



Kettle Creek
Conservation Authority

ANNUAL REPORT

2023





2023 Board of Directors

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A Message from the Chair

This past summer we had an opportunity as a board and staff to tour the watershed. I cannot underscore enough the value it brought to our relationships, understanding of the watershed and ability to better govern the organization.

Following the 2022 municipal election, Kettle Creek Conservation Authority's (KCCA) Board of Directors had an 80% turn over of members. So, exploring the watershed was a logical first step to better understand the why and how behind our various programs and services.

We started at the beginning – Lake Whittaker Conservation Area. Lake Whittaker is the headwaters of Kettle Creek and one of the first properties acquired by KCCA. From there we meandered through the various municipalities on back country roads and highways. We stopped along the way to view newly created wetlands, pastures and marginal farmland

replanted into forests, floodplains and dams all interconnected by Kettle Creek that eventually spills out into Lake Erie at the beautiful beach in Port Stanley.

I think the tour was a fitting reminder of how everything upstream affects downstream. What we do in one program area affects another, and that we must constantly be mindful that what we do, or fail to do today, will affect future generations.

Thank you to the members for their confidence in me to lead the organization through another year of conservation, teamwork, and partnerships.



Grant Jones
Board Chair

Our Partners & Donor List

AA Sanitation • Arlene and Terry Campbell Charitable Foundation • ALUS Elgin • Art Veldhuizer • Canadian Parks and Recreation Association • City of London • City of St. Thomas • County of Elgin • Conservation Ontario • Delta Power Equipment • Ducks Unlimited Canada • Elgin St. Thomas Community Foundation • Elgin Clean Water Program • Elgin Stewardship Council • Environment and Climate Change Canada • Essex Region Conservation Authority • Eugene Johnston • Fanshawe College • First Yarmouth Baptist Church • Ferguson RV World • Green Lane Community Trust Fund • Helen Nichol • Huron Tractor St. Thomas • Invasive Species Centre • Kettle Creek Environmental Trust • Kettle Valley Pioneers • London District Catholic School Board • Ministry of Agriculture, Food and Rural Affairs • Ministry of Environment, Conservation and Parks • Ministry of Natural Resources and Forestry • Municipality of Central Elgin • Municipality of Middlesex Centre • Municipality of Thames Centre • Northern Casket • Renato Belusic • Ron's Auto Service • Rotary Club of St. Thomas • Sam Bennett • St. Thomas Field Naturalist Club • Ted and Duggie Gill • Thames Valley District School Board • Township of Malahide • Township of Southwold • TD Friends of the Environment Foundation • Trillium Mutual Insurance Company • Upper Thames River Conservation Authority

Please notify our office of any errors or omissions.



2023 Staff

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FLOOD FORECASTING

Flood forecasting is one of the most important programs that KCCA provides to our member municipalities and watershed community. A network of stream gauges, precipitation gauges, weather stations and lake level recorders are used to monitor water levels and flow throughout the watershed during flood events. In 2023, KCCA issued one Lake Erie shoreline message and 14 riverine flood messages.

The watershed experienced another winter influenced by La Niña, with periods of snowy, cold weather interspersed with unusually high double-digit temperatures and rain. As a result, several rain-related high-water events occurred between January and March but no major flooding was experienced. While water levels in Lake Erie have dropped considerably since

the record highs experienced in 2019 and 2020, the lack of winter ice cover has increased the risk of storm surge along the north shore of Lake Erie and Port Stanley in particular. Lake Erie was less than 40% frozen over the winter months which may be an indication of a changing climate in the Great Lakes Region.

Structural engineers continued to monitor the spillway and wingwalls of the 102-year-old Dalewood Dam. An Options Assessment Report was also prepared. The report reviewed the operations, recent inspections, studies, projects, and improvements as well as historical information on the dam. Three viable options were recommended for KCCA's consideration: major rehabilitation, dam replacement (at a reduced capacity) or

dam removal (decommissioning). In 2024, an Environmental Assessment process will be initiated to assist in making a final decision.

