Watershed Services – 2024 Annual Report

March 1, 2025

Introduction

The Grand River Conservation Authority's (GRCA) vision is of a healthy watershed where we live, work, play and prosper in balance with the natural environment. To help achieve that vision, the GRCA delivers watershed services to twenty-two participating municipalities under a Memorandum of Understanding and funding agreement. These non-mandatory programs are in addition to those mandated under the Conservation Authorities Act (CAA).

The watershed services consist of watershed sciences and collaborative planning, water quality monitoring and reporting, wastewater treatment optimization, conservation services, and subwatershed services.

Watershed Issues

The health of the Grand River and its communities continues to be influenced by stressors that shape watershed conditions and responses. These include population growth, urban area expansions, intensive agricultural production, and climate change.

In 2024, watershed programs supported GRCA and municipal responses to these watershed stressors and addressed related issues, such as elevated phosphorous and nitrogen in the watershed's rivers and aquifers. A key concern raised by watershed municipalities is the potential impact of elevated nitrates on drinking water systems and wastewater treatment.

The GRCA's watershed programs are guided by a Watershed-based Resource Management Strategy that was approved by the Authority in June 2024.

2024 Highlights

The GRCA's watershed services build understanding of watershed conditions; help landowners, municipalities, and others to take action to improve watershed health; and foster collaborative problem solving across geographic and jurisdictional boundaries.

Understanding watershed conditions

- Operated nine automated water quality stations on the Grand and Speed rivers and provided real-time information about water temperature, pH level, dissolved oxygen, turbidity and conductivity on the GRCA's website.

- Installed a second sensor to continuously monitor nitrate levels at the Bridgeport water quality station on the Grand River. A similar sensor was installed at the Brant water quality station in 2023.
- Delivered subwatershed monitoring in 6 streams to support planning and implementation of urban area expansions and stormwater management, and documented stream flow and fish communities in 7 municipal drains. Supported municipalities in identifying subwatershed studies and environmental information needed to guide future growth and provided technical support for on-going subwatershed studies.
- Assessed potential point and non-point sources of nitrates in the Grand River and reported on conditions to the GRCA Board of Directors, the Lake Erie Region Source Protection Committee, university researchers, and the Grand River Water Managers Working Group.

Improving water quality and watershed health

- Delivered $932,000 in grants to landowners who implemented 270 projects to improve water quality and watershed health. Of that total, $650,000 in grants were provided by the counties of Wellington, Brant, Haldimand, Dufferin, and Oxford, the Region of Waterloo, and the City of Hamilton. An additional $282,000 in grants were secured from provincial and federal funding programs. These projects, worth more than $3.5 million, help reduce nutrient, sediment, and chemical losses to the environment while maintaining or enhancing agricultural production. Many projects provide additional environmental, economic, and social benefits by improving landscape resilience to extreme weather events, sequestering carbon, reducing greenhouse gas emissions, increasing recreational opportunities, and fostering biodiversity.
- Planted over 140,000 trees through GRCA's private land tree planting program and community tree planting events.
- Developed a video to promote grants to upgrade or decommission private wells to protect drinking water sources.
- Engaged 28 municipalities in improving the quality of treated wastewater effluent discharged to the Grand River and its tributaries. Technical workshops and site visits were held at six wastewater treatment plants and 25 plant operators were engaged in technical support and training.
- Assessed wastewater treatment plant performance for the previous year and shared the Annual Report findings at a workshop attended by more than 50 participants from 15 municipalities, contract operators, and provincial agencies. At the workshop, 14 wastewater treatment plants were recognized for producing excellent quality effluent that exceeded environmental standards.

Collaborative problem solving

- Hosted three meetings of the Grand River Water Managers Working Group. The Working Group is a network of municipal, First Nations, provincial, and federal water managers that align water supply, wastewater, stormwater, and water quality objectives and actions to achieve common watershed goals. A key topic of discussion was the potential impacts of elevated nitrates in groundwater and surface water on the quality of drinking water sources and future wastewater treatment standards.

- Provided technical input to almost twenty municipal assimilative capacity studies, wastewater master plans, water supply master plans, subwatershed and secondary plans, and climate strategies.
- Contributed to implementation of the federal-provincial Lake Erie Action Plan. The inter-agency Grand River Water Management Plan, Watershed-wide Wastewater Optimization Program, and private land stewardship programs are recognized as key actions to improve the health of the Grand River and Lake Erie.

