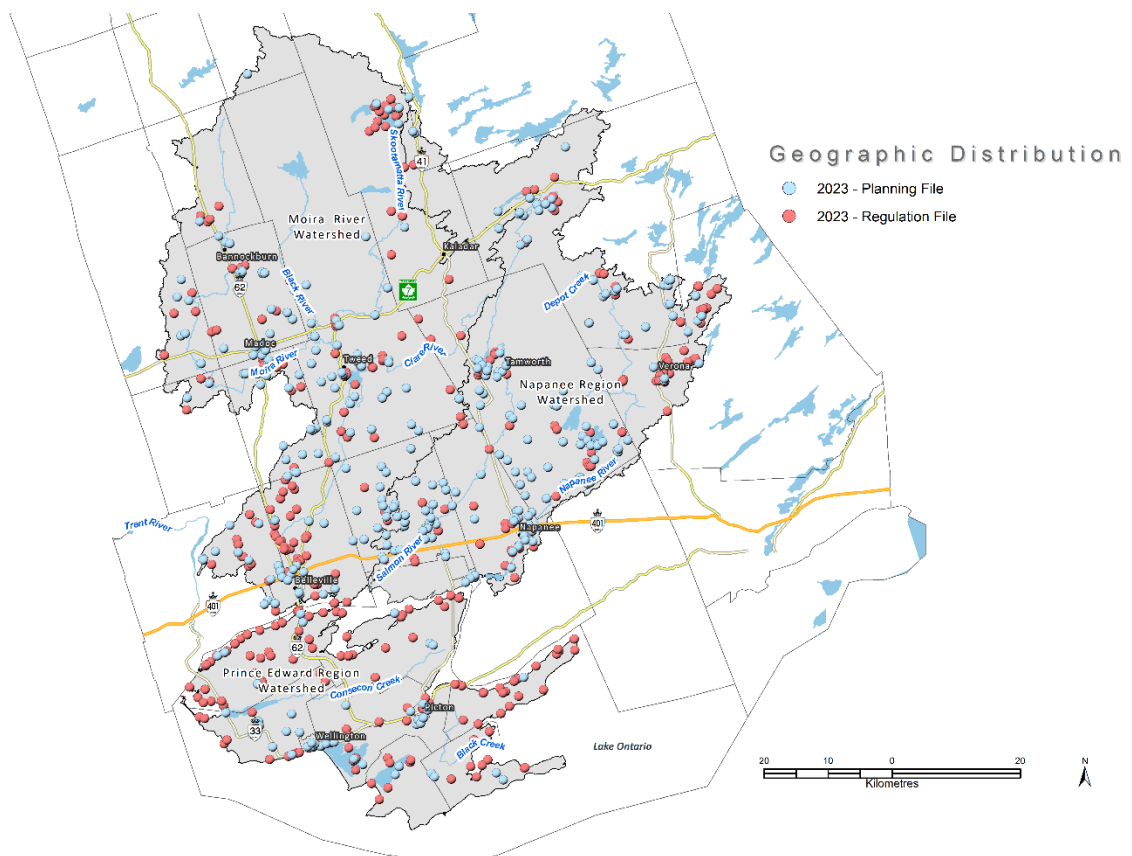
560
Site Visits

Planning

In 2023, staff reviewed over 420 planning applications including subdivisions, site plan control applications, official plan and zoning by-law amendments, consents and minor variances. An additional 64 Property Clearance/Legal Letters were issued to lawyers and prospective purchasers, providing valuable information on the various environmental features on newly purchased properties.

Permit Applications

In 2023, 391 applications were received and over 370 permits were issued. Three applications were denied, which resulted in two hearings before the QC Executive Board. QC staff were successful at the hearings and received a positive outcome from an appeal to the Ontario Land Tribunal. Reports from concerned landowners regarding development that may not be permitted are diligently followed up on by staff and nearly 40 investigations were carried out.



Staff conducted 560 site visits across the QC watershed.

The Planning and Regulations Department released two new guidance documents in 2023:

1. The Karst (Unstable Bedrock) Investigation Guidelines outline the expectation for technical studies that are required when Karst topography is suspected on a property. The implementation of these guidelines should help minimize time spent by both the applicant and QC staff in the completion and review of technical studies and improve the understanding hazard.
2. The QC Section 28 Compliance and Enforcement Administrative Guidelines outline QC's approach to compliance and enforcement activities including complaint response, identifying known or potential violations, and making decisions on the appropriate level of action to take for complaints, violations, and non-compliance issues. The guidelines should help to ensure consistency and transparency regarding these important decisions.

In addition, an updated online permit application form and the option for online payment was introduced and posted to QC's website and has drastically cut down on the processing time of permit applications and plan review.

Learn more about Planning and Regulations [here](#).

Water Levels

2023 Spring Freshet

The spring freshet of 2023, was comparatively uneventful compared to historic norms. Although peak springtime flows saw a general increase in all watersheds from the previous two years, it was still below the typical spring peak of bank full conditions. This year, only the Moira River had a notable response, slightly exceeding this typical condition.

Moira River

The 2023 Spring Freshet on the Moira River was notably higher than the previous two years (just exceeding Bank Full Conditions), and representative of springtime levels across QC watershed.

The Spring Freshet for the Moira River is considered the snow melt induced river peak, in the springtime between mid-March and early May.

| 2023 Spring Peak Flows | | | | |
|------------------------------|---------------|----------------|----------------------|-----------------------|
| River | Date | Peak Flow (cm) | Bankfull (2 yr) (cm) | Highest Recorded (cm) |
| Moira River at Foxboro | April 9, 2023 | 249 | 210 | 364 |
| Salmon River at Shannonville | April 7, 2023 | 68.5 | 77 | 141 |
| Napanee River at Camden East | April 8, 2023 | 45 | 69 | 78 |

