

# City of Waterloo, IPPW, City Utilities

2025

## Stormwater Management System Annual Report

CLI-ECA Stormwater Management 112-S701

January 1, 2025, to December 31, 2025

## **Executive Summary**

The Stormwater Management 2025 Annual Performance Report provides a comprehensive overview of the City of Waterloo's performance achievements and initiatives during 2025. The report highlights our operational challenges and corrective actions.

The management system is continuously monitored and maintained via several programs, supported by timely issue resolution. Looking ahead, the stormwater management system and associated inspection/maintenance programs are likely to expand with expected residential development and intensification of the city's core area.

Public transparency and communication remain a priority, with updates provided through social media and the annual performance report.

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# 1. Introduction

The 2025 Annual Performance Report has been prepared in accordance with the terms and requirements set out in the Consolidated Linear Infrastructure Environmental Compliance Approval (CLI-ECA) 112-S701, issued to the City of Waterloo on February 8, 2023, under the *Environmental Protection Act, 1990*. It covers the period of January 1 to December 31, 2025, and must be submitted to the Ministry of Environment, Conservation and Parks (MECP) no later than April 30, 2026. It must be made available to the public no later than June 1 the same year.

This report summarizes monitoring and maintenance activities for the Stormwater Management System regulated under the CLI-ECA and evaluates the system’s overall operational performance. Reporting requirements are outlined in **Table 1**.

*Table 1: Reporting requirements per CLI-ECA Stormwater Management 112-S701. The associated section(s) of the CLI-ECA is noted within brackets for each category.*

Category	Details
Monitoring Data (5.2.2 & 5.2.3)	Summary and interpretation of data, including environmental trends over the past 5 years; overview of the condition and operational performance of the Authorized System; adverse effects on the natural environment.
Operating Problems (5.2.4)	Summary of operational problems encountered and corrective actions taken.
Inspections, Maintenance, and Repairs (5.2.5)	Summary of inspections, maintenance, and repairs carried out on the Authorized System.
Monitoring Calibration and Maintenance (5.2.6)	Summary of calibration and maintenance on monitoring equipment.
Complaints and Resolutions (5.2.7)	Summary of complaints received, and the actions taken to address them.
Alterations (5.2.8)	Summary of alterations to the authorized system and significant drinking water threats (SDWT).
Spills (5.2.9)	Summary of all spills or abnormal discharge events.
Actions for Correction or Improvement (5.2.10 & 5.2.11)	Summary of actions taken to improve or correct the system, and updates for the previous reporting year’s actions.

## 1.1 System Description

The Municipal Stormwater Management (SWM) system serving the City of Waterloo's drainage area is a separated system (i.e. designed not to convey sanitary sewage or combined sewage) within the Grand River watershed. The City's subwatershed drains approximately 74 km<sup>2</sup> of land west of the Grand River and includes Laurel Creek and several tributaries that converge throughout the catchment. The drainage area lies primarily within City boundaries and features a mix of agricultural, wetland, woodland, and urban land uses. About half of the subwatershed is urbanized, with ongoing growth and development.

The municipal SWM system consists of the following (2025 data<sup>1</sup>):

- 343.9 km storm sewers
- 5.6 km culverts
- 8.9 km ditches
- 6,802 stormwater catchbasins
- 6,887 stormwater maintenance holes
- 65 stormwater management ponds

Alterations to the SWM system are documented through the MECP designated application process, Records of Future Alterations forms.

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<sup>1</sup> Data pulled from the Canadian Infrastructure Benchmarking Initiative online portal, calculated by City staff.

## 2. Monitoring Programs

The City conducts three monitoring programs designed to collect data related to the SWM system condition and performance:

- 1) A creek-based water quality sampling program (Laurel Creek Water Quality Monitoring Program) delivered by a consultant and detailed in **Section 2.1**;
- 2) A stormwater management system facility sampling program (Pond Monitoring for individual ECA requirements) that is conducted by City Utilities staff and detailed in **Section 2.2**; and
- 3) A program focused on rain gauges and flow monitoring within the City’s linear network that is managed by City Utilities staff and maintained by a consultant, detailed in **Section 2.3**.

**Section 2.4** provides a review of the supporting information for the Laurel Creek Water Quality Monitoring Program that outlines the findings of the work, including analysis on performance.

### 2.1 Laurel Creek Water Quality Monitoring Program (LCWQMP)

The purpose of the Laurel Creek Water Quality Monitoring Program (LCWQMP) is to monitor the baseline conditions of various water quality indices within the urban water systems in the City of Waterloo. The data was collected by a consultant during regular and freeze/thaw events. Water samples were sent to a CALA accredited laboratory for analysis. The results presented and summarized are from their report “Laurel Creek Water Quality Monitoring Program – 2025 Season” (hereafter referred to as the “Consultant’s Report”), which informed the sections of this Stormwater Management System Annual Report related to the LCWQMP; the Consultant’s Report is available upon request.

In 2025, the program included 13 pre-determined sampling locations (stations) that captured a wide range of land-use through the subwatershed (**Figure 1**; **Table 2**).