Financial summary

The GRCA's non-mandatory watershed services programs are funded through municipal agreements and other grants. The table below summarizes 2024 program expenses, off-setting funding, and the net cost to participating municipalities. Off-setting funds are received from provincial and federal grants, municipal funding for local or regional projects, and municipal Rural Water Quality Program capital grants for cost-share projects. Costs related to watershed sciences and collaborative planning are included in the other programs.

	Total Expenses ($)	**Funding: Municipal Apportionment ($)**	**Funding: Other ($)**	**Net Surplus/ (Deficit) ($)**	
Programs	*(a)*	*(b)*	*(c)*	*(b)+(c) less (a)*	
Subwatershed Services	263,253	235,000	84,495	56,242	Note 2
Conservation Services	1,313,710	539,000	821,204	46,494	Note 3
Water Quality Programs	435,243	243,000	126,275	(65,968)	Note 4
Total	**2,012,206**	**1,017,000**	**1,031,974**	**36,768**	Note 1

Note 1: Net Surplus (unspent municipal apportionment) transferred to Category 2 Stabilization Reserve.

Note 2: Wages (vacancy) $36K under, Admin (travel) $10K under, other expense $10K under.

Note 3: Savings due to ability to use Special Project funding to fund program wages and admin costs instead of Category 2 municipal apportionment.

Note 4: WQ monitoring ($12K), instrumentation supplies ($23K) and equipment costs ($30K) not budgeted.

For more information

Additional information on program deliverables is provided in the attached appendix and at www.grandriver.ca. The Grand River Conservation Authority's Board of Directors received updates on water quality conditions (GM-06-24-52), the Watershed-wide Wastewater Optimization Program (GM-12-24-122), landowner stewardship (GM-03-24-23) and land use planning in the Region of Waterloo (GM-06-24-54). These reports are available on the GRCA's website.

Appendix: Category 2 Programs and Services Deliverables and Metrics – 2024 Summary

Watershed Sciences and Collaborative Planning

Programs and Services Description	Deliverables	Metrics	2024 Watershed-wide Summary
Undertake watershed, regional, and landscape scale science and reporting: • Inter-disciplinary analysis and reporting on watershed health (surface water, groundwater, forests, wetlands) • Collaborative work on the hydrologic functions of natural features • Other watershed-scale science (e.g., fisheries)	Analysis and reporting on watershed conditions	Periodic reporting via Watershed Report Cards (e.g., 2023), Water Management Plan (e.g., State of Water Resources, 2020), technical reports, and reports to Authority board	• Watershed report cards have 5-year cycle. A report card was last produced in 2023 and is available on the GRCA's website. • Staff participated in technical subcommittee meetings for the groundwater quality component of the next watershed report card cycle. • A watershed characterization and summary of Category 2 programs were incorporated into development of the Watershed-based Resource Management Strategy (per section 6(2) of the Cat 2 MOU). The Strategy was approved by Board June 2024. • Report GM-06-24-52 to the GRCA Board of Directors regarding water quality in the Grand River watershed, with a focus on elevated nitrate levels in groundwater and surface water.

	Engagement of municipal, provincial, federal, non-governmental, academic and other stakeholders	As below for Water Managers Working Group and via other committees and meetings	• See below for a summary of Water Managers Working Group meetings.
			• GRCA staff participated in meetings of provincial-federal initiatives under the Great Lakes Water Quality Agreement:
			  ○ Lake Erie Action Plan Implementation Team
			  ○ Nuisance Algae Working Group
			  ○ Lake Erie Partnership Working Group (Lake Erie Lake wide Management Plan)
			• GRCA contributed to reporting on implementation of the Lake Erie Action Plan and Lake wide Management Plan, as the Grand River Water Management Plan, water quality program, Watershed-wide Wastewater Optimization Program, and Conservation Services are all listed as actions to improve the health of Lake Erie.