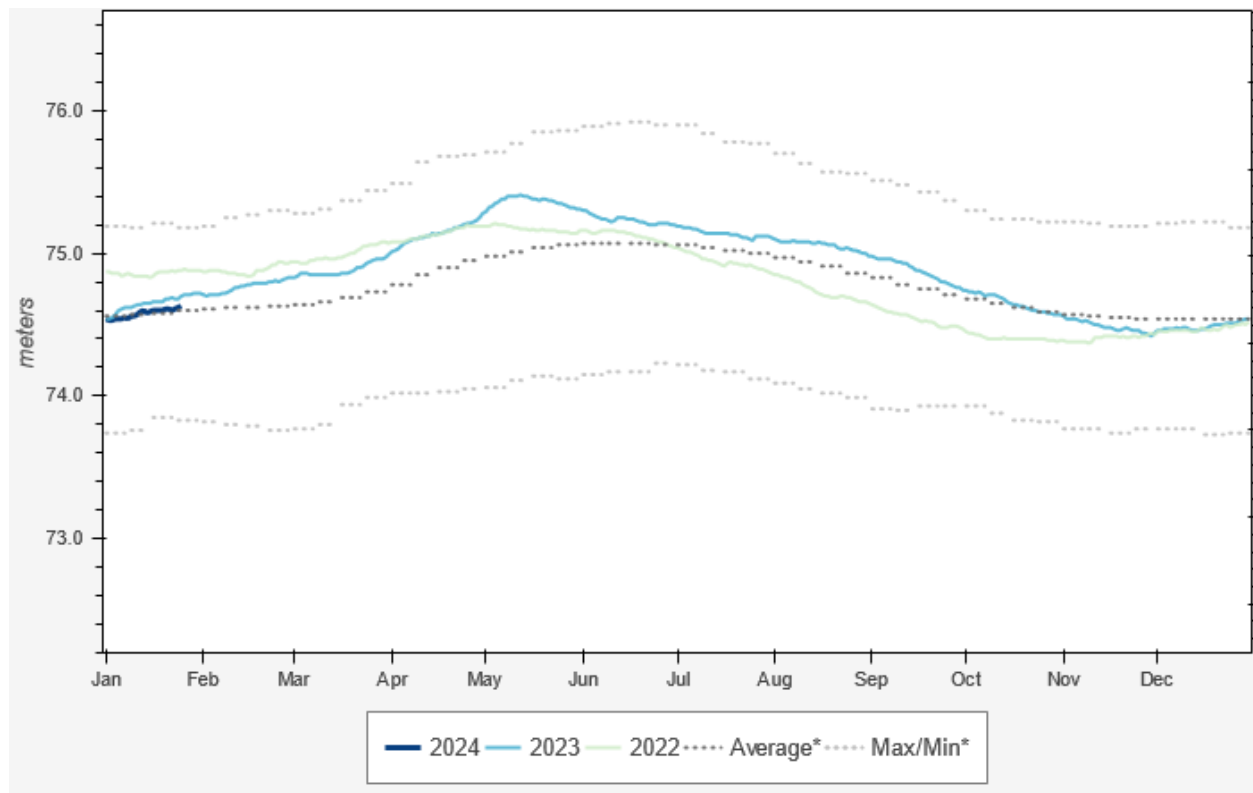
| Recent Yearly Peak Flows | | | | | |
|------------------------------|------|------|------|----------------------|-----------------------|
| River | 2021 | 2022 | 2023 | Bankfull (2 yr) (cm) | Highest Recorded (cm) |
| Moira River at Foxboro | 113 | 173 | 249 | 210 | 364 |
| Salmon River at Shannonville | 42 | 53 | 68.5 | 77 | 141 |
| Napanee River at Camden East | 25 | 48 | 45 | 69 | 78 |

The Freshet started with typical timing, around March 16. It was preceded by some incremental snow melt starting in mid-January, which by mid-March had melted out a notable portion of the total seasonal snow accumulation. The final snow melt occurred steadily over the course of two weeks into early April.

The arrival of springtime rains, which significantly increased the final peak flow, differed from last year. Snow over most of the watershed was depleted well before the peak around March

26. The northern part of the watershed retained an average snowpack, which continued to melt out during the rain events. However, a series of thaw and freeze cycles resulted in a drawn-out event.

Due to notable rainfall at the end of the snow melt cycle, 2023's springtime peak flow was bumped up to the two-year flood range.



Lake Ontario

Lake Ontario outflows were significantly above average in efforts to try and reduce water levels to near normal conditions in the beginning of 2022. By mid-September, Lake Ontario water levels were below the long-term averages. Aggressive outflow management by the International Joint Commission continued well into the fall and low precipitation levels over the summer contributed to this condition. The water levels in 2023 were above the long-term normal range.

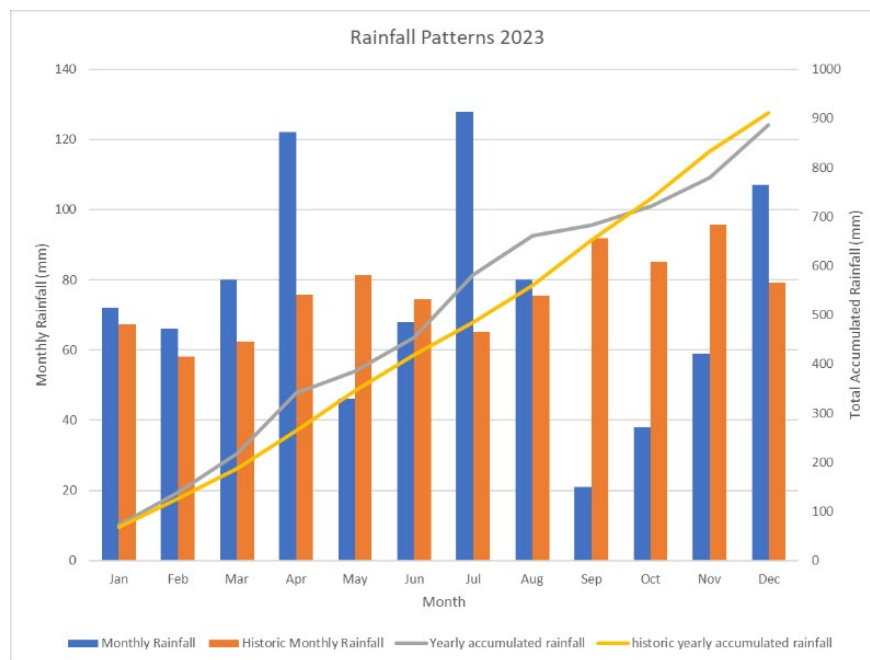
Lake Ontario water levels are influenced by uncontrolled inflow from Lake Erie, precipitation, local runoff directly into Lake Ontario, and allowable Lake Ontario outflows. All the Great Lakes are currently experiencing higher than average lake levels. Eventually, this water must pass

through Lake Ontario. It can be expected that above average inflows into Lake Ontario, and aggressive outflow rates, are anticipated to continue for several more years. However, a return to flooding levels experienced during 2017 and 2019 is unlikely.