*Table 2: Laurel Creek Water Quality Monitoring Program sampling locations (adapted from the Consultant’s Report).*

Site	Land-Use Classification	Rationale for Selection of Site	Drainage Area (ha)
3	Urban – Residential / Industrial	Understanding of residential / industrial lands run-off (water represents combined impacts of Clair Creek, Waterloo Park, Silver Lake, Uptown Waterloo).	5607.1
5	Urban – Residential	Understanding of residential lands run-off.	1244.6

Site	Land-Use Classification	Rationale for Selection of Site	Drainage Area (ha)
7	Mixed – Reservoir	Downstream of Columbia Lake controlled reservoir.	3464.1
8	Urban – Residential	Understanding of residential lands run-off.	722.0
10	Mixed – Reservoir	Controlled reservoir downstream of Laurel Creek Conservation Area.	3225.4
17	Rural – Agricultural	Understanding of agricultural run-off and turbidity impacts (site is rural headwaters of Laurel Creek).	697.4
20	Rural – Agricultural	Understanding of residential lands run-off.	1893.1
21	Rural – Pristine / Reference	Pristine headwaters prior to agricultural drain influence.	760.2
23	Rural – Agricultural / Wetland	Understanding of agricultural and wetland influence.	799.4
24	Urban – Industrial	Understanding of urbanized land use and chloride impacts.	910.0
25	Urban – Residential / Industrial	Understanding of urbanized land use and discharge from monitored ponds # 38, #33 and #20.	3204.2*
26	Urban – Park	Outflow of LCW into the Grand River.	1946.0*
27	Urban – Park	Outflow of small wetland.	3204.2*

\*Estimated based on the size of the subcatchment basin the site falls within (data provided by the Grand River Conservation Authority). With these estimated drainage areas, there may be some spatial overlap.

## 2.2 Pond Monitoring – Individual ECA Requirements

Pond monitoring includes sampling at four (4) stormwater management ponds (**Table 3; Figure 2**) following three (3) annual rainfall events, in accordance with existing individual ECA requirements. Sampling locations will remain unchanged until a new CLI-ECA monitoring program is implemented, at which time they may be updated.

*Table 3: Stormwater management ponds sampled as part of pond monitoring, including their name (pond ID), location, and rationale for selection.*

Pond Name	Site Location	Rationale for Selection of Site
Northfield SWM (20)	165 Frobisher Drive	Amended Environmental Compliance Approval – Number 2199-AU6NP3 Issue Date: January 24, 2018
Yarmouth SWM (33)	551 Eastbridge Boulevard	Amended Environmental Compliance Approval – Number 5308-ASHPJJD Issue Date: November 17, 2017
Dorwood SWM (38)	2355 University Avenue East	Amended Environmental Compliance Approval – Number 6231-APGJDY Issue Date: August 14, 2017
Creekside SWM (53)	550 Laurelwood Drive	Amended Environmental Compliance Approval – Number 7100-AUWVQ7 Issue Date: February 27, 2018

## 2.3 Stormwater Flow and Rain Gauge Network Monitoring Program

Flow monitoring was conducted at six (6) permanent sites selected as per the Stormwater Risk Assessment project. Precipitation monitoring was conducted using rain gauges at five (5) sites, whose locations were chosen to provide geographical coverage across the entire city.

