



Municipal Stormwater Management System  
Annual Operating Report  
2024

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# 1 Introduction

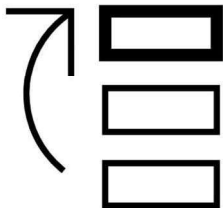
This report was prepared to satisfy the reporting requirements specified in Environmental Compliance Approval (ECA) No. 014-S701, Schedule E, Section 5 issued for the Corporation of the City of Barrie (the City of Barrie) Municipal Stormwater Management System (MSWMS), on June 19, 2024. This report summarizes activities for the 2024 reporting period, spanning from January 1, 2024, to December 31, 2024, inclusive. The information herein demonstrates the City of Barrie’s commitment to provide acceptable levels of service, while remaining transparent, financially accountable, and focused on continuous improvement.

## 1.1 Quality Management System

To satisfy the requirements of the ECA, the City of Barrie developed a quality management system, titled the OpsQMS, in general accordance with Canadian Standards Association (CSA) W211 Management Standard for Stormwater Systems to satisfy the requirements of the ECA for the MSWMS. The OpsQMS:

- Documents key policies and procedures needed for effective management of the MSWMS;
- Documents a framework for increasing public safety by identifying and mitigating environmental, social, legal, and economic risks to the MSWMS; and
- Demonstrates service delivery outcomes through the effective application and continual improvement of the MSWMS.

The City of Barrie is committed to ensuring the responsible management of stormwater in a way that protects public safety and the environment through the development, implementation, and maintenance of the OpsQMS. The City of Barrie supports the Operations Department as they maintain and continually improve the effectiveness of the OpsQMS through the following commitments:



1. To comply with applicable legislation and regulations;
2. To maintain and continually improve the stormwater system;
3. To minimize any impacts that the operations of the stormwater system might have on the natural environment and public health; and,
4. To consult with or inform the public when stormwater system elements are to be established or expanded.

The commitments of the OpsQMS align closely with the strategic priorities of the City of Barrie Council, particularly those related to Infrastructure Investments and Responsible Governance. Here is how each commitment supports these strategic priorities:

- Compliance with Applicable Legislation and Regulations: By committing to comply with relevant legislation and regulations, the OpsQMS ensures that the MSWMS operates within legal boundaries. This supports **Responsible Governance** by demonstrating a commitment to upholding laws and regulations, which is essential for maintaining public trust and accountability.
- Maintenance and Continuous Improvement of the MSWMS: The commitment to maintaining and continually improving the MSWMS supports Infrastructure Investments by ensuring the reliability, functionality, and longevity of critical infrastructure. Regular maintenance and improvement activities help prevent system failures, reduce overall asset lifecycle costs, and enhance the resilience of the MSWMS, aligning with the City of Barrie's priority of **infrastructure investments**.
- Minimization of Environmental and Public Health Impacts: The commitment to minimizing impacts on the natural environment and public health demonstrates a proactive approach to environmental stewardship and community

well-being. By prioritizing environmental and public safety considerations in stormwater management operations, the OpsQMS contributes to **Responsible Governance** by prioritizing the health and safety of residents and the protection of natural resources.

- Consultation with or Informing the Public: Engaging with the public and providing information about the MSWMS aligns with **Responsible Governance** by promoting transparency, accountability, and public participation in decision-making processes. Consulting with or informing the public about system establishment or expansion projects fosters community engagement, builds trust, and ensures that stakeholder perspectives are considered in stormwater management initiatives.

This report provides details of the achievements that support the priorities listed above, along with other reporting requirements.

1.2 Stormwater System Description

The Drainage System serves the urban area of the City of Barrie. When the ECA was issued, it described the MSWMS as consisting of approximately 676 kilometres (km) of storm sewer mains, culverts, ditches, and watercourses (WCs). The system includes 82 Stormwater Management Facilities (SWMFs), commonly known as storm ponds, which consist of 42 dry facilities and 40 wet facilities. Levels of treatments within these facilities range from only quantity control to enhanced 80% Total Suspended Solids (TSS) removal. As of February 2025, a dry SWMF was retrofit to a wet pond, 2 Filtration Manufactured Treatment Devices (MTDs) were assumed, 76 Sedimentation MTDs and 10 functioning Low Impact Development (LID) sites, with additional LID devices and sites planned in the future.

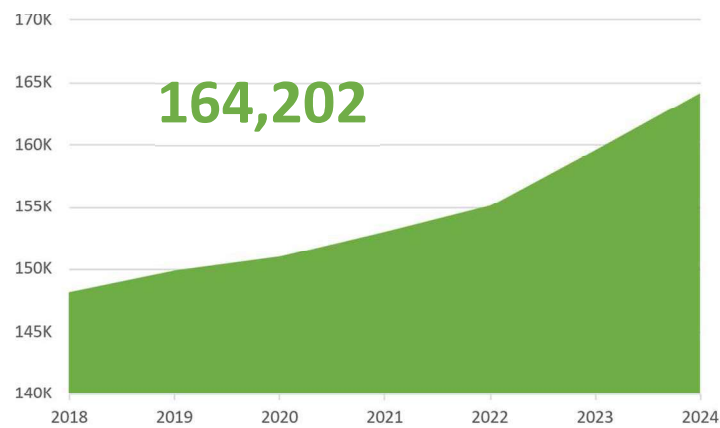
Table 1: Summary of Active Asset Inventory

Description	ECA Issued Jan 2023	December 2024
Storm Sewer Mains (km)	442	452
Culverts (km)	--	27
Ditches (km)	131	126
Watercourses (km)	--	103
SWMFs – Dry Facilities	42	41
SWMFs – Wet Facilities	40	41
Filtration MTDs	0	2
Sedimentation MTDs	65	76
LID Sites	7	10

As the MSWM continues to expand, the asset composition changes. In 2024, the description of the MSWMS changed to reflect the information provided in Table 1.

The population of the City of Barrie has steadily increased, as illustrated in Figure 1. As of December 31, 2024, a population of 164,202 resides across a drainage area of approximately 10,100 hectares (ha), with a mix of residential, commercial, and institutional and industrial land uses for the planning horizon 2031. The Drainage System has two distinct areas: the Lake Simcoe Watershed covering 7,100 ha and the Nottawasaga Valley watershed covering 3,000 ha. Future growth for both watersheds will be focused on undeveloped annexation lands to the southwest for the Nottawasaga Valley watershed and to the southeast for Lake Simcoe watershed. This MSWMS drains to the Township of Essa via the Bear Creek sub-watershed and Township of Springwater via Little Lake sub-watershed.

Figure 1: City of Barrie Population



## 2 Asset Management and Financial Performance

Effective operations and maintenance are crucial elements for ensuring the longevity, reliability, and efficiency of municipal infrastructure. Within this context, the role of asset management emerges as a cornerstone for achieving these objectives. A well-implemented asset management plan fosters operational resilience by reducing the impact of unforeseen events. Whether facing disruptions due to natural disasters, equipment failures, or other emergencies, organizations equipped with robust asset management practices can respond more effectively, minimizing downtime and ensuring continuity in their operations. To that end, the City of Barrie prepared a Stormwater Asset Management (AM) Plan, dated January 2021. An addendum to the Stormwater AM Plan was published in May 2022 to capture Level of Service requirements omitted from the original document. Both documents are available at [www.barrie.ca](http://www.barrie.ca).

### 2.1 Asset Management Plan

The 2021 Stormwater AM Plan outlines the current state of Barrie's stormwater infrastructure, and highlights the costs associated with the City of Barrie's responsibility to mitigate flood impacts and protect bodies of water from urban stormwater runoff. Highlights related to operational needs and risks include:



- The total stormwater asset value was \$1,245,000,000.
- 41% of SWMFs were designed for enhanced water quality treatment, without which stormwater will carry higher levels of pollutants into creeks, streams, and lakes, including Lake Simcoe.
- Figure 2 illustrates the projected funding required to operate and maintain the stormwater assets in a state of good repair to maintain the performance standards.
- Operations and maintenance needs associated with a growing asset portfolio will increase operating funding expenditures. For example, the identified SWMF cleanout backlog will result in poor water quality and failure to meet regulatory requirements if not addressed.<sup>1</sup>

Figure 2: Stormwater O&M Financial Sustainability



The Stormwater AM Plan concluded that the City of Barrie has historically underinvested in stormwater assets, noting that underinvestment is unsustainable and will result in more risk in the form of flooding events, infrastructure failures and loss of service.