In the meantime, engineering consultants recommended that the stop logs be removed from all bays in late fall and replaced following the passage of the spring freshet. Removing stop logs from the concrete spillway during times of major flood events lowers the risk of the dam overtopping, prolongs the dam's remaining lifespan, lowers long-term maintenance requirements, and generally follows best management practices. The updates to the operational plan are supported by analysis of the historic stream flow data upstream of the dam site.

For up-to-date flood information, watershed residents and businesses can visit the KCCA website kettlecreekconservation.on.ca where they can register to receive automatic flood related emails, or connect with KCCA socially on Twitter, Instagram and Facebook at @KettleCreekCA.



PLANNING & GIS

Thanks to a focus on exceptional customer service, KCCA continues to deliver all permits under Ontario Regulation 181/06 within 21-days of receipt of a complete application, meeting the Provincial Service Standard by 100%.

Ontario Regulation 181/06 Stats:

- 52 permits and 17 site clearances were issued.
- Provided plan review and input with regard to risks to natural hazards of over 70 planning and development applications circulated under the Ontario Planning Act.

KCCA was successful in obtaining \$52,000 in funding from the Flood Hazard Identification and Mapping Program (FHIMP) to undertake an Enhanced Riverine Floodplain Mapping project for

the Dodd Creek subwatershed. The FHIMP program is a partnership between Natural Resources Canada, Environment and Climate Change Canada and Public Safety Canada.

The project will update current mapping and technical standards and undertake new flood inundation mapping for a 24km² study area. Updated flood hazard mapping is required to support flood and erosion-related response and mitigation planning as well as land use planning and permitting decisions. It will also be used to support municipal emergency response management.

In February 2023, the Authority's new webmap platform was launched, providing users with an interactive and dynamic way to map properties within the

watershed. The webmap was accessed 2,201 times in its first year of service.

KCCA's data collection abilities improved with the transition to Mergin Maps for field data collection applications. The new platform allows Authority staff to collect data in the field streamlining workflows and data integration.

To stay at the forefront of technology, KCCA's GIS department performed a server refresh. This initiative ensures systems remain robust, reliable, and equipped with the latest technology.





ENVIRONMENTAL MONITORING

Environmental monitoring is essential for detection and management of changes within the natural landscape of the Kettle Creek watershed. Data collected is used in the Watershed Report Card which reports on watershed health using environmental indicators broken down into surface water, ground water, forest conditions and wetland conditions. KCCA released its fourth Watershed Report Card in 2023, providing valuable insights into the current state of the watershed and ongoing efforts to preserve and improve the environmental conditions.

During the summer, over 200 snapping turtle and 13 painted turtle hatchlings were released back into the Dalewood Reservoir. The eggs were recovered from nests in danger of being destroyed and incubated at the Upper Thames

River Conservation Authority with the help of its species at risk staff. Given the challenging odds, with less than one in a hundred turtle eggs hatching to become adult turtles, it is crucial to intervene and help whenever possible. As is the case for many species at risk, habitat destruction plays a major role in the decline of turtles, as well as road mortality and nest predation.

In the spring, a four-season life science inventory and bioblitz for the new Deer Ridge Conservation Area was completed. KCCA retained MTE Consultants to complete several biological surveys including snake emergence and coverboard surveys, three amphibian call surveys, Ecological Land Classification, a three-season botanical inventory, migratory and breeding bird surveys, two

crepuscular bird surveys, bat acoustic monitoring, fish community survey, one winter wildlife survey, incidental butterflies and dragonflies, and an additional day conducting a bioblitz.

Observations from the life science inventory and bioblitz confirmed that seven natural vegetation communities and at least 323 species are present within the Deer Ridge Conservation Area. Of the 323 species, nine species at risk (SAR), six rare species (S1-S3), and 25 invasive species were identified.