**Figure 2** shows the locations of the flow monitors and rain gauges.

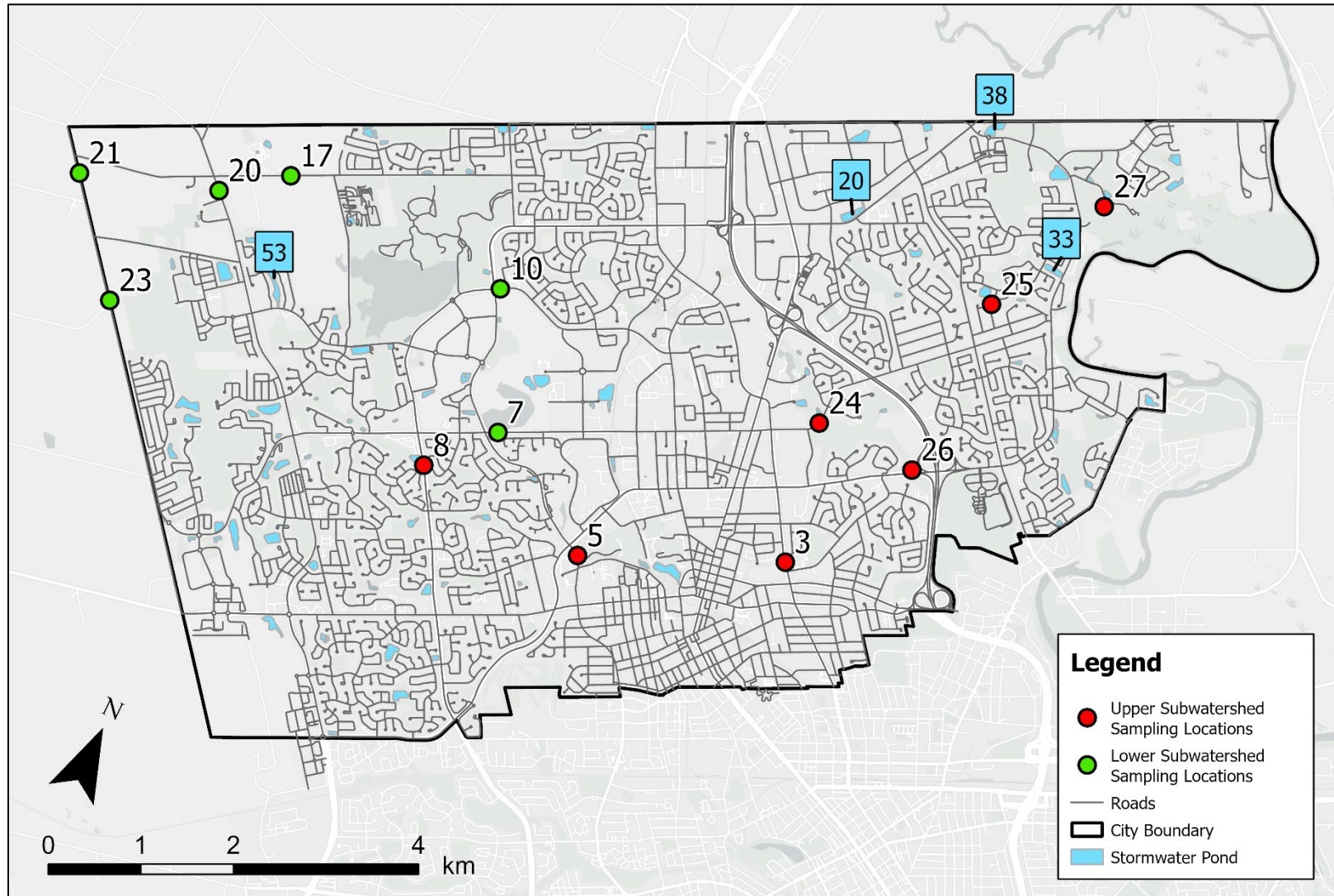


Figure 1: Laurel Creek Watershed Quality Monitoring Program and stormwater pond sampling locations.

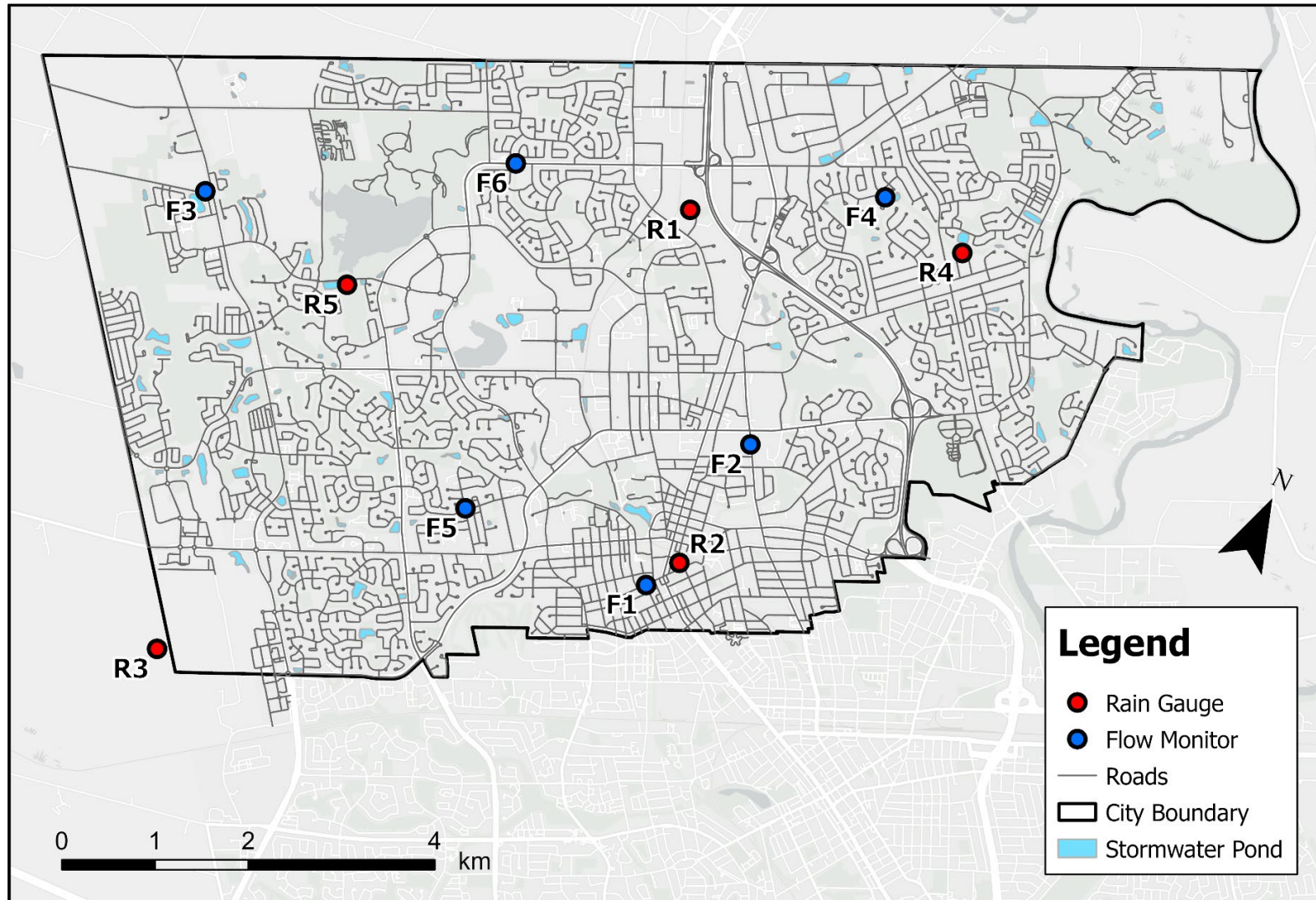


Figure 2: Flow monitor and rain gauge network. Rain gauges are labelled with the prefix “R”, while flow monitors are labelled with the prefix “F”.