2

<sup>1</sup> Table ES.5, titled AM Plan Risk Mitigation Summary, from the Stormwater AM Plan

<sup>2</sup> Figure 5.4 Stormwater O&M Financial Sustainability from the Stormwater AM Plan

2.2 Catchment Inventory

The City prepared the Storm Sewer Catchment Inventory, in accordance with the CLI-ECA, Schedule E, Section 9.0, Storm Sewer Catchment Inventory ahead of the November 15, 2025, deadline. The catchment area of the City of Barrie is 9,901 ha. Based on the inventory, 70% of the City of Barrie catchment is treating stormwater. MTDs treat stormwater from CLI-ECA Schedule E Table E1 and E2 are included in Appendix A, for reference.

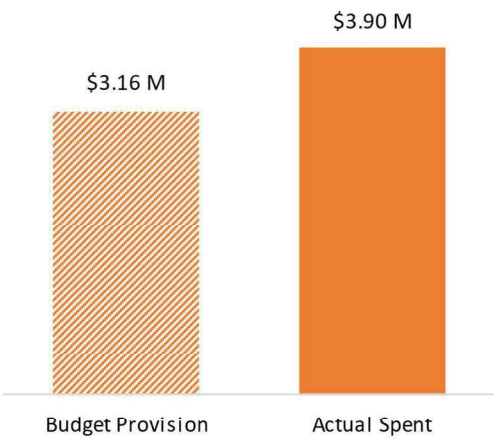
2.3 Financial Performance

The stormwater financials are broadly categorized into two categories: the first is collection, conveyance, and natural receivers; the second is treatment. Assets associated with stormwater collection, conveyance, and natural receivers include, but are not limited to, catch basins (CBs), storm sewers, ditches, culverts, WCs, lakes, and wetlands. Assets associated with stormwater treatment include, but are not limited to, SWMFs, MTDs and an increasing uptake of LID practices. With the asset management financial considerations in mind, the following is a summary of the financial performance of the operations and maintenance of the MSWMS.



As illustrated in Figure 3, in 2024, the operating expenses for the MSWMS was budgeted at \$3.16M dollars, of which \$3.90M was spent, representing approximately 123% of the projected operating budget was expended. References to financials within this report are based on the 2024 ledger prior to finalization and excluding debenture costs.

Figure 3: 2024 Operating Expenses



### 3 Approach to Optimize Operational Performance

The City of Barrie recognizes the importance of responsible asset stewardship to ensure that assets receive the periodic maintenance required to meet or exceed their design service life while maintaining their intended function. Optimizing operational performance is at the core of how the management of the MSWMS aligns with Council's Strategic Plan. To reiterate, optimization provides the following benefits directly aligned to priorities within the Strategic Plan:



- Compliance with applicable legislation and regulations supports **responsible governance** by demonstrating a commitment to upholding laws and regulations, which is essential for maintaining public trust and accountability.
- Maintenance and continuous improvement of the MSWMS helps prevent system failures, reduce operational costs, enhance the resilience of the stormwater system, and deferral of capital costs associated with the renewal of assets, aligning with the City of Barrie's priority of **infrastructure investments**.
- Minimization of environmental and public health impacts contributes to **responsible governance** by prioritizing the health and safety of residents and the protection of natural resources.

The City of Barrie has developed data-driven inspection and maintenance programs to operationalize best practices for preventative maintenance. Inspections and preventative maintenance are necessary to support improved overall safety and reliability of the MSWMS, as well as the optimization of asset lifecycle costs. The inspection and maintenance programs minimize the likelihood of unplanned service disruptions and resultant need for costly reactive repairs. The forecasted timing of capital plans, as well as potential flooding risks identified in the City of Barrie's most recent Drainage Master Plan (2019), are considered when prioritizing inspections and maintenance to the MSWMS.

Critical issues and other pertinent asset details are escalated as appropriate to support the development of safe, reliable, and cost-optimized infrastructure repair and renewal plans.

Operations and maintenance activities can typically be categorized as follows:

- **Annual Programming** – Annual Programming is required to continue delivering the minimum baseline levels of service. It is preventative, rather than reactive and therefore entails relatively stable and predictable funding requirements; however, increased funding pressures may potentially result from changes within the regulatory sphere or within the market.
- **Major Maintenance** – Schedule E, Section 1.0 of the Stormwater ECA requires that the City of Barrie always operate and maintain the system properly. This includes performance monitoring, addressing major maintenance concerns, adequate funding and adequate operator staffing and training. Major Maintenance needs are primarily based on findings from asset inspections; therefore, associated budget pressures tend to be relatively variable, but in most cases Major Maintenance needs can, to an extent, be prioritized and scheduled to align with available operational funding, or otherwise addressed through the capital budget.
- **Emergency Response** – Emergency Response is required in situations where asset conditions decline to the point of disrupting municipal services. Emergency response typically entails the greatest financial expense. Swift action is required to ensure public safety, minimize disruption to municipal services, and mitigate potential environmental harm. Within the context of municipal stormwater infrastructure, emergency response is mostly related to flooding, sinkholes, and spills.

## Emergency Repairs



In 2024, City council committed emergency funds, totalling approximately \$80,700 (plus HST), in addition to the approximately \$335,000 (plus HST) spent in 2023, towards drainage issues in the Bear Creek Wetland east of Marta Crescent. To protect surrounding residential property and community safety, emergency works including tree removal, construction of a coffer dam and infiltration trench were completed by a contractor. Operations staff will continue to monitor the situation until a long-term solution to the drainage issues are resolved.

### 3.1 Inspection Programs

Inspections were completed on assets including LIDs, sedimentation MTDs, wet and dry SWMF, ditches, culverts, WCs, CBs, MHs, and all other appurtenant structures. Each inspection was tracked in the Computerized Maintenance Management System (CMMS). The process is illustrated in a diagram in Figure 4.

Inspections are conducted operationally by City Operations staff resources and expertise, except for “structural culverts” (as defined in the Ontario Structure Inspection Manual), CBs, and MTDs, which are completed by contracted professionals. The City has adopted a variety of GIS-supported, non-entry inspection methodologies that are rapid, efficient and produces repeatable assessments and ratings. All inspectors are diligently trained to ensure that the data generated is standardized.

A summary of the inspection work orders is included in Table 2. A summary of linear assets (sewers) receiving maintenance is included in Table 3. Note that conveyance programs for sewer mains and laterals are not well resourced and are typically handled on a complaint driven basis.

Table 2: Summary of Completed Inspection Work Orders

ECA Asset Group	Total
Inspection – CBs	12,921
Inspection – Culverts	202
Inspection – Headwalls	239
Inspection – Laterals	--
Inspection – LIDs	37
Inspection – MHs	--
Inspection – MTDs	78
Inspection – SWMFs	132
Inspection – WCs	83

Table 3: Summary of Linear Length Receiving Inspections

ECA Asset Group	Length
Maintenance – Sewers	43 km

### 3.2 Maintenance Programs

Inspections that identified deficiencies resulted in added maintenance and repair activities (work orders). Each deficiency was actioned into a work order in the CMMS. The process is illustrated in a diagram in Figure 4. In 2024, maintenance and repair work orders were completed on assets including: CBs, culverts, ditches, laterals, LIDs, MHs, sedimentation MTDs, storm sewers, wet and dry SWMFs, WCs, and all other appurtenant structures. Refer to the sections below for specific details of work completed on each asset type. A detailed summary of maintenance work orders is included in Appendix B, describing the specific work activities completed against each asset type.

The remaining assets detailed in the ECA did not require maintenance or repairs in 2024.