Facilitating cross-municipal and inter-agency water resource management: • Support cross-disciplinary integration and inform municipal watershed planning and water, wastewater, and stormwater master planning • Liaise with First Nations, municipal, and provincial and federal agencies	Advance implementation of the collaborative, voluntary Grand River Watershed Water Management Plan. The Plan's objectives are to: • Ensure sustainable water supplies for communities, economies and ecosystems • Improve water quality to improve river health and reduce the river's impact on Lake Erie • Reduce flood damage potential • Build resilience to deal with climate change	Implementation tracking/reporting (scope TBD)	• Report GM-12-24-122 to the GRCA Board of Directors provided an update on implementation of the Watershed-wide Wastewater Optimization Program, a key action under the Grand River Water Management Plan (Integrated Action Plan action D2). • Report GM-03-24-23 to the GRCA Board of Directors was received regarding renewal of landowner stewardship grant funding agreements, a key action under the Grand River Water Management Plan (Integrated Action Plan action D7).

Programs and Services Description	Deliverables	Metrics	2024 Watershed-wide Summary
	Update the Water Management Plan (WMP) and Integrated Action Plan as needed	Scope/timing TBD	• GRCA undertook internal discussion and development of a project charter for scoped update of the Water Management Plan to be initiated in 2025. Next step is external consultation. • GRCA submitted an external funding proposal for scoped update to the water quality section of the Grand River Water Management Plan (pending)
	Chair the Water Managers Working Group (WMWG) with representation from watershed municipalities, First Nations, and provincial and federal agencies	Terms of Reference 2-4 meetings/workshops per year	• WMWG TOR in place for 2023-2026 and will be renewed with scoped update of WMP • Two WMWG meetings held and one scoped meeting with targeted invitations: o May 16 WMWG – Objectives were updates and discussion on new GRCA water management deliverables and the City of Kitchener's stormwater initiatives. 25 attendees participated from 13 partners – 9 municipalities, 1 First Nation, 2 provincial agencies, and the GRCA. o Sept 5 – Co-hosted with Brantford, objective to update on nitrates conditions characterization in the Grand River watershed and information sharing among academics and municipalities wholly or partially reliant on surface water for water supply. 21 participants from 8 organizations, including 2 municipalities, 1 First Nation, 2 provincial agencies, and researchers from two universities. o Dec 10 WMWG – Objective was to explore the water supply and wastewater implications of elevated nitrates in the groundwater and surface waters of the Grand River watershed. 34 attendees participated from 16 organizations, including 10 municipalities, 1 First Nation, 2 provincial agencies, and the GRCA.
	Provide input to municipal watershed planning – local, regional, and watershed conditions and issues identification	Upon request	• Participated in and/or provided input to: o Waterloo Region Water Supply Strategy Update o Waterloo Region Climate Adaptation Working Group o Grey County Climate Adaptation Plan o Brant County Climate Action Plan o City of Guelph Clythe Creek Subwatershed Update Study

Water Quality Programs

Programs and Services Description	Deliverables	Metrics	2024 Watershed-wide Summary
Deliver the Watershed-wide Wastewater Optimization Program (WWOP) to support municipal wastewater management and improve and protect water quality and watershed health • Support optimization of wastewater treatment plant (WWTP) operations through: knowledge sharing workshops, hands-on training, technical advice, and a recognition program • Provide technical support for municipal assimilative capacity studies and master plans for water and wastewater services • Engage the provincial and federal governments to develop programs to reduce nutrient loads in rivers and streams, and ultimately Lake Erie	Collect data from municipalities, analyze, and produce an annual report on WWTP performance across the watershed.	# of municipalities participating in annual reporting Annual report posted online	• 28 municipalities participated in the WWOP in 2024. • Annual Report on watershed-wide wastewater treatment plant performance (2023): 2023-wwtp-summary-report.pdf
	Host annual workshop for information sharing and networking among municipal wastewater practitioners	# of participants Workshop summary	• On November 14, 2024, GRCA hosted the Annual Workshop for the WWOP. GRCA welcomed 51 attendees (highest recorded attendance), from 15 organizations and municipalities to the GRCA head office. • Report GM-12-24-122 to the GRCA's Board of Directors provided an update on the WWOP.
	Provide technical support and training workshops for operators, supervisors and managers to implement optimization techniques at individual WWTPs	# of training, technical support events # of participants	• 1 half-day Sludge Accountability Workshop was provided to the Wellington North operators at the Arthur WWTP. The training workshop was provided by GRCA and consultant CPO2 Inc. The objectives were to train operators on understanding the principles of sludge accountability (SA), how to calculate SA and the benefits of performing SA from an optimization perspective. • 5 site visits were conducted at WWTPs that had a good track record of meeting GRCA voluntary targets for total phosphorous (TP). The objectives of the site visits were to survey and document best practices and to conduct dosing calculations. Site visits were conducted at Kitchener, Preston, Caledonia, Cayuga, and Brantford. The results and lessons learned from these TP surveys and site visits will be shared with all watershed municipalities in 2025, once completed. • 25 staff from municipalities and operating authorities (i.e., Veolia, Ontario Clean Water Agency) participated in the technical support and training offered in 2024.