## 2.4 Monitoring Results Analysis for the Laurel Creek Water Quality Monitoring Program

The following sub-sections outline the supporting information for the LCWQMP, climate considerations, details on the analyzed water quality parameters, and provides analysis on performance of the subwatersheds within Waterloo.

### 2.4.1 Supporting Information for Monitoring Results

There were no significant localized heavy rainfall flooding issues, lab problems, or changes to the sampling parameters during the 2025 season.

While loggers were deployed at all sites in May 2025, not all were removed in September 2025 as planned. The loggers at Site 5 and Site 26 were tampered with, requiring them to be removed prematurely in mid-July and mid-September respectively. Additionally, Site 24 had to be removed in early September due to cable corrosion and accumulated sediment from bank slumping.

### 2.4.2 Climate Parameters

Other than the month of May, temperatures during the 2025 sampling season (March – September) were significantly warmer than average (**Figure 3**). Total monthly precipitation was generally consistent with historical averages, however there were several notable extreme rainfall events (e.g. 78.8 mm rainfall on April 3<sup>rd</sup>).

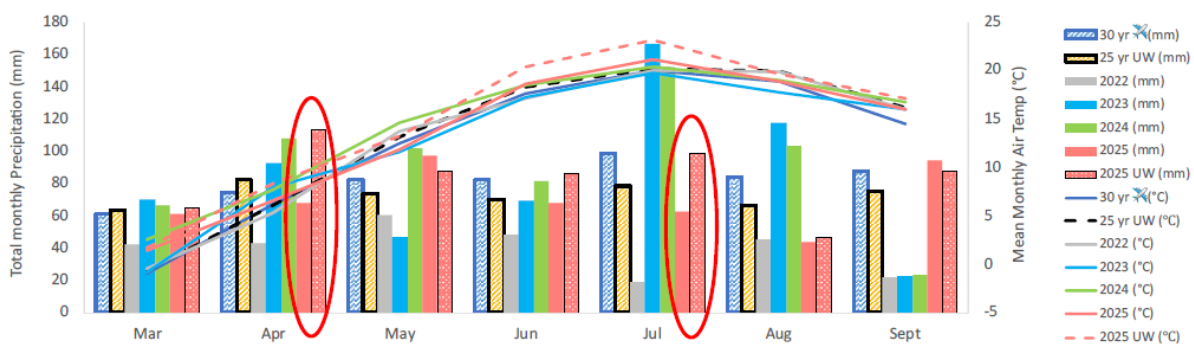


Figure 3: Average rainfall and air temperatures (reproduced from the Consultant’s Report).

Note: Air temperature and precipitation data for the 2025 monitoring season was sourced from the Kitchener/Waterloo weather station (Climate ID: 6144239). Historical climate data for Waterloo (30-year average from 1981-2010) was sourced from the weather station Waterloo Wellington A (Climate ID: 614387).

### 2.4.3 Analysis of Overall Performance

**Table 4** lists the water quality guidelines and thresholds used to ensure aquatic habitat protection for the Laurel Creek Water Quality Monitoring Program. Additionally, the observed and historical trends are identified.

*Table 4: Water quality guidelines and thresholds, and trends observed in the data (adapted from the Consultant’s Report).*

Indicator	Water Quality Thresholds	Guidelines & References	Observed Trends within the Reporting Period	Observed Trends Compared to the Past 5 Years
Chloride	- 640 mg/L acute (24 to 96 hours) - 120 mg/L chronic (7-day exposures for fish and invertebrates, 24-hour for aquatic plants and algae)	CWQG / CCME	Significantly lower chloride concentrations at rural and reservoir sites compared to urban areas, which remain below the acute threshold. Levels decreased following heavy rain.	Consistent.
Dissolved Oxygen	- Warm water Fishery (downstream of Laurel Creek Reservoir) – Minimum 5.5 mg/L - Coldwater Fishery (upstream of Laurel Creek Reservoir) – Minimum 6.5 mg/L	CWQG / CCME	Measurements declined beginning in spring and until early June, after which measurements remained consistent.	Mostly consistent.
Electrical Conductivity	N/A	N/A	Urban sites had higher measurements relative to rural and reservoir sites.	Consistent.