WATERSHED HIGHLIGHT

A component of KCCA's Environmental Monitoring Program is collecting up-to-date information on the fish communities within the watershed including the open watercourses that are also municipal drains. KCCA received \$9,466 in funding from Fisheries and Oceans Canada (DFO) to classify 13 municipal drains in 2023.

Municipal drains are classified into several categories to facilitate the review and approval of drain maintenance activities with respect to fish and fish habitat.

Staff conducted electrofishing surveys at 13 sites across the watershed, identifying a diverse collection of 21 fish species. These sites were evenly distributed between cool and warm water thermal regimes. Among the catch, johnny darters accounted for 20%, white suckers

comprised 17%, and creek chubs made up 16% of the total. Notably, the golden redbhorse, identified as the only sensitive species, was found at one site. Staff also made an exciting discovery, spotting a new species for the project and the watershed—the bowfin, observed and collected at a single site (pictured at right).

The bowfin stands out as one of Ontario's living fossils, having maintained its prehistoric characteristics for millions of years. As a warm-water fish native to Ontario, the bowfin is a common (but unusual) fish. It has a long dorsal fin extending along the top of its body, concluding with a rounded tail fin.

Bowfins, recognized by various names like freshwater dogfish, mudfish, grindle, and

beaverfish (poisson-castor), are predatory creatures that actively hunt crayfish and frogs in the weedy waters of southern Ontario. The bowfin has an air-bladder which functions as a lung, that gives the fish the unusual ability to gulp air from the surface. This enables them to live in areas with low oxygen that may be uninhabitable by other game fish.

While suckers and panfish can get pretty big, most of the fish found in local drains are often quite small and unless displaying their spectacular breeding colours, are often quite drab, brown or silvery. Often grouped together as "minnows," the ability to distinguish between small baitfish is important as the use of some fish species for bait is illegal, some are aquatic invasive species, while others are listed as species at risk and are protected.





TREE PLANTING & FORESTRY

KCCA continued its commitment to reforestation of the watershed, overseeing the planting of over 43,000 native tree and shrub species. The Greening Communities Program provided 4,100 seedlings to landowners in Central Elgin, St. Thomas, Southwold and Malahide.

Community involvement plays an important part in KCCA's tree planting program. Staff partnered with students from Central Elgin Collegiate Institute to plant 1,000 seedlings at the KCCA Administration Centre. An additional 2,023 seedlings were planted in partnership with Fanshawe College in recognition of the graduating class of 2023.

A collective effort from the Rotary Club of St. Thomas, employees from Graham Scott Enns Chartered Accountants, and members of the Kettle Creek Environmental Youth Corps

supported the planting of 400 large stock trees and shrubs on the north shore of Lake Margaret in St. Thomas.

KCCA sourced potted trees for the first ever City of St. Thomas tree giveaway – which supplied 160 native trees free of charge to St. Thomas residents.

In October, a TD Tree Days community planting event welcomed 60 community members to Waterworks Park in St. Thomas to plant 300 trees and shrubs.

Forests Ontario's 50 Million Tree program continues to be an important funder for KCCA's tree planting program, contributing over \$34,300 for the planting of 13,725 seedling trees on larger scale restoration sites in 2023.



STEWARDSHIP

With support from the Ontario Ministry of Agriculture, Food and Rural Affairs, KCCA undertook a project to raise awareness and increase adoption of Best Management Practices (BMPs) that reduce losses of sediment and nutrients from farmland. A series of four information sheets were distributed to 1,733 farms across Elgin County. In addition, an Elgin Clean Water Program bus tour was held in August showcasing a variety of projects such as wetland creation, erosion control and tallgrass prairie establishment to show how farmers can incorporate BMPs within existing production practices and highlighted the funding available for implementation.