Table 4: Summary of Completed Maintenance Work Orders

ECA Asset Group	Total
Maintenance – CBs	13,034
Maintenance – Culverts	61
Maintenance – Ditches	3
Maintenance – Laterals	4
Maintenance – LIDs	40
Maintenance – MHs	36
Maintenance – MTDs	79
Maintenance – Sewers	5
Maintenance – SWMFs	450
Maintenance – WCs	280



A summary of the maintenance work orders is included in Table 4. A summary of linear assets (ditches and sewers) receiving maintenance is included in Table 5. Note that conveyance programs for sewer mains and laterals are not well resourced and are typically handled on a complaint driven basis.

Table 5: Summary of Linear Length Receiving Maintenance

ECA Asset Group	Length
Maintenance – Ditches	2,280 m
Maintenance – Sewers	867 m

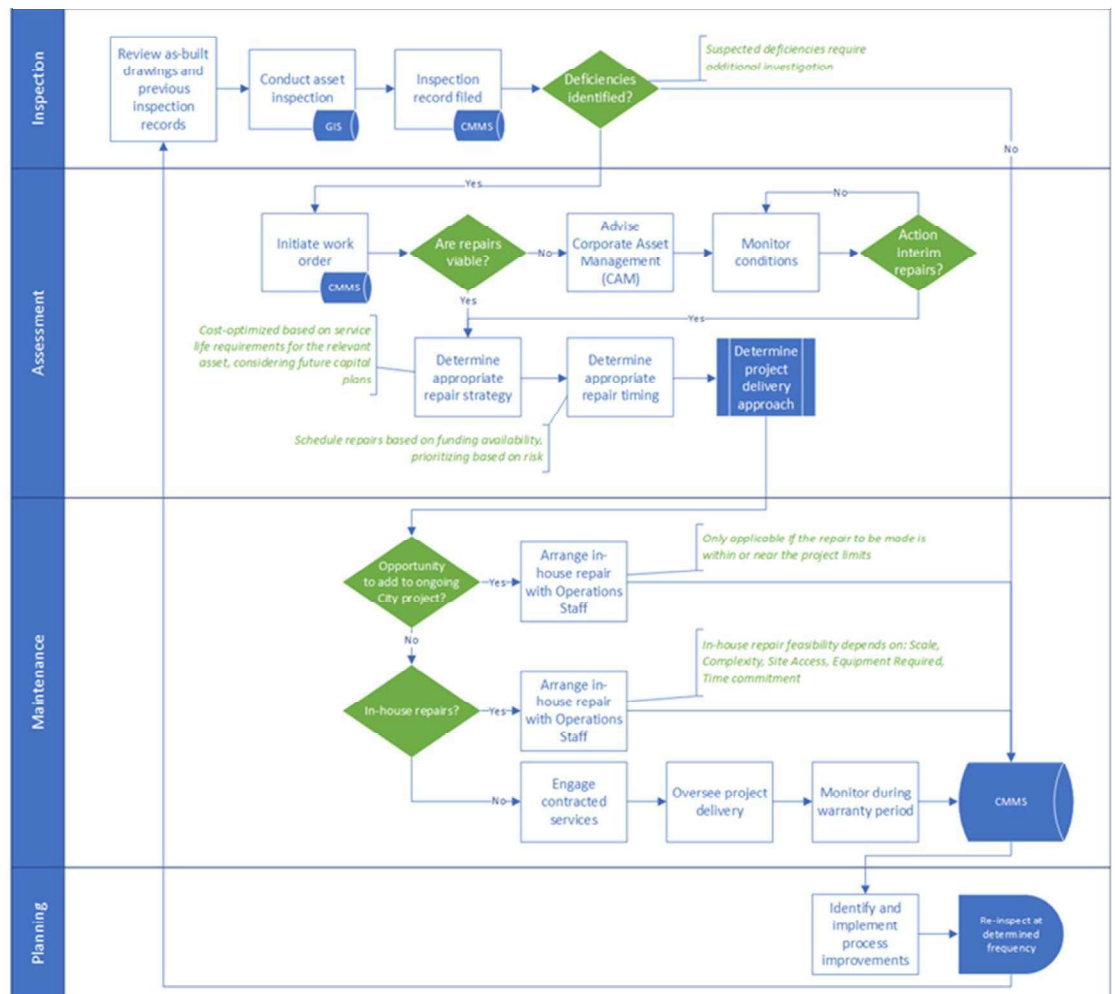
### 3.3 Computerized Maintenance Management System

The CMMS supports:

- Asset management-based decision-making;
- Data-driven budget planning;
- Tracking and benchmarking of Level of Service metrics;
- Preservation of corporate memory;
- Consistency of processes;
- Customer service excellence; and
- Analysis of data to foster continuous improvement and innovation.

The CMMS is fully customized and requires consistent and deliberate management to continually develop new processes and integrations.

Figure 4: Inspection and Maintenance Process



### 3.4 Environmental Monitoring Programs

The City of Barrie has developed Environmental Monitoring Programs to document condition of the environmental aspects of the MSWMS. In accordance with the ECA, Schedule E, Section 4.1, on or before November 15, 2024, or within twenty-four (24) months of the date of the publication of the Ministry of Environment, Conservation, and Parks (MECP) monitoring guidance, whichever is later, the Monitoring Plan shall be implemented; following which, the City of Barrie will include the results of the Monitoring Programs in the Annual Report. In the interim, a high-level summary of the monitoring data has been prepared for the purposes of this annual report.

#### 3.4.1 Field Activities

Field monitoring activities were undertaken in various locations throughout the MSWMS, including SWMFs and watercourses. Along with collecting surface water samples for external laboratory analysis, in-situ measurements were recorded for temperature, pH, and dissolved oxygen, and conductivity.

#### 3.4.2 Quality Control for Environmental Monitoring

Quality control was verified by way of field duplicates and daily calibration of field equipment.

##### 3.4.2.1 Sampling Quality Control



Field duplicate samples are an important quality control measure in analytical testing, especially in environmental monitoring, water quality analysis, and similar fields. The purpose of field duplicates is to assess the precision and reliability of analytical results by comparing the data obtained from two separate samples collected from the same location at the same time.

Quality control samples consisted of one field duplicate for every 10 samples that were submitted to the laboratory.

Analytical results of the field duplicates were comparable to the associated sample analytical results, indicating that the analytical results are valid.

A summary of the field duplicate analytical results is included in Appendix D.

##### 3.4.2.2 Monitoring Equipment Calibration and Maintenance

YSI, multi-parameter water meters, are used to monitor the MSWMS. Each of the devices is calibrated in accordance with the manufacturer's instructions. In addition, the devices are field verified prior to each use, in accordance with the manufacturer's instructions. Maintenance of the equipment is completed on an as needed basis.

In 2024, the pH probe, serial number 17A101263, was repaired in January.

A summary of the calibration records is included in Appendix E.

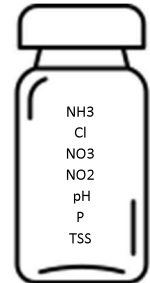


### 3.4.3 Laboratory

In 2023, an independent laboratory, ALS Laboratories Canada Ltd, was retained to perform analysis of the sample media associated with the monitoring program. ALS Canada Ltd. is accredited with Canadian Association for Laboratory Accreditation (CALA) to perform analysis of sample media, including water, soil, and sediment, for environmental projects and programs.

#### 3.4.3.1 Laboratory Analytical Results

A selection of water samples was analyzed for suite of organic and inorganic parameters. The concentrations of key indicator parameters, including Total Ammonia (NH<sub>3</sub>), Chloride (Cl<sup>-</sup>), Nitrate (NO<sub>3</sub><sup>-</sup>), Nitrite (NO<sub>2</sub><sup>-</sup>), pH, Total Phosphorous (P), and Total Suspended Solids (TSS) were aggregated and summarized in the report.



### 3.4.4 Environmental Trends



Environmental trends will be included in future annual reports; however, for the purposes of this report, a high-level summary of the monitoring data has been prepared, refer to Appendix F and Appendix G. In accordance with the ECA, Schedule E, Section 4.1, on or before November 15, 2024, or within twenty-four (24) months of the date of the publication of the MECP monitoring guidance, whichever is later, the Monitoring Plan shall be implemented; following which, the City of Barrie will include the results of the Monitoring Program in the Annual Report.