In 2023, lake levels did not require QC staff to issue any long-term flood messages to the public.

Low Water Conditions

Although there was no Low Water or Drought Condition declaration in QC's watershed in 2023, precipitation patterns were unsettled and variable over the course of the year. The overall precipitation received by the region by year end was very close to the long-term average, there were two multi-month dry periods interspersed by wet months that mitigated the impact. Although there were months that were dryer than normal, the conditions were short lived that would cross thresholds to declare a Low Water status.



The winter and early spring had average to above average precipitation. A wet April raised the springtime flows into a more typical Bank Full Condition.

The impacts of a dry, late spring were then offset by a wet July. Summer surface water flows and lake levels became unusually high, reaching springtime levels (but not flood risk levels), after a series of large widespread summer rain events.

With surface and ground water fully recharged by the end of July, the impacts of the subsequent dry period in September through November were largely mitigated. The absence of rainfall during this period moved the thresholds into a low water condition on a moving three-month basis, as improving rainfall amounts arriving in later half of November, indicated reduced risk on a one-month basis.

| Low Water Precipitation Indicators | | | | | | | | | | | | | |
|--|-------------------|------------|--------------|------------|--------------|--------------|--------------|------------------------------|---------|---|---|---|------------|
| Month: | Nov | | | | | | | | | | | | |
| Day: | 30 | | | | | | | | | | | | |
| Watershed | Gauge | Current | | | | Historical | | Percent of Historical Precip | | Rainfall Needed to move out of Level 3 (mm) | Rainfall Needed to move out of Level 2 (mm) | Rainfall needed to move out of Level 1 (mm) | Data Since |
| | | Date** | 1 Month (mm) | Date** | 3 Month (mm) | 1 Month (mm) | 3 Month (mm) | 1 Month | 3 Month | | | | |
| EC Gauges | | | | | | | | | | | | | |
| | Belleville | 2023-11-30 | 60.0 | 2023-11-30 | 120.0 | 95.7 | 270.1 | 63% | 44% | N/A | 42.0 | 96.0 | Jan 1866 |
| | Point Petre (PEC) | 2023-11-30 | 69.0 | 2023-11-30 | 138.0 | 95.7 | 270.1 | 72% | 51% | N/A | 24.0 | 78.0 | Jul 2020 |
| | Centreville | 2023-11-30 | 47.0 | 2023-11-30 | 110.0 | 100.9 | 300.1 | 47% | 37% | 10.0 | 70.0 | 130.0 | Dec 1985 |
| | Trenton | 2023-11-30 | 63.0 | 2023-11-30 | 109.0 | 95.5 | 266.5 | 66% | 41% | N/A | 50.9 | 104.2 | Jan 1935 |
| | Bancroft | 2023-11-30 | 53.0 | 2023-11-30 | 164.0 | 83.8 | 250.2 | 63% | 66% | N/A | N/A | 36.1 | Jun 1995 |
| QC Weather Station | | | | | | | | | | | | | |
| NRW | 2nd Depot Lake | 2023-11-30 | 41.0 | 2023-11-30 | 105.0 | 102.4 | 206.0 | 40% | 51% | N/A | 20.4 | 59.8 | Jan 2005 |
| **Dates that are red indicate that there is no recent data from the last 7 days. These gauges should not be used in low water decisions. | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| *Update current values manually from Environment Canada's website | | | | | | | | | | | | | |
| **Dates that are red indicate that there is no recent data from the last 7 days. These gauges should not be used in low water decisions. | | | | | | | | | | | | | |

Rainfall in December brought the total annual rainfall up to the average range, as well as a full recovery of stream flows and groundwater, just ahead of the ground freezing.

Flood Mitigation Investigations

In the spring, QC received final reports for the Lane Creek and Deer Creek Flood Mitigation Investigations. The purpose of the reports was to explore opportunities to reduce the floodplain along the creeks to protect people and property from flooding. Deer Creek information was presented to Centre Hastings Council in July.

To reduce the flood damage to existing residential and commercial properties within the Town of Wellington, the preferred alternative was to divert flood waters east of Belleville Street. This alternative would have the added benefit of reducing the floodplain on vacant lands which could be developed in the future. The report recommended improvements to the Niles Street culvert. Similar to the Deer Creek study, the preferred alternative would be costly to implement. Further investigation would be required to assess the feasibility of the project.

Beaver Activity

There are hundreds of beaver dams in the Quinte watershed. In 2023, some lakes with residential properties along the shoreline saw water levels rise due to the presence of beaver dams. In 2023, beaver dams caused water levels to rise on Fifth Depot Lake and Mellon Lake.

Around July 1, beaver dams at Joeperry and Pearson Lakes in Bon Echo Park breached, causing high water levels on Wolfe Creek. Downstream, Skootamatta Lake rose to spring water levels. Some shoreline residents experienced flooded docks because the water levels were unexpected in the summer. QC notified residents of the beaver dam breach and advised residents to secure loose items along the shoreline. QC also operated the Skootamatta Lake to alleviate high water levels.

On August 10, a 25 mm rainfall event caused a suspected beaver dam breach upstream of Mellon Lake. Mellon Lake exceeded typical spring conditions. Members of the public reported significant beaver debris on Mellon Lake, docks underwater, and water overtopping the banks of the Clare River. QC issued a media release notifying residents of the high-water levels.

On August 16, another beaver pond release washed out the entrance to Sheffield Conservation Area. This prompted the closure of the entrance to avoid vehicular damage. The entrance was repaired on August 17 and access was reopened.