	Deliver annual recognition program to acknowledge WWTPs that participate in WWOP activities and produce a very high-quality effluent	Awards presented	• 14 total awards presented in 2024 (highest total number of awards)
			  ○ 5 Bronze (Guelph, Kitchener, New Hamburg, St. George, St. Jacobs)
			  ○ 6 Silver (Cainsville, Caledonia, Dundalk, Elmira, Heidelberg, Preston)
			  ○ 3 Gold (Ayr, Brantford, Conestogo)

Programs and Services Description	Deliverables	Metrics	2024 Watershed-wide Summary
	Support municipal assimilative capacity studies and master plans for water and wastewater • Upon request, facilitate initial scoping, act as liaison with MECP, provide technical/methodological advice, provide stream data, provide watershed context, participation in steering committees (but not provide comments on EAs unless related to drinking water source protection)	Studies are carried out by each municipality, as needed and GRCA staff participate at the request of the municipality	• Participated in assimilative capacity study pre-consultation meetings with the Ministry of the Environment, Conservation and Parks (MECP), HESL, CIMA+, and Mapleton as a technical resource. • Participated in meetings on the Caledonia WWTP Schedule C Municipal Class EA with MECP, HESL, and Haldimand County as a technical resource. • Provided technical support to the City of Brantford regarding outfall alternatives at the Brantford WWTP. • Correspondence provided on Wellesley Water & Wastewater Master Plan Class EA. • Preliminary discussion held with the Region of Waterloo regarding their upcoming Wastewater Treatment Master Plan.
Surface water quality monitoring, modelling, analysis and reporting • Operate and maintain continuous water quality stations • Maintain a water quality database • Develop and maintain a water quality model • Report on water quality and river health	Operate and maintain 9 continuous water quality monitoring stations	Continued operation of 9 stations	• Operated 9 continuous monitoring stations, collecting real-time water quality information for the following parameters: conductivity, temperature, dissolved oxygen, pH, and turbidity. • GRCA installed a second continuous nitrate sensor, which was installed at the Bridgeport water quality monitoring station. There are now 2 operational nitrate sensors, one at Bridgeport and one at Brant water quality station. • Water quality stations visited bi-weekly for cleaning and calibration • Data made publicly available on the GRCA website and historic data available for download. • Grab samples were collected from the Brant and Bridgeport water quality stations and analyzed for nitrates at an accredited laboratory for the purpose of validating GRCA continuous sensor data.
	Maintain a water quality database for continuous water quality data and grab sample data from GRCA, municipal and provincial water quality sampling programs within the watershed	Continued maintenance of the database	• Database maintained in WISKI data management platform • Provincial Water Quality Monitoring Network (PWQMN) database maintained by MECP and backed up on GRCA server (GRCA data only) • Historic PWQMN data were used to update scoped water quality metrics that were presented in the Grand River Water Management Plan. Nitrate characterization was updated at select sites along the Grand River and major tributaries, up to 2023, using PWQMN data.
	Develop and maintain the Grand River Simulation Model (GRSM) for use in municipal assimilative capacity studies or for broader watershed planning purposes	GRSM is available for any municipal studies, upon request and GRCA staff will provide support for model application in assimilative capacity studies	• GRCA initiated discussion with a provincial agency to fund a feasibility study to update the GRSM.