Long term environmental trends will be used to establish stormwater pond and sub-watershed baselines. Environmental monitoring data will help guide operational maintenance priorities and capital retrofit opportunities.

## 4 Stormwater Collection



Stormwater collection plays an integral role in the pre-treatment of stormwater. Collection is achieved primarily via CBs. They are the first piece of infrastructure that urban stormwater enters, and it is at this point in the system that there is an opportunity to reduce maintenance demands and maintain the performance of downstream infrastructure.

### 4.1 Catch Basin Inspection and Cleaning

The City of Barrie has a robust CB inspection and cleaning program that operates annually and is exploring new ways that pre-treatment can reduce reactive maintenance. CB inspection and cleaning is performed concurrently by the City of Barrie's contractor with the use of numerous hydrovac trucks. The CB inspection and cleaning program begins in early April and runs through to the end of June. Material generated from CB cleaning is stockpiled and temporarily stored at the Operations Centre for laboratory analysis to confirm appropriate disposal sites.

Highlights of the program in 2024 are as follows:

- Activities were conducted from April through to June;
- 12,936 CBs were cleaned; and
- 5,624 metric tons of sediment was removed and disposed.

### 4.2 Internal Catch Basin Devices

Internal Catch Basin Devices (ICDs) are becoming increasingly popular as a pre-treatment method. ICDs are devices designed to sit inside CBs and provide the ability for the CB to retain more sediment in CB sumps and capture plastics and debris.

## 5 Stormwater Conveyance



Stormwater conveyance infrastructure consists of storm sewers, ditches, and culverts. Conveyance assets transport stormwater from roadside runoff, CBs, and other inputs to downstream stormwater treatment infrastructure and/or natural receivers. Ongoing inspections and maintenance programs that are administered include: culverts, ditches, laterals, MHs, storm sewers, WCs, and all other appurtenant structures. These programs are all at varying stages of development based upon available resources. In 2024, a focus was placed on establishing the culvert inventory and identifying future maintenance needs.

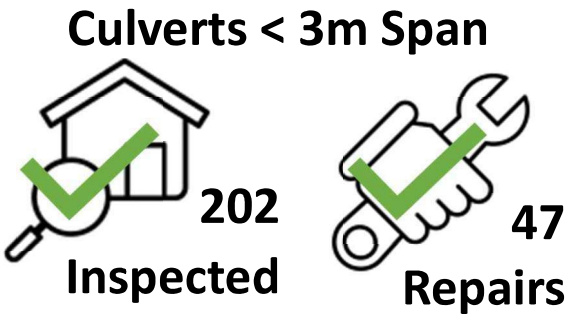
If deficiencies of ditches are observed through routine inspections and patrolling, the City of Barrie initiates a work order. In 2024, 3 maintenance activities were completed on ditches and 2,323 m of ditches were cleaned.



In accordance with O. Reg. 104/97 *Standards for Bridges*, as amended, all structural culverts with spans of 3 metres or greater must be inspected under the direction of a Professional Engineer on a biennial basis in accordance with Ontario Structural Inspection Manual (OSIM). Culverts with spans less than 3.0 metres are not subject to inspection under O. Reg. 104/97; nevertheless, they serve a critical role in supporting the safety and reliability of the local infrastructure and surrounding lands. In the absence of a mandated framework for non-regulated culverts, the City of Barrie established a 2-year inspection frequency. Currently, the 2-year inspection frequency is considered sufficient for achieving the positive objectives of the program, while minimizing staff resources. Entrance culverts are not subject to the inspection and maintenance program given that the rehabilitation of culverts is the responsibility of the individual property owner(s), as per Council Policy 91-G-247.

Structural culverts were not inspected in 2024. Structural culverts are scheduled to be inspected again in 2025, in accordance with applicable regulations, identifying 14 maintenance needs that should be completed within the next year, and 29 maintenance needs that should be completed within the next two years. 14 maintenance Work Orders were completed in 2024.

A total of 202 non-OSIM culverts were inspected in 2024, resulting in 22 maintenance Work Orders, all were completed in 2024. In addition, 25 identified in previous years were completed in 2024.



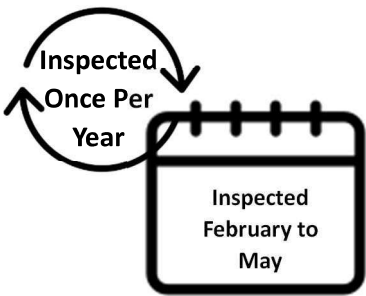
## 6 Stormwater Treatment

Stormwater conveyance infrastructure typically discharges to stormwater treatment infrastructure for the purposes of reducing flooding and improving the overall quality of stormwater runoff from urban areas before it is released to the natural receivers. Stormwater treatment infrastructure consists of SWMFs, MTDs and an increasing uptake of LID practices.

### 6.1 MTD Inspection and Cleaning

MTDs are used to target the treatment and removal of contaminants, broken out into two categories: Sedimentation MTDs and Filtration MTDs. Sedimentation MTDs (more commonly called oil grit separators) makeup the vast majority of the City of Barrie’s inventory of MTDs. Filtration MTDs are equipped with the addition of a filter or filtration media. Filtration MTDs have the capability of providing higher performance for improving stormwater quality discharges from these units. Within the City of Barrie’s drainage areas, MTDs are often installed ahead of SWMFs and/or on their own in smaller catchments as a standalone treatment device prior to discharge to the natural receiver.

MTDs were inspected by contractors, documenting an array of items. In addition, samples of sediment are collected and submitted to a licenced laboratory for analysis to determine appropriate disposal options. The following conditions were identified as concerns in 2024:



- Accumulation of Sediment, Trash or Debris
- Gaskets Missing or Damaged
- Hydrocarbons (Visible Oil Sheen)
- Infiltration or Leaking
- Signs of Clogging
- Standing Water Upstream
- Submerged Condition



#### 6.1.1 Sedimentation MTDs

In 2024, 76 sedimentation MTDs were inspected and 77 maintenance activities, consisting mainly of cleaning, were completed on Sedimentation MTDs.

#### 6.1.2 Filtration MTDs

The City of Barrie’s first Filtration MTDs were brought online in 2023, inspection and maintenance activities became the responsibility of the City of Barrie in 2024.

In 2024, 2 filtration MTDs were inspected and 2 maintenance activities, consisting of cleaning, were completed on Filtration MTDs.

6.2 Stormwater Management Facilities

SWMFs receive stormwater runoff from stormwater conveyance infrastructure and are designed to treat and/or hold stormwater prior to discharging it in a controlled manner to the downstream natural receiver. The City of Barrie has several SWMFs that are designed to hold stormwater.

6.2.1 Environmental Monitoring

Samples of surface water were collected on various dates July to October 2024, inclusive, from the outlet of 42 wet SWMFs. In 2024, a total of 121 samples, including 11 duplicates, were submitted for analysis. Concentrations of key indicator parameters are summarized in Table 6.

Table 6: Concentrations of KPI Analytical Parameters in SWMFs

Parameter	Units	Minimum	Maximum
Ammonia, total (as N)	mg/L	0.01	1.91
Chloride	mg/L	2.36	639
Nitrate (as N)	mg/L	0.02	2.07
Nitrite (as N)	mg/L	0.01	0.20
pH	pH units	7.25	9.48
Phosphorus, total	mg/L	0.01	0.30
Solids, total suspended [TSS]	mg/L	3.00	80.50

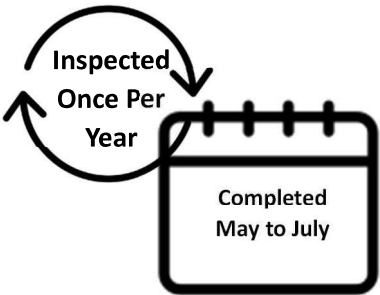
Note: Analytical results less than (<) the Method Detection Limit are reported at the detection limit for data aggregation purposes.

Figure 5: SWMF Sample Locations



The aggregated analytical result for each SWMF overlain on an aerial photo is included in Appendix F for reference.

6.2.2 SWMF Inspection and Maintenance



SWMFs are inspected once per year. In 2024, 83 inspections were completed in May and July. In addition, 49 inspections of Marta Crescent were completed at various times throughout the year.