Downstream of beaver dam breaches experience high water, however, as the beaver ponds drain, water levels decrease upstream. This was the case on Varty Lake in the fall.

QC does not manage beaver activity and encourages the public to be mindful of provincial and federal guidance when addressing any beaver concerns. The MNRF provides resources on what to do [if beavers are causing damage to properties](#) and who to contact for advice on how to control the level of water behind a beaver dam. DFO has [a code of practice](#) for beaver dam breaches and removal to prevent harmful impacts to fish and fish habitat.

Water Control Structures

QC owns, operates and maintains 40 water control structures (dams) in the Quinte watershed, each providing flood management, raising low water levels, recreation, water supply, habitat creation, historic, and/or hydro power production. Major maintenance on these structures is often supported through the Water and Erosion Control Structure Infrastructure (WECS) program, sponsored by the Ontario Ministry of Natural Resources and Forestry (MNRF).

Colebrook Dam Safety Review and Public Safety Risk Assessment

The Colebrook Dam, built in 1966 with a major rehabilitation in 1980 and 2015, underwent a Dam Safety Review (DSR) per MNRF guidelines and a Public Risk Assessment.

The DSR found the dam to have a Low Hazard Potential classification. The dam was found to be structurally stable. Several minor public safety measures were suggested such as increased signage and fencing. These measures will be explored in a timely manner.



Photo 1: Looking East at downstream face.

Third Depot Apron Removal

The 3rd Depot Dam consists of a main dam, a saddle dam, and a concrete overflow weir. Downstream of the overflow weir was a concrete apron. This apron began to collapse due to

undermining, and presented a safety issue as it was part of a recreational trail. In the spring, this issue was resolved by breaking up the apron concrete to avoid collapse. Trail signage was also modified to minimize any users that may cross the rubble.



Photo 2: Looking East, post apron demolition.

Upper Arden Dam Trash Rack

Debris at the Upper Arden Dam was an ongoing concern as it frequently plugged up the dam's log bay. This slowed the flow over the dam and lowered the downstream water levels. In the spring, QC staff installed a trash rack which is designed to protect against clogging under all flow conditions. To date, the trash rack has been effective.

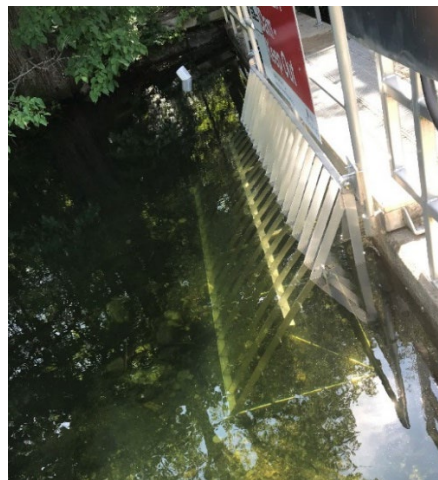


Photo 3: Upper Arden Trash Rack Following Installation

Middle Arden Dam Log Replacement

Through the 2018 Capital Asset Management Plan, staff recommended that the Middle Arden Dam logs be replaced due to increased leakage between the logs. The head pond was becoming increasingly difficult to keep at elevation particularly during drought conditions. Staff completed this replacement in the summer.



Photo 4: Middle Arden Dam: Looking Upstream at the Logs. Post Replacement. Water elevation is overtopping the top log.

Watershed Monitoring

QC is involved in several monitoring programs that collect scientific data to assess the ecological health of the Quinte watershed, track trends, and alert potential issues.

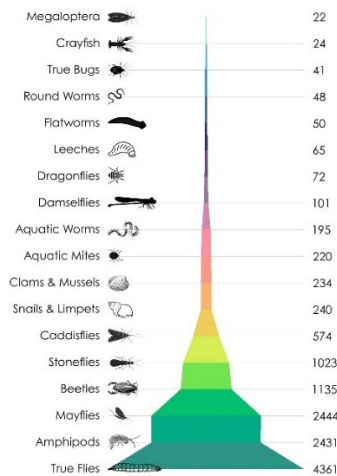
The following programs are critical to producing QC's Watershed Report Card, which is a summary on the state of forest and wetland conditions, and surface water and groundwater resources. In 2023, staff published the [2017-2021 Watershed Report Card](#). QC's watersheds (Moir River, Napanee River, Salmon River and Prince Edward Peninsula) are assessed on four categories and scores ranged from 'A' to 'B'.



Benthos (Benthic macroinvertebrates)

The [Ontario Benthos Biomonitoring Network](#) (OBBN), designed and managed by the Ministry of Environment, Conservation and Parks (MECP), is a provincial network used to monitor the quality of the watersheds.

Staff sampled 48 sites throughout various streams of the Quinte Watershed in 2023. The data gathered supports the identification of stream conditions. By tracking these sites long-term, we can later determine the conditions of various watersheds and sub-watersheds, as well as detect changes in the water quality. Staff identified 15,755 benthic invertebrates. (See illustration)



Surface Water

In collaboration with the MECP, QC has been participating in the [Provincial Water Quality Monitoring Network](#) (PWQMN) for more than 50 years, collecting monthly water quality information. Surface water quality samples are collected from 28 monitoring sites across the Quinte Watershed between April and October.

Groundwater

Through the Provincial Groundwater Monitoring Network (PGMN), QC conducted water level data collection and performed maintenance at 28 PGMN sites, and water quality sampling was conducted at 19 of these sites in 2023.

QC tests samples on a rotational basis for metals, nutrients, and general chemistry, with certain wells also tested for pesticides and bromides; to assess aquifer status while adding to our knowledge of groundwater studies. The network also provides an early warning system for changes in water levels caused by climate conditions or human activities, and information on regional trends in groundwater quality. The groundwater level readings are taken hourly and are stored in a datalogger for either manual or remote-automated download.



15,755
Benthic Invertebrates
Identified



28
Surface Water Quality
Sites Monitored



232
Base Flow Sites
Monitored

Baseflow

QC staff complete baseflow monitoring in 30 sub-watersheds at approximately 232 sites. Initially, data was collected to help establish baseline conditions and to improve understanding of the watershed's conditions in respect to the [water budget](#). The need arose from estimates of groundwater recharge. However, this data may also be used in assessing areas for fisheries and in interpreting water quality data.