Eight wetland projects were implemented in the watershed in 2023 in partnership with Elgin Stewardship Council, ALUS Elgin, ALUS Middlesex and Ducks Unlimited.

The Elgin Clean Water Program (ECWP), administered by KCCA and funded by Elgin County and the Green Lane Community Trust Fund, provided 28 projects with \$67,654 in funding. Since 2012, the ECWP has awarded \$861,559 in grants to 318 projects totaling over \$3,676,000 in total project costs that directly benefit the environmental conditions of Elgin County.

The Kettle Creek Environmental Youth Corps (EYC) gained meaningful volunteer experience in the environmental field through the planting of 1,000 wildflower plugs and 200 shrubs on the north shore of Lake Margaret in St. Thomas. Members also assisted with the removal of garlic mustard in the woodlot at Pinafore Park, and trail maintenance at Dalewood Conservation Area.





INVASIVE SPECIES MANAGEMENT

KCCA actively managed invasive species on public, private and Authority owned properties throughout the watershed in 2023. Staff targeted eight invasive species including phragmites, multiflora rose, European buckthorn, invasive honeysuckle, autumn olive, spotted knapweed, garlic mustard, and Canada thistle.

Kirk-Cousins Management Area

KCCA secured a \$10,000 grant from the Invasive Species Centre to develop an invasive species management plan for the Kirk-Cousins Management Area. In addition, treatment was initiated on a seven-acre meadow overtaken by spotted knapweed and woody invasive species such as autumn olive, European buckthorn, and multiflora rose. This project involved the collaborative efforts

of 57 student volunteers from Regina Mundi Catholic College, who assisted with the manual cutting of the invasive species.

Lake Margaret

KCCA secured \$23,512 in funding from the Great Lakes Local Action Fund to manage invasive species at Lake Margaret in St. Thomas. This project targeted six invasive species across 38 acres of forest and shoreline habitats. In addition, 10 events were held to engage the community in the project. Participants assisted with the removal of woody invasives and activities to restore the shoreline such as tree and wildflower planting.

Deer Ridge Conservation Area

Staff targeted treatment of woody invasive species, including European buckthorn, honeysuckle, and multiflora

rose, spanning 21 acres of forest at Deer Ridge Conservation Area. Initial treatment of approximately four acres of Canada thistle was also successfully completed.

Phragmites

KCCA continued the battle against invasive phragmites in 2023. A total of 19.1 acres of phragmites have been treated to-date, with 3.6 acres receiving an initial treatment in 2023. KCCA performs annual inspections of previously managed stands and undertakes retreatment as required to manage re-growth and new growth. In total 15.5 acres of managed phragmites stands required retreatment in 2023.





CONSERVATION LANDS

KCCA's Conservation Areas welcomed 19,170 visitors ready to explore picnicking, kayaking, fishing and camping. Gatehouse staff greeted many familiar and new faces, hosting 10,225 campers at Lake Whittaker and Dalewood Conservation Areas throughout the camping season. It marked another outstanding year, featuring 2,903 booked campsites, 3,804 day passes sold, and 450 watercrafts rentals.

To enhance visitor experience, the Authority made improvements to Dalewood and Lake Whittaker campgrounds. This included the installation of new entrance lift arms that now allow campers and visitors to access both parks with a scannable pass, streamlining the entry process for a more efficient and enjoyable visit.

Upgrades to the Kirk-Cousins Management Area began in 2023 thanks to a generous donation from Trillium Mutual Insurance Company. Upon completion, the community can expect an improved parking lot, new entrance and trailhead signs, and stone seating in a newly designed picnic area. This project is a testament to KCCA's dedication to enhance access to green spaces.

KCCA believes that nature should be accessible to people of all ages and abilities, and continues to prioritize initiatives that align with this vision.





EDUCATION & OUTREACH

In 2023, the Carolinian Forest Festival welcomed back grades 6 and 7 students from 23 schools across the Thames Valley and London District Catholic School Boards. This immersive educational experience teaches students about forest ecosystems, biodiversity and climate change through hands-on activities linked to the Ontario Curriculum.