Indicator	Water Quality Thresholds	Guidelines & References	Observed Trends within the Reporting Period	Observed Trends Compared to the Past 5 Years
Major Ions*	N/A	N/A	Measurements at urban sites were higher and showed a larger range of values compared to rural and reservoir outlet sites.	Consistent.
Nitrate	- Maximum of 3.0 mg/L-N long term - Maximum of 124 mg/L-N short term	CWQG / CCME and GRCA	Reservoir sites had the lowest level of nitrates; rural and urban sites had the highest levels during freeze-thaw events.	Consistent.
Phosphorus	- Instream maximum of 30 ug/L (upstream of Laurel Creek Reservoir) - Instream maximum of 80 ug/L (downstream of Laurel Creek Reservoir)	CCME Nutrient Framework	Increased levels were observed following precipitation events.	The last three years showed lower phosphorous levels in the spring than previous years.
pH	- 6.5 to 9.0 long term - 6.5 to 8.5	CWQG / CCME and PWQO	Measurements at urban sites were lower than at rural and reservoir outlet sites.	Consistent.
Suspended Solids	- Instream maximum of 25 mg/L	CWQG / CCME	All sites experienced spikes in measurements following intense precipitation events.	Consistent.

Indicator	Water Quality Thresholds	Guidelines & References	Observed Trends within the Reporting Period	Observed Trends Compared to the Past 5 Years
Water Temperature	<ul style="list-style-type: none"> <li>- Warmwater Fishery (downstream of Laurel Creek Reservoir)</li> <li>- Maximum instream temperature of 26°C (1 Jun – 1 Aug)</li> <li>- Maximum instream temperature of 29°C (1 Aug - 31 Oct)</li> <li>- Coldwater Fishery (upstream of Laurel Creek Reservoir)</li> <li>- Maximum instream temperature of 22°C (1 Apr – 31 Oct)</li> </ul>	Laurel Creek Watershed Study, (GRCA, 1993); Weatherbee et al, 1993; Draper et al, 1992	All sites showed a similar pattern of warming starting in March, reaching their peak in July, and starting to slowly cool in mid-August.	Consistent.

\*Major Ions include Calcium, Magnesium, Potassium, Sodium, and Sulfate.

CCME = Canadian Council of Ministers of the Environment

CWQG = Canadian Water Quality Guidelines

PWQO = Provincial Water Quality Objectives

GRCA = Grand River Conservation Authority

### **3. Interpretation of Environmental Trends**

It is predicted<sup>2</sup> that the primary climate change-driven weather impacts within the City's subwatershed will be short-term increased precipitation intensity, rapid snow melt, and rises in temperature.

In 2021, the City received a National Disaster Mitigation Program grant for the update and calibration of the City's existing SWM model. The updated and calibrated model was then used for a flood risk assessment of the City's SWM infrastructure. The purpose of the risk assessment was to establish the extent of flood hazards and identify deficiencies to help the City of Waterloo develop solutions for impacted public/private properties and allow for better preparedness for emergency flood events and future climate change conditions.

In support of the model calibration, and to better understand the effect of changing climate on linear stormwater system, the City implemented a City-wide permanent rain gauge and flow monitoring network. The stormwater flow monitoring and rain gauge program was undertaken in 2022, and the calibration of the City's existing stormwater model was completed in early 2023.

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<sup>2</sup> Ontario Provincial Climate Change Impact Assessment, Technical Report, January 2023, Ministry of Environment, Conservation, and Parks, Province of Ontario.

### 3.1 Stormwater Risk Assessment

The updating, refinement, and calibration of the existing SWM Model will allow the City to better understand the effect of changing climate on the linear stormwater system, more accurately predict the risk of flooding throughout our higher risk areas under various weather events and climate change adaptation scenarios, and to determine proposed development/infill impacts on the existing system. The City plans to take a more proactive role in identifying these areas to mitigate risk and build flood resiliency city-wide.

Data gathered in 2022 was used for the initial calibration of the existing SWM Model and to generate a Modeled Stormwater Risk Assessment Report. The report and model were finalized in early 2023. Another calibration of the SWM Model is expected to be conducted in 2028.

As part of the methodology used for the risk assessment, the following environmental indicators were considered under the environmental risk category:

- Water Quality Impact to Environmentally Sensitive Areas
- Erosivity Impacts
- Contamination of Ground/Source Drinking Water

These indicators provided the basis for evaluating environmental risks for each sub-basin within the subwatershed.

The risk assessment includes the identification of system deficiencies to be considered in future mitigation planning and incorporated into the City's capital plan. A geographic representation of the environmental flood risk model is presented in **Figure 4**.