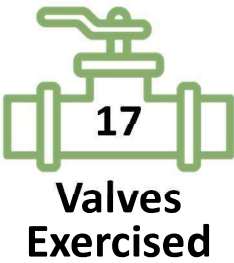


In 2024, 420 maintenance activities were completed within the SWMFs. Maintenance activities included but were not limited to installing signs, debris and litter removal, graffiti removal, grate repairs, access road maintenance, outlet repairs, etc. In addition, dewatering at Marta Crescent resulted in 13 maintenance activities.

SWMF valves are exercised once per year. In 2024, 17 valves were exercised. All valves were found to be in good working order.

Valves are exercised to ensure their functionality is maintained. Properly functioning valves result in reduced costs to draw down water within the SWMF, which is required periodically to perform certain maintenance activities.

In 2024, 5 valves were repaired, and 8 valves were replaced at the following SWMFs: BR10, BR25, BY01, HW05, HW06, HW09, LV14, LV27, LV49.



### 6.2.3 Repairs

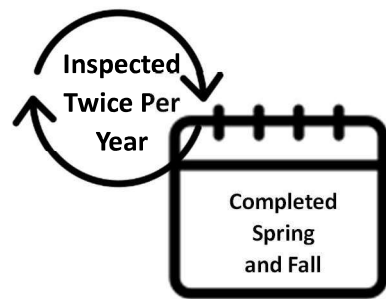
In 2024 the following major SWMF repairs were completed:

- In 2024 the emergency overflow spillway berm and downstream channel at SWMF BR08a was redesigned, constructed. Construction and replacement of the existing maintenance valve was also included in the project. The works included an armour stone berm and riffle / pool channel design. The project will restore the functionality of the facility, improve water quality downstream of the pond and protect the surrounding properties from potential flooding.
- Concrete cable matting associated with the inlet structure at SWMF LT02 was replaced. This maintenance was completed to protect the inlet structure from erosion issues.

## 6.3 Low Impact Development

Low Impact Developments (LIDs) are innovative approaches used in urban and suburban areas to manage stormwater runoff in an environmentally sustainable manner. These methods aim to mimic natural hydrological processes by using techniques such as green roofs, permeable pavements, rain gardens, and bioretention cells. By intercepting and treating stormwater close to its source, LIDs reduce the volume and improve the quality of runoff entering water bodies. This not only helps mitigate flood risks but also enhances water quality by filtering pollutants and replenishing groundwater tables, promoting more resilient and ecologically balanced communities.

### 6.3.1 Low Impact Development Inspection and Maintenance



LIDs are inspected annually in the spring each year. 37 inspections were conducted in May and June. No pre-assumption inspections were completed.

In 2024, 40 maintenance activities were completed on LIDs. Operations and maintenance activities included, but were not limited to control structure repairs, litter and debris removal, erosion maintenance and repair, spring sluice gate opening

and fall sluice gate closing, subdrain maintenance and repair, and non-invasive vegetation removal.



### 6.3.2 Repairs

Based on inspections carried out in 2024, maintenance and retrofit activities were completed 11 LID locations in the right of way on Big Bay Point Road. Maintenance included mulch removal, topsoil and sod placement and curb inlet concrete placement. The curb inlet placements will increase the functionality of the facilities and allow for more efficient maintenance in the future.



7 Natural Receivers

Natural receivers, such as WCs, lakes, and wetlands, serve as integral components of the MSWMS for the absorption, filtration, and conveyance of stormwater. The primary purpose of the natural receiver is to convey water from source to end receiver (i.e. lake within a watershed). Influences of groundwater and runoff inputs ever evolve the fluvial system. Current thinking around stormwater discharges to natural receivers should look to mimic pre-development flows as much as possible.



7.1 Environmental Monitoring

Samples of surface water were collected on various dates April to September 2024, inclusive, from various locations along the watercourses, illustrated in Figure 6. In 2024, a total of 116 samples, include 12 duplicates, were submitted for analysis. Concentrations of key indicator parameters are summarized in Table 7.



Table 7: Concentrations of KPI Analytical Parameters in Natural Receivers

Parameter	Unit	Minimum	Maximum
Ammonia, total (as N)	mg/L	0.01	1.65
Chloride	mg/L	24.1	1630.0
Nitrate (as N)	mg/L	0.02	5.46
Nitrite (as N)	mg/L	0.01	0.10
pH	pH units	7.98	8.61
Phosphorus, total	mg/L	0.004	0.10
Solids, total suspended [TSS]	mg/L	3	101

Note: Analytical results less than (<) the Method Detection Limit are reported at the detection limit for data aggregation purposes.

The aggregated analytical result for samples collected from the watercourses is included in Appendix G for reference.

7.2 Watercourse Inspection and Maintenance



Watercourses are completed on foot or using a drone. A total of 83 watercourse inspections were completed in 2024, which represents inspecting 65 km of watercourses. Approximately 38km of watercourse was not inspected due to health and safety concerns and competing priorities.

In 2024, 280 maintenance activities were completed on watercourses, including but not limited to erosion repairs, grateclearing, and inlet grate repairs.



83

Inspections



280

Repairs

### 7.3 Watercourse Erosion Repair Program

Erosion of watercourses presents a risk to the flood protection and conveyance capacity of the MSWMS. Following urban development and hardscaping of the landscape, natural receivers will respond to additional and/or changing inputs of stormwater discharges over the years. Erosion and sediment deposition impacts can be noticed almost immediately or take years to decades to develop into issues that need to be further addressed. The watercourse erosion repair program was developed to address certain immediate needs that which are not be suitable for capital budget planning. Depending on a variety of factors, certain projects can be undertaken by internal City staff requiring as little as a few days to resolve. The watercourse erosion repair program utilizes a contracted fluvial geomorphologist to support the delivery of medium sized projects by preparing site specific designs for the selected projects and providing cost estimates to complete the work. The City of Barrie retains a qualified contractor to complete these repairs. Work in sensitive riparian zones is subject to a variety of regulations that support ecological outcomes by imposing restrictions on when the work can be carried out.

The following erosion repair project(s) were completed in 2024:

- Ferndale Drive North Outfall to Dymont's Creek Rehabilitation
- Fairview Drive Outfall to Whiskey Creek Rehabilitation
- Whiskey Creek at Harvie Road Culvert Outlet Reinforcement
- Whiskey Creek at Hurst Drive Culvert Outlet Reinforcement
- 200 Minet's Point Road Outfall to Whiskey Creek Reinforcement



## 8 Addressing Enquiries and Complaints



The City of Barrie tracks enquiries and complaints via Service Requests in the CMMS. In 2024, 207 service requests were initiated in the of which 182 were resolved. This represents a resolution rate of 88% as illustrated in Figure 7. The remaining service requests have been scheduled for resolution. As illustrated in Figure 8, blocked CBs and flooding contributed the highest volume of complaints, representing half of the

total volume of complaints. Damaged sewer grates and MH covers contributed one quarter of the total volume of complaints. A combination of complaints regarding culverts, ditches, WC debris or obstructions, and varmint activity contributed to the remaining quarter of the total volume of complaints.

Figure 7: Complaints Resolution Efficiency

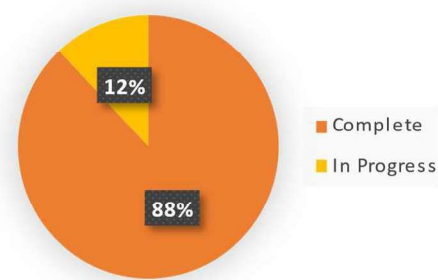
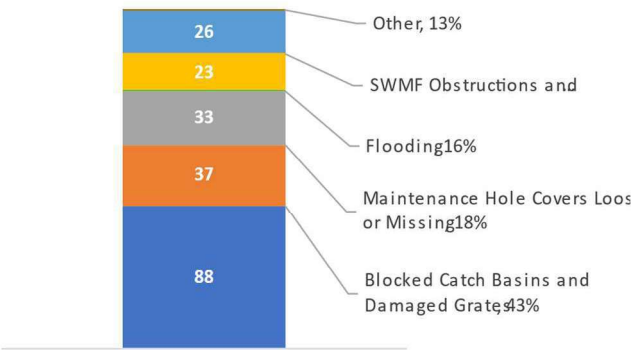
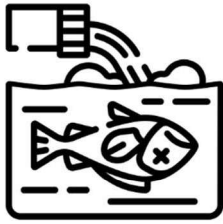


Figure 8: Types of Complaints



## 9 Spills and Abnormal Discharge Events

62



The City of Barrie responds to, and documents spills and abnormal discharge events impacting the MSWMS. A total of 62 spills and discharges impacting the MSWMS were documented during the reporting period. The location of the discharges in relation to the sub-watershed areas and a summary of applicable records is included in Appendix H.