The Festival also saw enthusiastic support from more than 140 high school students from three schools, including participants from East Elgin Secondary School's Environmental Leadership Program and the Thames Valley District School Board's H3-ELP Program.

New for the 2023 Festival was the addition of an activity station led by the Indigenous Student Success and Cultural Teacher at London District Catholic School Board to explore natural medicine found within a forest. The inclusion of this station reflects the Festival's commitment to offering rich and comprehensive environmental education, fostering a deeper connection between students and the natural world.



CORPORATE SERVICES

December 2023 marked the end of a transition period to fully enact Ontario Regulation 402/22 Budget and Apportionment. KCCA successfully negotiated cost apportioning agreements with all seven member municipalities. These agreements allow KCCA to continue to use municipal funds to offset costs associated with tree planting and enhanced environmental monitoring programs. The final Programs and Services Inventory used to categorize KCCA's programs and services was submitted at year-end bringing the transition period to a close. The 2024 budget was developed in accordance with the Regulation and the newly established agreements.

In 2023, KCCA received a grant from the Elgin-St. Thomas Community Foundation's Community Services Recovery Fund to

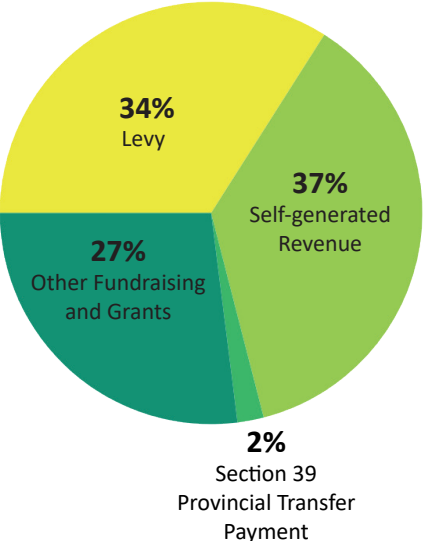
support the digitization of the Authority's extensive archives including slides, photographs, aerial photographs, maps, and minute books. This grant will also serve as the launchpad for KCCA's new document retention program. It ensures proper management of existing files and the timely removal of outdated documents. This initiative not only preserves records but also supports enhancing KCCA's management of digital files.

KCCA's social media platforms reached over 113,318 people in 2023, a nine percent increase over 2022. KCCA's Facebook account had 11,020 visits with 3,637 followers and continues to act as an important engagement and communication tool.

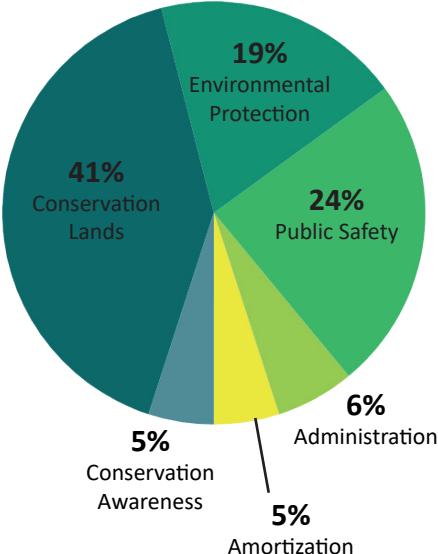


Financial Summary

2023 Revenues



2023 Expenses



Full financial statements are available at www.kettlecreekconservation.on.ca



Land Acknowledgement

Kettle Creek Conservation Authority wishes to acknowledge the treaty and traditional lands originally occupied by the Indigenous First Nations peoples of the Anishinabek, Attiwoonderonk and Haudenosaunee Nations.

KCCA strives to build meaningful relationships with Indigenous communities and recognizes the importance of respecting these treaties and lands.

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