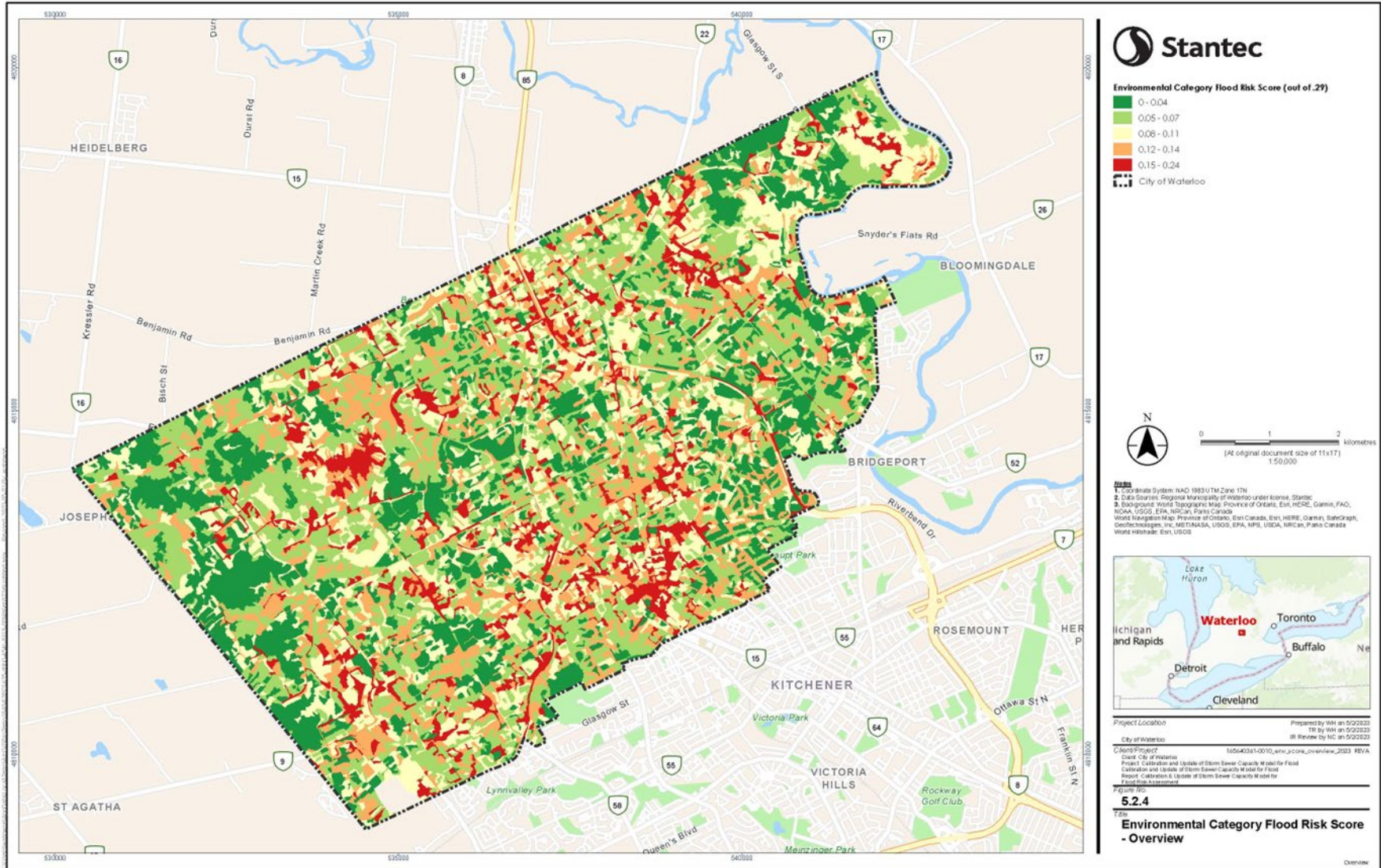


Figure 4: Environmental category flood risk score – overview.

### **3.2 Precipitation**

Inspection of collected rainfall data showed considerable variation in rainfall measurements across the City's five (5) rain gauges in terms of rate, maximum depth, event start and end, and total volume for various storm events recorded over the monitoring period. Environment and Climate Change Canada historical data showed five (5) stations within a search radius of 25 kilometres, with data available between 2021 and 2025. Examining rainfall data of these stations demonstrated a similar pattern of varying rainfall events. A comparison of the City's rainfall data with the City of Waterloo's IDF curves showed that most of the largest storms that occurred in 2025 were roughly equivalent to 2-year events, with only one storm being a 5-year event, further supporting the monitoring observations.

### **3.3 Flooding, Bank Erosion, and Siltation**

The City does not have an established flood database. However, creek and stormwater inspections (bank erosion) are performed annually and as needed after a rain event.

In terms of siltation, through the LCWQMP, it was observed that the behaviour of subwatershed turbidity spikes with elevated stream flow is a well-established correlation. The data shows that the turbidity drops over time after a precipitation event has passed. It does not provide any meaningful quantitative data for the City in terms of decision making.

Further data gathering is required to better understand these environmental trends.

## 4. Operations

### 4.1 Operational Problems Experienced

During 2025, some equipment used to record operational data (e.g., inspections) was temporarily out of service, which disrupted daily operations and caused delays in data entry.

### 4.2 Inspections, Maintenance, and Repairs

Inspections of stormwater infrastructure are completed 1) proactively to monitor infrastructure conditions and performance, and 2) reactively to address issues and carry out maintenance before issues result in system performance problems, as described in **Table 5**.

*Table 5: Inspection and maintenance programs.*

Maintenance Program	Program Description	Frequency	# Completed in 2025
Catchbasin Cleaning	<ul style="list-style-type: none"> <li>Cleaning of catchbasins as per established cleaning cycle</li> </ul>	One area annually based on 7-year rotation.	793
Catchbasin Reviews	<ul style="list-style-type: none"> <li>Structure condition</li> <li>Functionality assessment</li> <li>Damage reports</li> </ul>	One area annually based on a 7-year rotation.	691
Creek Inspection	<ul style="list-style-type: none"> <li>Obstruction</li> <li>Channel conditions</li> <li>Evidence of pollution</li> </ul>	Occurs in response to large rain events (>15mm) and high wind events. At least once per creek annually.	241
Culvert Inspection	<ul style="list-style-type: none"> <li>Structure condition</li> <li>Functionality assessment</li> <li>Damage reports</li> </ul>	Once annually.	87