Snow Sampling

Snow depth information is routinely collected from 15 sites throughout the winter months to aid in precipitation estimations and flood forecasting. Over the course of the year's snowy periods, staff performed 150 snow depth surveys throughout the watershed.



150
Snow Depth Surveys
Performed



28
PGMN Wells with
Maintenance Visits



19
Ground Water Quality
Sites Monitored

Long Term Monitoring & Coastal Wetlands

Long-Term Monitoring Program (Bay of Quinte Blue-green Algae Watch)

Since 2009, QC has been working with the Bay of Quinte Remedial Action Plan (BQRAP), Government of Canada, Government of Ontario, local agencies, and municipalities in collecting water quality data from the Bay of Quinte to learn about when, where, and why blue-green algae (cyanobacteria) blooms occur.

The Long-Term Monitoring Program is designed to monitor water quality every two weeks from May to October at nine sampling sites around the Bay, from the Murray Canal to Picton Harbour (pictured in map).

In 2023, the Long-Term Bay of Quinte Phosphorus Management Plan targets for the Upper Bay of Quinte were not met, except for [microcystins](#). The short-term targets for [Beneficial Use Impairment](#) #8 were met. The reduction of total phytoplankton biomass has been met.

QC, along with the BQRAP and partner agencies, has reduced the amount of phosphorus entering the Bay of Quinte from multiple sources, both rural and urban, such as sewage treatment plants, stormwater run-off, and agricultural land practices.

Despite the reductions in phosphorus inputs, the current phosphorus levels are still a major concern. The data collected through the Long-Term Monitoring program is essential for the implementation of the Bay of Quinte Phosphorus Management Plan for the long-term monitoring targets associated with eutrophication, phosphorus concentration and loadings.



Coastal Wetlands

In 2023, QC entered the 15th season of our Bay of Quinte Coastal Wetland Monitoring Program.

Coastal wetlands can tell us a lot about the health and the function of the Bay of Quinte's water quality, invasive species, and effects from climate change. The absence of monitoring programs puts the Bay of Quinte at risk and damage goes unnoticed until it's too late or too expensive to correct any issues.

The Bay of Quinte's 15 coastal wetlands, which cover approximately 4,367 hectares, score higher in Index Biotic Integrity (IBI) than other coastal wetlands within the Great Lakes. Through stewardship and restoration activities with the BQRAP, the quality of our coastal wetlands has improved and are considered to be more productive and diverse than others in Lake Ontario.



All submerged aquatic vegetation scored from **Very Good** to **Excellent**



Fish results scored from **Good** to **Excellent**



37
Submerged Aquatic Vegetation Species Identified



17
Fish Species Identified

Water Soldier

Since detection in 2021, extensive monitoring for Water Soldier, an invasive aquatic plant, was completed in 2022 and 2023 to determine the extent of the population and lead to the discovery of large colonies in the western half of the Bay of Quinte.

Since the initial discovery of Water Soldier in the Trent River, an inter-agency Technical Working Group was established to help coordinate research, monitoring, control, and prevention strategies. QC joined a new Technical Working Group for the Bay of Quinte in 2023.

Impacts on Great Lakes Ecosystems:

- Forms thick mats of floating and submerged vegetation
- Aggressively outcompetes native species
- Has the potential to alter surrounding water chemistry
- Can interfere with infrastructure
- Threatens the diversity of aquatic ecosystems
- Significantly impedes recreational activities such as boating, fishing, and swimming

For more on information on water soldier visit invadingspecies.com.

If you find water soldier or another invasive species in the wild, please contact the toll-free Invading Species Hotline at 1-800-563-7711, visit EDDMapS, or search for the 'Invasive Species in Ontario' project on iNaturalist.org.



25
Water Soldier Surveys Completed



37
Water Soldier Populations Managed



141
eDNA Samples Collected



44
Informational Signs Posted around BoQ

Conservation Lands Management

30 by 30 Target

QC proudly announced its contribution of 10,357 hectares of conservation areas and reserves towards Canada's international commitment to protect 30% of lands and waters by 2030, commonly known as the [30x30 target](#).

The target, which was adopted by nations around the world as part of the Global Biodiversity Framework at the United Nations Biodiversity Conference (COP 15), aims to protect biodiversity, mitigate impacts of climate change and ensure the sustainability of ecosystems.

Based on an assessment completed in partnership by Ontario Nature and QCA, it was determined that 66 properties meet the rigorous pan-Canadian standards, warranting their designation as protected areas in the national database that is monitored and maintained by Environment and Climate Change Canada. Stewarded by QCA, these lands prioritize watershed health and the protection of the area's natural ecology. Commercial forestry is not permitted.

Source Water Protection

The Clean Water Act was enacted in 2006 to protect both existing and future sources of drinking water from overuse and contamination. Known as the Quinte Source Protection Authority, QC provides technical and administrative support to the Quinte Source Protection Committee. The 21-member Committee has been monitoring the progress of the policy implementation phase, while working on improvements to the existing policies to enhance the effectiveness of the policies as well as to include newly developed areas.

2023 marked the eighth year of the Quinte Area Source Protection Plan, which came into effect on January 1, 2015. Implementing bodies are responsible for enacting 63 policies set out in the plan. To assess the implementation progress, QC must report annually using a high-level reporting template developed by the Ministry of Environment, Conservation and Parks (MECP). In 2023, implementing bodies reported 100% of significant drinking water threat policies were either in progress or fully implemented.

Section 36 Amendments

The Quinte Source Protection Committee is in the process of completing a Section 36 Amendment to the Source Protection Plan and Assessment Report under the Clean Water Act. The Quinte Area Source Protection Plan contains policies that help manage threats to drinking water near municipal wells and intakes. The changes to existing policies are required to improve and adapt to the new MECP technical rules. Part of this Amendment will include a Public Consultation phase, where landowners will be asked to provide feedback on the proposed changes.