Programs and Services Description	Deliverables	Metrics	2024 Watershed-wide Summary
	Analyze and report on surface water quality	Reports on water quality are produced cyclically or as needed (e.g., reports to Board, watershed report cards, technical updates to Water Management Plan)	• Report GM-06-24-52 to the GRCA Board of Directors regarding water quality in the Grand River watershed, with a focus on elevated nitrate levels in groundwater and surface water. • A presentation of the updated nitrate characterization was presented to the Region of Waterloo, City of Brantford and invited local academics at a virtual meeting on September 5, 2024. • A presentation of the updated nitrate characterization was presented to the Grand River Water Managers Working Group at the quarterly meeting on December 10, 2024.
Groundwater analysis and reporting	Analyze and report on groundwater quality	Reports on water quality are produced cyclically or as needed (e.g., reports to Board, watershed report cards, technical updates to Water Management Plan)	A presentation on nitrate in groundwater was presented to the Grand River Water Managers Working Group on December 10, 2024.

Conservation Services

Programs and Services Description	Deliverables	Metrics	2024 Watershed-wide Summary
Deliver municipal and partnership cost-share programs to support private land stewardship action to improve and protect water quality and watershed health	Provide information and resources to landowners related to stewardship action including agricultural best practices, private water well maintenance, tree planting and naturalization projects.	Number of program participants, number of landowner inquiries	• 256 landowners participated in GRCA delivered stewardship programs in 2024. Conservation Services staff responded to an additional 100+ inquiries from landowners.
	Engage watershed residents in stewardship action through promotion of cost share opportunities	Number of residents engaged though program promotion	• Private land stewardship action and GRCA cost share programs were promoted through GRCA's Landowner Grants and Resources webpages, social media, one on one extension visits (260), and displays, presentations and participation in local agricultural industry and community events (2600 participants). Total watershed resident engagement: 28,000 (estimated).
	Conduct site visits to assist landowners with planning stewardship projects and submitting applications to GRCA delivered cost share programs	Number of site visits	• 260 site visits were conducted to support proposed, new and existing private land stewardship projects.
	Administer and deliver municipally funded rural water quality programs (RWQP) as requested by watershed municipalities	Projects completed (number, type)	• Municipal grant funding delivered on behalf of 7 municipalities: Waterloo Region, Wellington, Brant, Haldimand, Dufferin, Oxford and well decommissioning program on behalf of the City of Hamilton. 180 projects were completed with $650,000 in municipal grants provided. The total investment in these projects is $3 million.
		Project investment by funding source	• See above.
		Total grant, kg Phosphorus retained	• An estimated 2,760 kg of phosphorus was retained on the landscape as a result of these projects. Projects completed prior to 2024 continue to retain phosphorus on the land. An estimated 135,000 kg of phosphorus is retained each year resulting from previously implemented RWQP projects.