## 10 Summary of Alterations

Planning for the MSWMS is achieved through the Official Plan, to the Infrastructure Master Plans, finally to Annual Budgeting. The watersheds are well documented in the Drainage Master Plan. The planning process includes extensive assessment of factors affecting stormwater management, including but not limited to consultation with upstream and downstream municipalities, and regulating agencies.

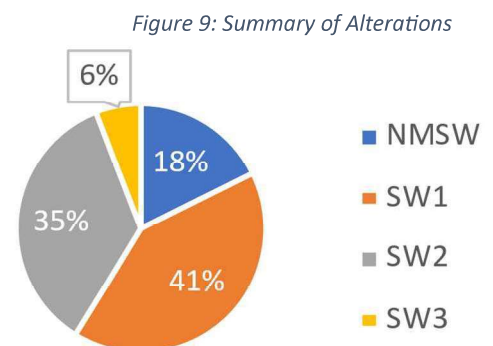
### 10.1 Alterations

A stormwater management system alteration refers to any change made to existing stormwater management infrastructure or design. This could involve various components of the system, such as drainage channels, pipes, SWMFs, infiltration basins, green infrastructure (e.g., rain gardens, permeable pavement), or other structural elements designed to control and mitigate the impacts of stormwater runoff.

Alterations to stormwater management systems can encompass a wide range of activities, including but not limited to:

- **Expansion or Modification:** Increasing the capacity of existing infrastructure to accommodate higher volumes of stormwater runoff or modifying the layout or configuration of the system to improve its effectiveness.
- **Repair or Rehabilitation:** Addressing damage or deterioration to components of the system, such as repairing cracks in pipes, stabilizing erosion-prone areas, or restoring the functionality of SWMFs.
- **Enhancements for Water Quality:** Introducing new features or technologies aimed at improving the quality of stormwater runoff, such as adding filtration systems, vegetated swales, or other best management practices (BMPs).
- **Incorporation of Green Infrastructure:** Integrating nature-based solutions into the stormwater management system, such as installing rain gardens, bioswales, or permeable pavement to capture and infiltrate runoff while providing additional environmental benefits.
- **Upgrades for Compliance:** Making changes to the system to ensure compliance with evolving regulatory requirements, such as enhancing pollutant removal capabilities or implementing measures to reduce peak flow rates.
- **Adaptation to Climate Change:** Modifying the stormwater management system to account for changing precipitation patterns, increased frequency of extreme weather events, ensuring resilience and adaptability in the face of climate change impacts.

Alterations to the MSWMS are captured on MECP forms including the; Notice of Modification to Sewage Works (NMSW) and Environmental Compliance Approval (ECA) Applications, Form SW1 – Record of Future Alteration Authorized for Storm Sewers/Ditches/Culverts, Form SW2 – Record of Future Alteration Authorized for Stormwater Management Facilities, and Form SW3 – Record of Future Alteration Authorized for Third Pipe Collection Systems.



Municipal Stormwater Management System  
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### 10.1.1 Notice of Modification to Sewage Works (NMSW) and Environmental Compliance Approval (ECA) Applications

As illustrated in Figure 9, in 2024, 18% of alterations were NMSW and ECA Applications. NMSW and ECA Applications were submitted for the following locations:

*Table 8: Notice of Modification to Sewage Works and Environmental Compliance Approval Applications*

File No.	Description	Date Signed
D11-017-2022	SWM Pond within Park Place North Lands	March 18, 2024
D30-001-2022	Sandy Creek Estates	November 4, 2024
EN1280	Queens Park A1 Neighbourhood Renewal Reconstruction	January 24, 2025

### 10.1.2 Form SW1 – Record of Future Alteration Authorized for Storm Sewers/Ditches/Culverts

As illustrated in Figure 9, in 2024, 41% of alterations were Form SW1s. Form SW1s were submitted for the following locations:

*Table 9: Record of Future Alteration Authorized for Storm Sewers, Ditches, and Culverts*

File No.	Description	Date Signed
2022-013	Sophia Creek Trunk Storm Sewer	March 13, 2024
D30-12-2021	Mattamy Lockhart Subdivision Phase 2	March 26, 2024
D12-423	D12-423 Watersand Subdivision Phase 1 Stage 2A	June 19, 2024
D11-021-2021	Storm sewer modification on Grove St W	October 8, 2024
D30-001-2022	Sandy Creek Estates	November 4, 2024
EN1280	Queens Park A1 Neighbourhood Renewal Reconstruction	January 24, 2025
EN1238/EN1319	Eugenia Street and Wellington D1 Neighbourhood Reconstruction	February 7, 2025

### 10.1.3 Form SW2 – Record of Future Alteration Authorized for Stormwater Management Facilities

As illustrated in Figure 9, in 2024, 35% of alterations were Form SW2s. Form SW2s were submitted for the following locations:

*Table 10: Record of Future Alteration Authorized for Stormwater Management Facilities*

File No.	Description	Date Signed
D30-12-2021	Mattamy Lockhart Subdivision Phase 2	March 26, 2024
EN1463	Sophia Creek Outlet	May 29, 2024
EN1473 / 2024-005	SWM Ponds Access Roads, Inlets & Outlets Repair	June 4, 2024
D12-423	D12-423 Watersand Subdivision Phase 1 Stage 2A	June 19, 2024
D30-001-2022	Sandy Creek Estates	November 4, 2024
EN1280	Queens Park A1 Neighbourhood Renewal Reconstruction	January 24, 2025

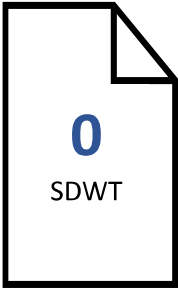
10.1.4 Form SW3 – Record of Future Alteration Authorized for Third Pipe Collection Systems

As illustrated in Figure 9, in 2024, 6% of alterations were Form SW3s. Form SW3s were submitted for the following locations:

Table 11: Record of Future Alteration Authorized for Stormwater Management Facilities

File No.	Description	Date Signed
D30-12-2021	Mattamy Lockhart Subdivision Phase 2	March 26, 2024

10.2 Alterations Posing a Significant Drinking Water Threat



The report of Significant Drinking Water Threat (SDWT) Assessment (SDWTA) for Proposed Alterations, dated February 28, 2025, was prepared by the City of Barrie Office of the Risk Management Official, and covered January 1, 2024, to December 31, 2024.

As of the date of the reports, any proposed sewage works project within the designated protection areas for Wells 3A, 5, 7, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19 were screened for SDWT, the Risk Management Office was consulted in appropriate circumstances and design considerations in the MECP’s Guideline SOP or Design Criteria (2022-2023) were expected to be implemented. No projects were identified as a SDWT for this reporting period.

## 11 Continual Improvement Initiatives

As stated in Section 1.1, the City of Barrie is to maintain and continual improve the operational management of the stormwater system. The following summarizes goals completed in 2024, and proposed goals in 2025.