Maintenance Program	Program Description	Frequency	# Completed in 2025
Grate Inspection	<ul style="list-style-type: none"> <li>• Structure condition</li> <li>• Functionality assessment</li> <li>• Damage reports</li> </ul>	Inspected prior to and following rain events exceeding 5mm.	1,534
Maintenance Hole Inspection	<ul style="list-style-type: none"> <li>• Structure condition</li> <li>• Functionality assessment</li> <li>• Damage reports</li> </ul>	One area annually based on 7-year rotation.	898
Maintenance Hole Cleaning	<ul style="list-style-type: none"> <li>• Cleaning of maintenance holes as per established cleaning cycle</li> </ul>	One area annually based on 7-year rotation.	202
OGS Cleaning	Depending on the inspection report: <ul style="list-style-type: none"> <li>• List of OGS units in need of cleaning generated</li> <li>• Cleaning performed by external contractor</li> </ul>	As needed annually based on inspections. OGS's near the Excess Soil Facility (5 units) are cleaned as needed.	11
OGS Inspection	<ul style="list-style-type: none"> <li>• Structure condition</li> <li>• Functionality assessment</li> <li>• Damage reports</li> </ul>	Once annually.	50
SWM Pond Inspection	<ul style="list-style-type: none"> <li>• Outfall channels</li> <li>• Outlet structures</li> <li>• Upstream/downstream dam banks</li> <li>• Control valves</li> <li>• Emergency spill ways</li> <li>• Permanent ponds</li> <li>• Vegetation</li> <li>• Forebays</li> <li>• Water quality</li> <li>• Inlets</li> <li>• Pond buffers</li> <li>• Reporting of repairs needed</li> </ul>	Annually and post rain event.	212

Maintenance Program	Program Description	Frequency	# Completed in 2025
SWM Pond Sign Inspection	<ul style="list-style-type: none"> <li>• Sign inspection</li> <li>• Reporting on the need to replace missing signage</li> </ul>	Once per month over winter months (Nov. 1 – April 1).	230

As identified during inspections or reports, some components of the City’s stormwater management infrastructure needed maintenance, repair, or replacement; details are described in **Table 6**.

*Table 6: Maintenance and repairs.*

Type of Maintenance/Repair	# of Occurrences
Catchbasin	116
Culvert	6
Infiltration gallery	8
Maintenance hole	34
Sinkhole	19
Storm sewer/service	20
<b>Total</b>	<b>203</b>

### 4.3 Calibration and Maintenance of Monitoring Equipment

All monitoring equipment used in 2025 is owned or provided by City Utilities or consultants. The monitoring equipment is maintained and calibrated on a regular basis to ensure reliable and accurate data by the responsible owners. Field instruments, including those used for water quality measurements, are calibrated before use, or at routine intervals. Similarly, data loggers, rain gauges, and flow monitors are calibrated upon installation and receive ongoing maintenance and recalibration on a scheduled basis. When a piece of equipment no longer holds calibration, it is removed from service to be repaired or replaced. These steps help maintain the integrity of the monitoring program and support consistent, high quality data collection.

## 5. Complaints

**Table 7** includes a summary of all stormwater-related complaints that the City received, as well as typical responses.

*Table 7: Summary of complaints.*

Complaint Type	Description	Typical Response	# Received
Animal Rescue	Animal found to be stuck in a piece of stormwater infrastructure (typically a catchbasin).	Stormwater operators are sent out to retrieve the animal.	1
Creeks	Debris found to be within the creek's channel.	Stormwater operators are sent to remove the debris from the creek.	3
Catchbasins	A perceived issue with the function of a City catchbasin has been observed.	Stormwater operators are sent to assess the issue and administer corrective action. If another department is better suited to respond, then they are informed and the issue is transferred to them.	126
Maintenance Hole	A perceived issue with the function of a city maintenance hole has been observed.	Stormwater operators are sent to assess the issue and administer corrective action. If another department is better suited to respond, then they are informed and the issue is transferred to them.	29

Complaint Type	Description	Typical Response	# Received
Private Property Drainage Issue	Drainage issue relating to stormwater has occurred on private property.	The issue is discussed further with the property owner. If the issue occurs solely on private property, the property owner is provided with potential options to address the issue. It is up to their discretion whether they would like to pursue any of these options further. If the issue is a result of City infrastructure, the appropriate City departments are involved to implement a resolution.	20
Sink Hole	Sinkhole has been noted around stormwater infrastructure.	Stormwater operators are sent to assess the issue and administer corrective action. If another department is better suited to respond, then they are informed and the issue is transferred to them.	24
Spills into the Stormwater Infrastructure	A spill of a potentially environmentally hazardous substance was observed.	Stormwater operators are sent to assess the issue and administer corrective action. If another department is better suited to respond, then they are informed and the issue is transferred to them.	9
Stormwater Pond	A perceived issue with the function of a city stormwater pond has been observed.	Stormwater operators are sent to assess the issue and administer corrective action. If another department is better suited to respond, then they are informed and the issue is transferred to them.	15
<b>Total</b>	-	-	<b>227</b>

## 6. Summary of Alterations to the System

### 6.1 Summary of All Alterations

**Table 8** shows the summary of alterations to the stormwater system for 2025.

*Table 8: Summary of alterations.*

Alteration Type	# of Completed Alterations	Description of Alteration	# of Alterations that Pose a Significant Drinking Water Threat
Pre-Authorized Storm Sewer, Ditch, or Culvert	4	- 2.35 km of storm sewer	0
Pre-Authorized Stormwater Management Facility	2	- One low impact development feature - Two oil/grit separators	0
Pre-Authorized Third Pipe	1	- 2 Third Pipe Collectors to service the Vista Hills Subdivision	0

### 6.2 Significant Alterations

No significant alterations were made to the system that did not meet the pre-authorized criteria in 2025.