Best Practices for Source Water Protection

The Best Practices Guidance program was published on the MECP website in 2021. The goal of this voluntary guidance program is to protect human health and the environment by providing information and suggestions to rural Ontario residents who are not protected by the government's multibarrier approach for source water protection.

To help promote this new guidance, staff attended several public events including cottage/landowner associations' annual general meetings, Discovery Days, Plowing Matches, Loyalist College's Open-Air Market, and the Shannonville World's Fair. There were approximately 4,500 attendees, 2,000 conversations regarding the Best Practices Guidance, and 150 well water testing kits were distributed.

In addition to attending these events, QC staff also created new communication materials. These included infographics for rural homeowners with wells and septic systems, social media campaigns, Drinking Water Wise webinars, and school contests. Many of the materials that staff created have been shared across Ontario to promote Best Practices in other Conservation Authorities.

Communications

Strengthening Brand Recognition

QC's Communications team took several strategic steps to strengthen brand recognition in 2023.

One key strategy was to expand its social media presence on LinkedIn, a platform known for professional networking. By doing so, QC aimed to reach a more professional audience interested in environmental conservation and related topics.

Communications implemented a consistent social media calendar featuring industry-relevant awareness days, seasonal Step Into Nature campaigns to promote QC Conservation Areas, and Water Wednesday's featuring Source Water Protection, and Water Monitoring and Resources. Having dedicated topics helps QC maintain a regular presence on social media, engage its audience with relevant and timely content, and reinforce its key messages and priorities.

Another important initiative was supporting other QC departments in their outreach efforts:

- Communications supported Outreach and Stewardship with communications and marketing for the Discovery Day at Vanderwater event, at which more than 200 people attended.
- Source Water Protection hosted three Drinking Water Wise Webinars, which garnered 408 total registrants. Communications supported these virtual sessions by promoting them on social media and through email communications.
- One of QC's roles is to provide flood forecasting and low water information to municipalities and residents within the Quinte watershed. Communications supported the Water Resources staff with sending flood messaging to municipalities, local flood coordinators, media, email subscribers, and social media followers. This messaging keeps the community informed about potential flood risks, safety measures, and conservation efforts related to flood management.

In addition, staff kept a consistent monthly e-newsletter called Take A Hike. This newsletter helped QC maintain regular communication and build a sense of community with its audience, provided valuable information about conservation areas and events, and showcased activities and achievements.

Adopt an Acre

The 2023 Adopt An Acre fundraising campaign surpassed expectations with 273 acres adopted —73 acres beyond the initial goal of 200 – raising \$8,190 over six weeks. The funds raised will help the rebuilding of the Hi-Lo Bridge at the H.R. Frink Conservation Area.



20
Media Releases



\$8,190
Raised through Adopt
An Acre



273
Acres Adopted



5,072
Social Media
Followers

Outreach & Stewardship

Outreach and Stewardship organizes and delivers a variety of programs and services to watershed residents and municipalities each year.

**48**

Acres Restored

**47,243**Native Trees, Shrubs &
Wildflowers Planted**80**

Stewardship Site Visits

Landowner Programs

Stewardship Site Visits for Guidance & Connections to Programs

QC offers shoreline stewardship visits to waterfront property landowners within the watershed, sharing information pertaining to best practices for waterfront living including well and septic care, shoreline erosion concerns and protection methods, identification of invasive/problematic species with tips for control and removal, species at risk in the area/lake, and provide recommendations for long-term water and eco-system protection.

In 2023, 80 stewardship consultations and site visits were completed providing landowners with guidance and advice for stewarding their land.

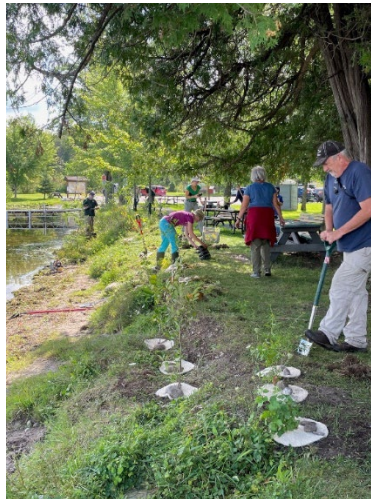
Staff pre-qualify landowners for various grants/programs, such as large-scale tree planting and shoreline planting. Staff also promote partner landowner programs including, but not limited to, the Managed Forest Tax Incentive Program, large-scale tree planting programs, grassland restoration, pond creation, and Bay of Quinte Remedial Action Plan initiatives for septic stewardship, rain gardens, buffer plantings, and livestock fencing.

- 47,243 native species were planted throughout the watershed
- 17 shoreline properties were naturalized, for 100,502 m² (24.8 acre) of restored shoreline
- In partnership with agricultural landowners, 93,077.7 m² (23 acres) of marginal agricultural land and retired farm field were reforested

- 116 outreach and education programs were delivered, which reached over 7,000 individuals.

Shoreline Restoration Program

QC staff offered a full-service shoreline planting program and shoreline planting starter kits to assist landowners in restoring their shorelines. The shoreline planting program was available at a subsidized rate and included a free site visit and free customized planting plan, a minimum of 50 potted native plants (including 38 trees and shrubs, and 12 wildflowers), hemp fibre mats, mulch, tree guards, and guides on plant care, habitat creation and wildflower gardens.



Restoration/Habitat Enhancement on Public Lands

Through partnerships with Quinte watershed municipalities, local service groups and youth groups, native tree, shrub and wildflower plantings took place in under-utilized areas of eight public lands:

- Riverside Park East along the Moira River
- Tweed Memorial Park on Stoco Lake
- Jasper Avenue Stormwater Pond in Picton
- Beaver Lake Lions Park in Erinsville
- Township Park in Belleville
- Sophiasburgh/North Port Centennial Park in Prince Edward County
- Potter's Creek Conservation Area in Belleville

- and an expansion of a Prairie Restoration Planting at Sidney Conservation Area in Stirling/Rawdon.

These restoration projects were made possible through support from volunteers, local students, service groups and project funders including Belleville Rotary (Rotary Love Trees), Belleville Senators, EcoAction and Watersheds Canada, Tree Canada and TDFEF.