Programs and Services Description	Deliverables	Metrics	2024 Watershed-wide Summary
	Seek additional partner funding to enhance cost share programs GRCA offers to watershed landowners (ie. offering funds in municipalities without a RWQP or enhancing cost share funding opportunities in areas where municipal RWQPs exist).	Projects completed (number, type) project investment by funding source, total grant, kg Phosphorus retained.	• Additional funding was secured by the GRCA to support private land stewardship. Sources include: Environment and Climate Change Canada Nature Smart Climate Solutions fund in partnerships with Conservation Ontario, Fisheries and Oceans Canada Habitat Stewardship Program for Aquatic Species at Risk, Forests Ontario 50 Million Tree Program, and Tree Canada. $282,000 in grant from these GRCA-delivered initiatives supported 119 projects, including tree planting, erosion control, livestock fencing and cover crop incentives.
Facilitate private land, municipal and community partner tree planting	Conduct field surveys and site assessments to develop tree planting plans for rural landowners and community groups (for projects that meet minimum property and project size requirements)	Number of landowners engaged, number of planting plans developed, number of projects completed, number of trees planted, planting area, km of windbreak, km of riparian buffer	• 168 residents requested assistance from GRCA Forestry Specialists in planning tree planting projects. 90 planting plans were developed; 81 of these private land projects were planted by GRCA contractors. 111,700 trees were planted (planting area 76 ha, 27 km windbreak and 6.5 km riparian buffer). Planting plans were also created for 13 community/municipal partner tree planting events.
	Provide technical assistance to tree planting clients to ensure successful completion of projects.	Number of landowners, projects and trees planted by landowners (plant your own projects) with Forestry Specialist support	• See above
	Support rural landowners to develop suitable applications to cost share programs	Summary of project investment by funding source	• $410,000 in grant provided to 81 landowners to cost-share tree and planting costs for 111,700 trees on 76 ha. $215,000 was provided from municipal Rural Water Quality Programs and $195,000 leveraged by GRCA from other sources (Forests Ontario, Tree Canada, Fisheries and Oceans Canada Habitat Stewardship Program for Aquatic Species at Risk). The total cost of these projects was $590,000.
	Secure tree stock and manage contracted planting services for landowners	Number of trees, projects, grant and investment in projects planted through GRCA planting program	• Just over 140,000 trees were secured by GRCA for 243 watershed landowners. This includes 81 landowners who had planting plans developed by GRCA forestry specialists and trees planted by GRCA contactors, 13 community planting events and 149 plant your own tree orders from eligible watershed residents, many of which received technical support from Forestry Specialists.
	Serve as technical resource to landowners and community tree planting organizations	Number of community partner organizations supported; hours contributed	• Trees for Mapleton, Trees for Woolwich, Lets Tree Wilmot, Brant Tree Coalition, Perth County Stewardship Program, Sustainable Waterloo Region, Community Living Haldimand. Estimated hours contributed = 315.
	Support community partner and municipality hosted outreach (tree planting) events as capacity permits	Number of community partners, number of residents engaged/event participants, number of events, number of trees planted, total area planted, volunteer hours contributed	• 13 community planting events, 6,600 trees planted by 745 participant who contributed 1,500 hours, partners included Brant Tree Coalition, County of Brant, City of Brantford, Ducks Unlimited Canada, TD, Community Living Haldimand, Trees for Mapleton, Trees for Woolwich.
Coordinate education and outreach activities to promote actions to improve water quality and watershed health	Engage watershed residents through development and delivery of outreach events (tours, workshops, webinars) and participation in partner, community, and municipal events and meetings; as capacity and opportunities exist	Number of partners, events, event participants.	• Private land stewardship action and GRCA stewardship programs were promoted by Conservation Services staff at 32 events in 2024. These events were hosted or offered in partnership with 26 local organizations (municipalities, community groups, agricultural industry associations). An estimated 2,600 participants attended these events.

Programs and Services Description	Deliverables	Metrics	2024 Watershed-wide Summary
	Develop promotional materials (print, website, social media) to promote stewardship action and recruit participants to GRCA Conservation Services Programs.		• Maintained GRCA website, contributed to GRCA social media content, developed “Is your well, well?” video promoting private well stewardship, posted to YouTube.

Subwatershed Services

Programs and Services Description	Deliverables	Metrics	2024 Watershed-wide Summary
Deliver a subwatershed planning program and provide technical support for municipal stream monitoring and (sub)watershed planning*	Identify and recommend (sub)watershed or other regional-scale technical study priorities	Provide a table of recommendations annually	• Region of Waterloo – Prioritized completion of on-going studies. Continued monitoring programs underway since 2005. Identification of new studies was put on hold pending Provincial review of proposed settlement area boundary expansions. • Prioritized studies underway or recently initiated by the City of Guelph and the City of Brantford.

	Upon request and in watershed priority sequences, provide technical advice on terms of reference, scoping, methods for (sub)watershed studies.	Identify studies where support has been provided within the watershed annually	• North Brantford and Tutela Heights Subwatershed Study (City of Brantford)
			  ○ Coordinated technical review and provided GRCA requirements for floodplain mapping and public consultation.
			• Clythe Creek Subwatershed Study (City of Guelph)
			  ○ Coordinated technical review and provided GRCA advice for Regulatory Floodplain Mapping Terms of Reference.
			  ○ Provided recommendations for the draft Table of Contents for the Phase 1 study.
			• Provided comment on the Draft Framework for Processing and evaluating Urban Boundary Expansion Applications (City of Hamilton).
			  ○ Comments included technical advice for scoping and recommended methods for a Phase 1 Subwatershed Study, which is proposed to be a minimum requirement for applications.
			  ○ Provided technical advice and recommendations on Phase 1 Subwatershed Study general Terms of Reference.
			• Guelph Innovation District Block 3 Terms of Reference (City of Guelph)
			  ○ Provided technical advice based on recommendations in the Torrance Creek Subwatershed Study Management Strategy (1998).
			• Draft Technical Memo: Subwatershed Goals, Objectives, Targets, and Draft Land Uses (City of Kitchener).
			  ○ Reviewed and provided technical advice on scoping the Subwatershed Study for the development of the Dundee Secondary Plan.
			• Breslau Secondary Plan (Township of Woolwich)
			  ○ Attended virtual meeting, provide information on work completed to date in the East Side Subwatersheds and recommendations moving forward.
			• Erbsville North MESP (City of Waterloo)
			  ○ Provided technical advice on the Terms of Reference for this study.