### 11.1 Goals for the Reporting Year

In addition to work completed as a part of the monitoring and maintenance programs detailed throughout this report, the following Action Items were identified for completion in 2024:



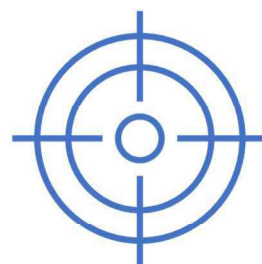
1. Prepare a monitoring report to document work completed in 2023 associated with the Operations and Maintenance Manual;
2. Further develop the QMS to support the MSWMS;
3. Repair watercourse erosion where impacted from stormwater discharges;
4. Repair or replace malfunctioning valves;
5. Participate in updating the asset management plan associated with the MSWMS;
6. Clean sediment from collection and conveyance infrastructure as preventative measures;
7. Address invasive phragmites control where appropriate;
8. In-situ repairs of storm sewers and culverts;
9. Conduct bathymetric surveys;
10. SWMF sediment removal;
11. SWMF safety handrail installations;
12. LID bioretention cell retrofits; and
13. Culvert repairs and replacements.

All items were completed, apart from installing safety handrails at SWMFs, which required reprioritization due to budgetary and procurement constraints.

### 11.2 Goals Proposed for the Next Year

In addition to work completed as a part of the monitoring and maintenance programs detailed throughout this report, the following items were identified as opportunities for improvement in 2025:

1. Prepare a monitoring report to document work completed in 2024 associated with the Operations and Maintenance Manual;
2. Further develop the QMS to support the MSWMS;
3. Conduct Erosion Repairs along watercourses impacted by stormwater discharges;
4. Clean sediment from collection and conveyance infrastructure as preventative measures;
5. Address invasive phragmites control where appropriate;
6. In-situ repairs of storm sewers and culverts;
7. Conduct bathymetric surveys;
8. SWMF sediment removal;
9. SWMF safety handrail installations;
10. Address drainage impacts on public lands caused by private properties; and
11. Culvert repairs and replacements.



## 12 Closure

This report serves as a testament to the City of Barrie's commitment to effective stormwater management practices. Through comprehensive data collection, performance analysis, and implementation of best practices, the City of Barrie has made significant strides in improving asset lifecycle management while safeguarding the environment and water resources.

Looking ahead, the City of Barrie remains steadfast in its pursuit of innovation and excellence. The City of Barrie recognizes the ever-evolving nature of stormwater challenges and are committed to adapting and refining strategies and tactics to meet future needs effectively.

Distributed to:

- Top Management
- MECP

Appendix A      – Storm Sewer Catchment Asset Inventory



CLI-ECA Schedule E – Table E1. Storm Sewershed and Associated Treatment

Asset Type	Asset I.D.	Catchment Area (Ha)	Inlet	Outlet	Subwatershed /Watershed	Stormwater Management Level (A, B, C)	Treatment by others
<b>SWMF</b>	102000000-BY03	33.32	101304820, 101304829	Storm sewer network	BY	A	N/A
<b>SWMF</b>	102000001-KD03	29.63	120311444, 101301773	Storm sewer network	KD	A	N/A
<b>SWMF</b>	102000002-LV25	21.15	101305397	LV Watershed Tributary	LV	A	N/A
<b>SWMF</b>	102000003-LV23	17.77	101304506	LV Watershed Tributary	LV	A	N/A
<b>SWMF</b>	102000004-LV12	21.98	101305095	LV Watershed Tributary	LV	A	N/A
<b>SWMF</b>	102000005-KD01	366.73	101300835 (watercourse), 101310551, 101310544, 120295075 (watercourse), 101300004 (watercourse)	KD Watershed Tributary	KD	A	N/A
<b>SWMF</b>	102000015-BR01	543.04	101300760 (watercourse), 101300762, 101308957, 101303392, 101304066, 120347916	BR Watershed Tributary	BR	A	N/A
<b>SWMF</b>	102000018-HW05	60.08	101305402, 101304703	HW Watershed Tributary	HW	A	N/A
<b>SWMF</b>	102000019-HW09	21.33	101305469	HW Watershed Tributary	HW	A	N/A
<b>SWMF</b>	102000020-HW08	155.14	101305761, 101304168, 101304170	HW Watershed Tributary	HW	A	N/A
<b>SWMF</b>	102000022-LV04	91.08	101304496, 120298266, 120298268, 101304372	LV Watershed Tributary	LV	A	N/A
<b>SWMF</b>	102000023-LV05	64.02	120184277, 120263672, 120318983, 101300970 (watercourse)	Storm sewer network	LV	A	N/A
<b>SWMF</b>	102000024-LV06	194.37	101304500, 120298251, 120298256, 120298255	LV Watershed Tributary	LV	A	N/A
<b>SWMF</b>	102000025-LV22	10.71	101307363, 101307346	LV Watershed Tributary	LV	A	N/A
<b>SWMF</b>	102000026-LV17	46.47	101306229, 120252489	Storm sewer network	LV	A	N/A
<b>SWMF</b>	102000027-BR25	105.07	101300601, 120252472, 101305353	Storm sewer network	BR	A	N/A
<b>SWMF</b>	102000028-BR24	23.62	120298303, 101305295, 120298307	Storm sewer network	BR	A	N/A
<b>SWMF</b>	102000029-BR16	37.97	101305229, 120298306, 120298304, 101307428, 101304048, 101304047	Storm sewer network	BR	A	N/A
<b>SWMF</b>	102000030-BR20	73.75	120253286, 101309111, 120298299, 101307626, 101304124, 120298301, 101307625	Storm sewer network	BR	A	N/A
<b>SWMF</b>	102000031-BR08a	93.29	120298813, 120250309	Storm sewer network	BR	A	N/A
<b>SWMF</b>	102000032-BR08b	137.54	101303445, 101304064,	BR Watershed Tributary	BR	A	N/A

Asset Type	Asset I.D.	Catchment Area (Ha)	Inlet	Outlet	Subwatershed /Watershed	Stormwater Management Level (A, B, C)	Treatment by others
			101305570, 101310757				
<b>SWMF</b>	102000033-BR05	18.46	101300221	BR Watershed Tributary	BR	A	N/A
<b>SWMF</b>	102000034-BR06	25.47	101310424, 101310418	BR Watershed Tributary	BR	A	N/A
<b>SWMF</b>	102000037-BR15	31.91	101303371, 101303370	BR Watershed Tributary	BR	A	N/A
<b>SWMF</b>	102000040-HT03a	6.56	101307881 (watercourse), 101303635	HT Watershed Tributary	HT	A	N/A
<b>SWMF</b>	102000041-HT06	32.33	120225399	Storm sewer network	BR	A	N/A
<b>SWMF</b>	102000042-BR14	127.95	101308540, 101305263, 120298294, 101300250 (watercourse)	BR Watershed Tributary	BR	A	N/A
<b>SWMF</b>	102000043-BR09	39.56	101303796, 101300246 (watercourse)	BR Watershed Tributary	BR	A	N/A
<b>SWMF</b>	102000044-BR22	75.95	101305169, 101305379	BR Watershed Tributary	BR	A	N/A
<b>SWMF</b>	102000045-BR07	19.68	101308910 (watercourse)	BR Watershed Tributary	BR	A	N/A
<b>SWMF</b>	102000046-BR18	1.49	120298289, 101310276, 101310277	Storm sewer network	BR	A	N/A
<b>SWMF</b>	102000047-BR13	78.75	120298292, 101303708	Storm sewer network	BR	A	N/A
<b>SWMF</b>	102000050-LT02	40.85	120298225, 101309522, 101309521	Storm sewer network	LT	A	N/A
<b>SWMF</b>	102000051-HW04	10.13	101304146	HW Watershed Tributary, leads to Kempenfelt Bay	HW	A	N/A
<b>SWMF</b>	102000052-BY01	14.03	101307278, 120298315	Kempenfelt Bay	BY	A	N/A
<b>SWMF</b>	102000054-LT01	104.68	101301956, 101309563	Little Lake	LT	A	N/A
<b>SWMF</b>	102000056-KD06	60.72	101301850, 101310337, 101302037	Storm sewer network	KD	A	N/A
<b>SWMF</b>	102000057-KD05	16.50	101310667, 101301907	Storm sewer network	KD	A	N/A
<b>SWMF</b>	102000060-DY02	17.84	101305958	Storm sewer network	DY	A	N/A
<b>SWMF</b>	102000061-DY03	113.71	101303255, 101303224	Storm sewer network	DY	A	N/A
<b>SWMF</b>	102000065-HR01	84.69	120298221, 101300303	Kempenfelt Bay	HR	A	N/A
<b>SWMF</b>	102000067-WK04	8.53	101308836	WK Watershed Tributary, leads to Kempenfelt Bay	WK	A	N/A
<b>SWMF</b>	102000068-HR02	40.17	101301063, 101308783	Storm sewer network	HR	A	N/A
<b>SWMF</b>	102000071-WK01	577.04	101301040 (watercourse), 101308666, 101301036	WK Watershed Tributary	WK	A	N/A
<b>SWMF</b>	102000072-LV13	12.07	101311725, 101311749	LV Watershed Tributary	LV	A	N/A
<b>SWMF</b>	102000073-LV10	19.12	101304955	Storm sewer network	LV	A	N/A
<b>SWMF</b>	102000074-LV01	67.95	101308288, 101304898, 101304868	Storm sewer network	LV	A	N/A
<b>SWMF</b>	102000076-LV27	2.25	101308596, 101308600	LV Watershed Tributary	LV	A	N/A
<b>SWMF</b>	102000077-HW06	35.32	101305692	HW Watershed Tributary	HW	A	N/A
<b>SWMF</b>	102000078-HW01	10.73	10130681, 101306811	Storm sewer network	HW	A	N/A
<b>SWMF</b>	102000079-LV11	12.52	101304888	Storm sewer network	LV	A	N/A