Community Trees

Nine Quinte watershed municipalities participated in the Community Trees program, from which they purchase tree seedlings for community distribution. This program is meant to help increase native tree cover through our watersheds, especially urban environments and educate the public on native tree species and the many benefits that trees provide.

In addition, tree seedlings were sold to landowners.

The total seedlings distributed through Community Trees was 12,575.

Large-Scale Tree Planting Program

In 2023, two private landowner sites were planted under Forests Ontario's subsidized 50 Million Tree Program. The properties resided in Yarker and Stirling-Rawdon in the QC watershed. Species were selected for site conditions and species included native White Pine, Red Pine, White Cedar, White Spruce, Red Oak and Sugar Maple. This program is a shared-cost program with the participating landowners.

Agricultural Riparian Planting Program

QC received funding from Molson Coors through the Bonneville Environmental Foundation to subsidize large-scale riparian (within 30 metres of water) and upland restoration through the planting of native trees and shrubs.

Sites included one private and one QC-owned property on Palliser Creek in Quinte West, a property draining to the Clare River in Erinsville, and a waterfront property in Demorestville.

This was a shared-cost program with the participating landowners.



Waterfront Property Outreach and Restoration on Stoco Lake

In 2023, QC and Watersheds Canada received funding support from an EcoAction Community Funding Program to carry out a shoreline stewardship program on Stoco Lake in Tweed. Properties on the lakes were assessed from the water by Watersheds Canada. Landowners will receive a personalized property report with recommended actions for improving shoreline and lake health in 2024. The emphasis of this grant is to focus on educating shoreline property owners on the actions they can take on their lands to protect wildlife habitat, water quality and species at risk.

Youth & Community Outreach

From attending public events to speaking to groups to in-school programs and delivering outdoor education field trips for students K-12, QC staff attended and facilitated 116 outreach events across the QC watershed.



116
Outreach &
Education Programs



7,000+
Individuals Reach
Through Programs



40
Pop-up Events



800
Visitors Reached

Watershed Education K-12

A variety of conservation-based education programs are curriculum-connected for Kindergarten to Grade 12 students and were offered at QC Conservation Areas and in local schools.

Conservation Areas utilized for outdoor education included H.R. Frink, South Potter's Creek, Macaulay Mountain, and Vanderwater. Learn more on our website's education programs [page](#).

Stream Of Dreams Watershed Education Art To Science In-School Curriculum Connected Program

The Stream of Dreams Program, a science to art program, was offered in two Quinte watershed schools, Sir James Whitney School for the Deaf in Belleville and Prince Edward Collegiate Institute in Picton. Each class received a 40-minute watershed workshop followed by a 40-minute art workshop. Students painted their "dream fish" representing their dream for their water. The "dream fish" were installed on a fence in front of their school as a reminder of what they learned about protecting water.

[Learn more about Stream of Dreams](#)

Community Outreach

Staff attended community events with QC programs and services displays and presented on conservation-related topics such as programs and services, watershed and shoreline health, and well and septic care. Staff attended community events to promote what QC does, answered public inquiries, and helped connect residents to expert staff and partners.

Self-Guided Audio Interpretive Hikes

Outreach and Stewardship continued to develop self-guided audio interpretive walks at select destination Conservation Areas: H.R. Frink, Macaulay Mountain, Massasauga Point, North Potter's Creek, South Potter's Creek and Vanderwater. Along the trails, visitors can scan a QR code and listen to an interpreter explain the natural and cultural history of the area. Listen to the hikes [here](#).

Vanderwater Conservation Area Discovery Day

Over 200 people attended the Vanderwater Conservation Area Discovery Day on August 17, 2023. The event featured nature-based activities for families to participate in and learn about the Conservation Area, the history of the site, and the important plant and animal life it is home to. A native grass and wildflower restoration planting was also a part of this event. Visitors could also take a native wildflower or shrub home with them to plant in their yards.



Conservation Area Pop-Ups

Discovery Pop-Ups were offered in select Conservation Areas throughout the summer to connect with the visiting public and share information with them regarding the ecological significance of the Conservation Area, answer questions and concerns visitors may have, and collect visitor feedback. The pop-up table contained information and resources for visitors, as well as activities and scavenger hunts for kids.



Supporting Lake Associations & Related Volunteer-Based Groups

QC continues to support local Lake Associations and watershed groups by providing lake-specific resources, presentations, mapping, and assistance with priority goals like water testing and data analysis.

QC received funding to support the re-stocking of water sampling kits from Water Rangers to further engage in data collection for the different lake associations. For a listing of local volunteer-based lake and watershed community groups visit our [website's volunteer page](#).

Birdhouse City Adopt-A-Birdhouse Program

The volunteers for Birdhouse City have made significant strides toward restoring birdhouses at the site, located at Macaulay Mountain. Eighteen birdhouses were fully restored and reinstalled in the spring, and 21 more birdhouses were restored over the winter for installation in 2024.