## 7. Spills and Abnormal Discharge Events

When spills occur in the City of Waterloo, they are recorded and tracked through our spill reporting procedure. **Table 9** provides details about reported spills in 2025, including volume and response actions.

*Table 9: Spill events.*

Date	Location/Receiver	Description of the Spill/Event	Estimated Volume	Actions Taken
2025/03/26	Interlaken Drive	Battery acid in catchbasin and on the roadway.	2-3 L	Battery acid was contained to catchbasin and removed.
2025/03/28	Black Oak Crescent	Cooking oil or grease poured into catchbasin.	<2 L	Oil/grease was contained to the catchbasin and removed.
2025/06/23	Columbia Street West heading to Erbsville Road	Substance suspected to be vehicle coolant was leaking on road along Columbia Street West to Erbsville Road.	<10 L	No material entered a catchbasin. Sorbent material placed over the roadway where spill was noticeable.
2025/07/25	King Street North	Overflow of cooking grease/oil to private catchbasin.	20 L	Sorbent material and pads placed to contain further spread, after which material was removed and disposed of.
2025/08/19	Bluevale Street North	White, milky substance in catchbasin.	1 L	Spill material remained within the catchbasin sump, from which it was removed.

Date	Location/Receiver	Description of the Spill/Event	Estimated Volume	Actions Taken
2025/08/29	Columbia Street West at Benington Gate	Antifreeze from car accident on roadway.	2 L	Put sorbent material on the antifreeze and swept it up.
2025/09/15	Seawind Trail	Cooking grease poured into catchbasin.	<1 L	Spill material remained within the catchbasin sump, so sorbent pads were placed and replaced in the sump until all material was removed.
2025/09/23	Woolwich Street	Latex white paint on roadway.	<10 L	Staff placed sorbent material over the paint, swept up the sorbent material, then had the street sweeper clean the roadway.

## 8. Actions Taken to Improve or Correct Performance

### 8.1 Continuous Improvement Actions Taken in Current Reporting Year

**Table 10** lists the actions taken to improve the planning, operation, and maintenance of the stormwater system.

*Table 10: Continuous improvement actions taken.*

#	Issue	Actions to be Taken	Completion Date
1	SOP revisions/development	SOPs review, and creation of new ones to ensure standard performance.	Ongoing.
2	Creek stabilization/rehabilitation	Continue training and implementation of creek stabilization/rehabilitation techniques to expand knowledge and operational capacity.	Ongoing.
3	Improvements to parks/forestry, facilities, and transportation	Drainage correction, replacement of infrastructure.	Ongoing.

## 9. Additional Notes / Comments

The following is a list of significant projects or expected impacts for the stormwater system within the City of Waterloo:

- Beaver Creek Meadows Development Area – the City has approved infrastructure work in support of residential unit growth, originally slated for 2026 to 2028. Several stormwater ponds, stormwater piping, and related works will require system alterations review and permitting, along with expansion of the operations and maintenance programs to support these net new assets for the duration of their life cycle. Due to the Region of Waterloo water supply constraint, discussed in **Section 9.1**, the anticipated timing is unclear.
- The City continues to receive planning applications for intensification in the City’s core area and in proximity to transit corridors. These developments will require systems alterations permitting, review, and expansion of the operations and maintenance programs.
- The City will develop action plans in response to recommendations received from the monitoring and flow monitoring data gathered in the next 2-years.

### 9.1 Water Supply Constraint Advisory (issued late 2025)

On December 4, 2025, the Region of Waterloo issued an advisory that water supply in the Region’s Mannheim Service area is constrained and impacts the Cities of Waterloo and Kitchener, and Townships of Woolwich and Wilmot. Several factors have been cited in context of the constraint including aging infrastructure, well impacts, plateauing of conservation efforts, and growth. The advisory stated that water quality was not impacted and continues to be safe for consumption.

The Region of Waterloo communicated that a peer review had been initiated to examine all information at that time and that a new methodology had been developed for calculating remaining supply using a sustainable water supply approach.

The Region of Waterloo requested the municipalities impacted halt Form 1 approval processes for water system alterations. By proxy, for system additions, this extends to stormwater systems.

In January 2026, the Region of Waterloo initiated two teams to examine water technical options and planning processes; however, at the time of this report preparation, no approved solutions for the water supply constraint that would allow new development applications to proceed have been shared by the Region of Waterloo.

City staff have been engaged to participate on the various teams and are committed to support continued growth in the City while balancing the safety of the drinking water supply.

## **10. Making Available to the Public**

This document is available digitally on the City of Waterloo website.

<https://www.waterloo.ca/water-utilities/manage-drainage-and-stormwater/learn-how-the-city-manages-stormwater/>