Programs and Services Description	Deliverables	Metrics	2024 Watershed-wide Summary
	Seek additional partner funding to undertake subwatershed/regional studies	Identify the number of applications, specifics, success and financial information annually	• Secured federal funding ($10,000) from Fisheries and Oceans Canada (DFO) to classify previously unclassified municipal drains in the County of Brant using DFO's municipal drain classification system. This data could inform future characterization of a subwatershed and input to the development of monitoring plans for consolidated linear infrastructure approvals. • Successfully sampled 7 municipal drains and 9 independent drain segments. Sampling included specific parameters for flow characteristics and fish community sampling.
	Review and provide input to watershed, regional and local scale subwatershed studies. • Participate on steering committees, working groups • Scope of technical review in compliance with O. Reg 596/22 - Prescribed Acts	Number of requests and reviews undertaken	• Clythe Creek Subwatershed Study: Technical Advisory Group (City of Guelph) o Participated in Workshop #3 and #4, focusing on calibration of the hydrologic model (Workshop #3) and modeling future land use scenarios (Workshop #4). • North Brantford and Tutela Heights Subwatershed Study (City of Brantford) o Coordinated technical review and provided GRCA comments on hydrologic and hydraulic models. o Participated in working group with City and consultant regarding hydrologic modelling. • Randall/Breslau Drain Engineered Floodplain mapping (Region of Waterloo) o Coordinated technical review and provided GRCA comments on engineered floodplain mapping for Randall and Breslau Drains, which was approved by GRCA General Membership on June 28, 2024. • Participated on the Mohawk Lake Steering Committee (City of Brantford).
	Provide technical support and advice on municipal stream monitoring.	Number of plans reviewed and location within watershed	• Milll Creek Subwatershed Study Implementation (City of Cambridge, Township of Puslinch): o Technical support provided for the Mill Creek Ranger program, University of Guelph Department of Integrative Biology, and Friends of Mill Creek. o Results for STREAM benthic macroinvertebrate sampling collected in 2023 provided in 2024. • Provided technical support and advice for the City of Kitchener for the proposed city-wide weather station implementation. • Completed water quality sampling on Blair Creek (City of Kitchener) on behalf of the MECP for a chemical compound known to be toxic to salmonids. • Provided technical support and advice to the City of Brantford on scoping the monitoring of a prairie fen.
	Serve as digital custodian for previously completed subwatershed studies (listed on GRCA website) Respond to requests for digital copies of previously completed subwatershed studies from consultants and the public.	Upon request	• GRCA website updated to include recently completed studies available to the public. • Responded to 97 requests from municipalities/consultants/public for digital copies of previously completed studies.

Programs and Services Description	Deliverables	Metrics	2024 Watershed-wide Summary

*Undertake subwatershed monitoring for watershed and regional scale subwatershed studies where services are cost-shared between the municipalities and the GRCA under separate agreements. May undertake monitoring for local scale subwatershed studies where 100% funding provided by municipal under separate agreement.			• Blair Creek (City of Kitchener):
			  ○ Administered annual monitoring program completed by GRCA staff and consultants.
			  ○ Consolidated data and provide annual monitoring report.
			• East Side Lands Subwatersheds (cost-shared with Region of Waterloo, monitoring sites within City of Cambridge, City of Kitchener, and Township of Woolwich):
			  ○ Administered monitoring program completed by GRCA staff
			  ○ Consolidated data and provide annual monitoring report.
			• Completed Randall/Breslau State of the Watershed update (Region of Waterloo) – to be submitted in 2025.
			• Jones Creek Monitoring – finalized and sent water quality data to the City of Brantford.
			  ○ Completed monitoring in 2024
			  ○ QA/QC and consolidate data