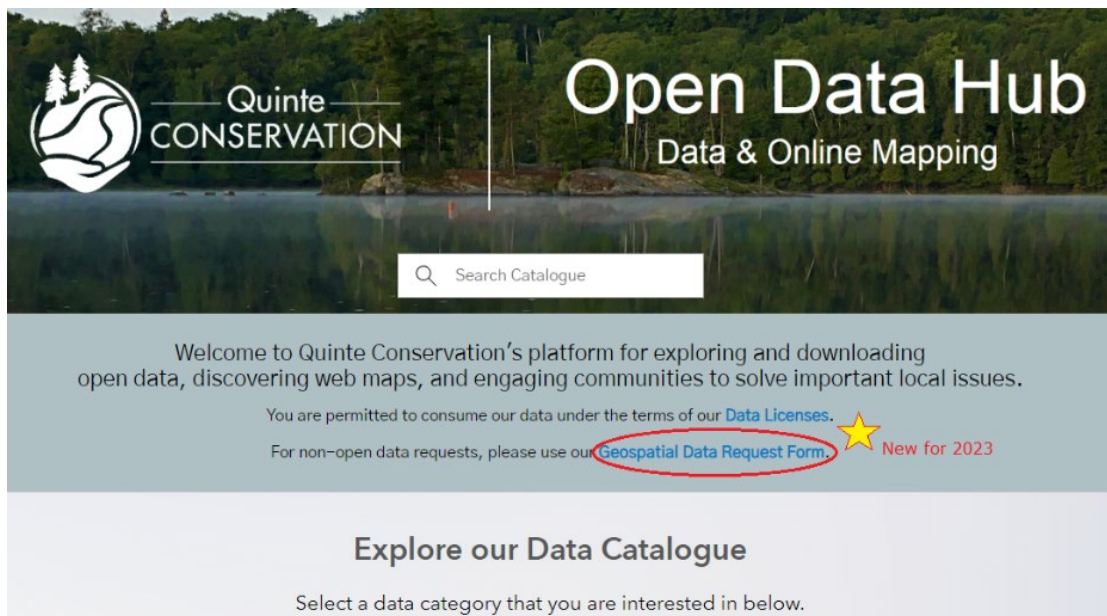
Trail Stewards Program

Over 20 volunteers have continued to help maintain 75 kilometres of trails by providing regular checks, light pruning, and reporting concerns to QC's Field Operations team. Since the program's inception in 2018, QC has received over 890 trail reports from volunteers.

[Learn more about the Adopt-A-Trail Volunteer Trail Stewards Program](#)

Geographic Information Systems

Geographic Information System (GIS) programs and services at QC provide a foundation for the collection and distribution of authoritative geospatial data sets within the Authority. GIS applications are relied on each day to assist with public services offered through QC programs. Fifteen requests for geospatial data across a broad range of sectors were fulfilled in 2023, from private consulting firms to educational institutions and provincial government ministries. A new online [Geospatial Data Request Form](#) was launched this year to streamline the data sharing process with outside agencies, reducing administrative efforts related to the invoice and agreement process. QC's [Open Data Hub](#) continues to serve the public by providing access to a variety of 'open' GIS datasets, mapping products and web-based mapping applications.



The GIS department contributed to grade development, analysis, reporting and mapping components of the provincially standardized Watershed Report Card program 2023 update.

Mapping, remote sensing, data analysis, and interpretation observations were provided to support the efforts of the 2023 Big Island Wetland Perimeter Report. QC and OPG (Ontario Power Generation) staff were able to schedule and task the collection of satellite-based imagery

within specific timing windows at the Big Island Wetland complex. With this data, GIS tools and techniques were used to assess changes to the wetland perimeter over time.

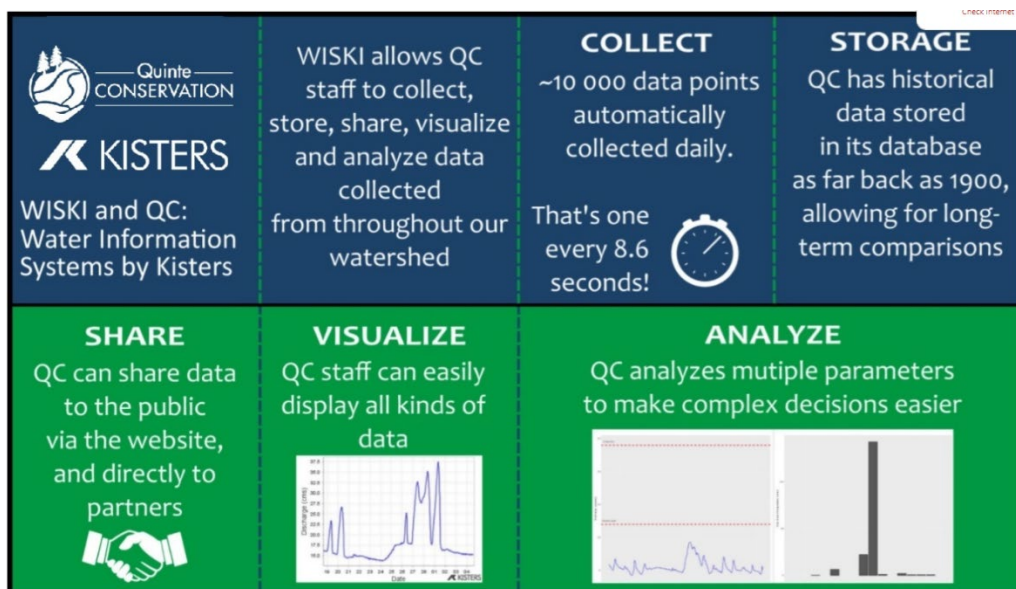
QC participated in South-Central Ontario Orthophotography Project (SCOOP) 2023 to allow the organization continued access to current, high-quality, high resolution aerial photography at a subsidized low cost. Aerial imagery is used by QC for a variety of purposes, such as:

- providing spatial reference in online mapping applications.
- information and reference for land use and emergency flood warning plans.
- assisting with asset management mapping.
- desktop information for planning and regulation permit processing.
- information for policy development, environmental management.
- assisting with various monitoring and modeling activities.
- field work planning.

The newly acquired imagery is set to be delivered in early 2024 after the quality assessment process is finalized.

WISKI Hub

Water Information System by Kisters (WISKI) is a centralized database that allows QC to store, share, visualize and analyze millions of data points collected every year.



WISKI is relied on by staff to monitor specific environmental variables in near real-time. The types of information that are collected range from ground water levels to snow depth measurements and everything in between. This data is used to make informed decisions for the safety of the public and ecological integrity of the watershed.

QC is also part of the Eastern WISKI Hub, which is a cooperative group of 11 Eastern Conservation Authorities who share resources relating to WISKI and its use. The Hub was created to maintain a consistent, common process for collecting, compiling and the utilization of monitoring data, including hydrometric, meteorological, groundwater and water quality data.



Eastern WISKI Hub Member Conservation Authorities

Over the past decade, QC has acted as the Server Host – the Eastern WISKI Hub organization responsible for the operation and maintenance of the WISKI application servers. Under the responsibilities of this role, QC is required to review purchase requests for compatibility with existing systems and to maintain and present financial statements for the Hub. Approved operational budget targets were met this year with no expected fee increase for 2024.

In 2023, QC and the Eastern WISKI Hub were excited to welcome Ganaraska Region Conservation Authority as the newest member to the group.