Asset Type	Asset I.D.	Catchment Area (Ha)	Inlet	Outlet	Subwatershed /Watershed	Stormwater Management Level (A, B, C)	Treatment by others
<b>SWMF</b>	102000080-LV19	134.65	101306580, 101304568	LV Watershed Tributary	LV	A	N/A
<b>SWMF</b>	102000081-LV21	19.78	101304369	LV Watershed Tributary	LV	A	N/A
<b>SWMF</b>	102000082-LV20	33.83	101304796	LV Watershed Tributary	LV	A	N/A
<b>SWMF</b>	102000083-LV03	8.49	101307105, 101300997	Storm sewer network	LV	A	N/A
<b>SWMF</b>	102000085-HT17	400.32	101307668 (watercourse)	Storm sewer network	HT	A	N/A
<b>SWMF</b>	102000086-LT06	61.35	101308337, 101302250	Little Lake	LT	A	N/A
<b>SWMF</b>	102000087-BR03	252.88	120404300 (watercourse), 120404301 (watercourse)	BR Watershed Tributary	BR	A	N/A
<b>SWMF</b>	102000088-BR10	90.27	101303772, 101303671	Storm sewer network	BR	A	N/A
<b>SWMF</b>	102000102-GR04	79.54	101302555, 101307753, 120298213, 120298214, 101302574, 120298212, 101307750, 120298211, 101307502, 120298210,	Storm sewer network	GR	A	N/A
<b>SWMF</b>	102000103-GR03	35.17	101307593, 101307591, 101302089	Storm sewer network	GR	A	N/A
<b>SWMF</b>	102000104-GR01	137.77	101302101	GR Watershed Tributary	GR	A	N/A
<b>SWMF</b>	102000109-LV28	1.45	101300339	LV Watershed Tributary	LV	A	N/A
<b>SWMF</b>	102000112-LV02	207.47	101300993 (watercourse), 120298281, 120298277, 120298362	LV Watershed Tributary	LV	A	N/A
<b>SWMF</b>	102000113-LT04	117.52	101301974, 101301936, 101309354	Little Lake	LT	A	N/A
<b>SWMF</b>	102000114-DY04	110.84	120298191, 101300792 (watercourse), 101300147, 101305453	DY Watershed Tributary, storm sewer network	DY	A	N/A
<b>SWMF</b>	102000124-GR02	40.12	101307587	Storm sewer network	GR	A	N/A
<b>SWMF</b>	102000128-LT03	36.19	101302042, 101302205	Little Lake	LT	A	N/A
<b>SWMF</b>	102000129-LT05	20.34	N/A	Little Lake	LT	A	N/A
<b>SWMF</b>	102000133-LV18	19.45	101311643, 101304544	LV Watershed Tributary	LV	A	N/A
<b>SWMF</b>	102000134-LV16	5.90	101306230	LV Watershed Tributary	LV	A	N/A
<b>SWMF</b>	102000136-LV08	12.42	120298237, 120298238	Storm sewer network	LV	A	N/A
<b>SWMF</b>	102000139-LV07	189.74	120298247, 120298244, 101305856, 101304366, 120298245, 101300957 (watercourse), 120298250	Storm sewer network	LV	A	N/A
<b>SWMF</b>	102000140-SP02	4.10	101310369	Storm sewer network	SP	A	N/A
<b>SWMF</b>	102000155-LV14	31.56	101310697, 120298234, 120252387,	LV Watershed Tributary	LV	A	N/A

Asset Type	Asset I.D.	Catchment Area (Ha)	Inlet	Outlet	Subwatershed /Watershed	Stormwater Management Level (A, B, C)	Treatment by others
			101306999, 120298232				
<b>SWMF</b>	102000163-LV50	12.27	101310106	Storm sewer network	LV	A	N/A
<b>SWMF</b>	102000167-LV15	16.73	101307339, 120253503, 120252855	Storm sewer network	LV	A	N/A
<b>SWMF</b>	120001898-LT17	16.47	120000841	Storm sewer network	LT	A	N/A
<b>SWMF</b>	120003859-BK08	74.19	120401582, 120003653, 120003656, 120401609, 120003655	BK Watershed Tributary	BK	A	N/A
<b>SWMF</b>	120078887-LT14	20.53	12078889	Little Lake	LT	A	N/A
<b>SWMF</b>	120217444-BR30	4.66	120194618	BR Watershed Tributary	BR	A	N/A
<b>SWMF</b>	120295768-HW11	3.00	101308369, 101308363, 101308365	HW Watershed Tributary	HW	A	N/A
<b>SWMF</b>	120336552-SP03	84.13	101306278, 120346583, 101307548, 120395473, 120346573, 101307541, 101307542	Storm sewer network	SP	A	N/A
<b>MTD</b>	100100683	0.043	N/A	N/A	KD	B	N/A
<b>MTD</b>	100102064	0.53	101305801	101302325	LT	B	N/A
<b>MTD</b>	100102129	1.01	101305276	101305276	GR	B	N/A
<b>MTD</b>	100102408	0.677	101305738	101302456	SP	B	N/A
<b>MTD</b>	100102515	0.204	101305737	101310066	SP	B	N/A
<b>MTD</b>	100102595	4.80	101302343	101302462	BK	B	N/A
<b>MTD</b>	100107090	N/A	SWMF LV28	SWMF LV28	LV	B	N/A
<b>MTD</b>	100108146	7.64	101303859	101311096	WK	B	N/A
<b>MTD</b>	100108170	1.65	N/A	N/A	BR	B	N/A
<b>MTD</b>	100108174	N/A	101305701	101305701	LV	B	N/A
<b>MTD</b>	100108186	3.26	120347317	120347326	BR	B	N/A
<b>MTD</b>	100108188	2.25	120347357	120347350	BR	B	N/A
<b>MTD</b>	100109237	2.93	101305116	101304401	HW	B	N/A
<b>MTD</b>	100109241	0.806	101304398	101303410	HW	B	N/A
<b>MTD</b>	100109512	1.95	101300357	101300339 (leads to SWMF LV28)	LV	B	N/A
<b>MTD</b>	100109513	0.775	101304374	101304373	LV	B	N/A
<b>MTD</b>	100109737	0.319	101304533	101304534	LV	B	N/A
<b>MTD</b>	100109784	0.791	101311063	101311064	LV	B	N/A
<b>MTD</b>	100109785	0.688	101304540	101304535	LV	B	N/A
<b>MTD</b>	100110095	0.0702	120077020	120193860, 101309205	LV	B	N/A
<b>MTD</b>	100110552	11.7	101305108	101304760	HW	B	N/A
<b>MTD</b>	100110553	15.8	101305109	101304759	HW	B	N/A
<b>MTD</b>	100110642	6.68	101304874	101304875 (leads to Kempenfelt Bay)	GL	B	N/A
<b>MTD</b>	100110747	1.43	120351256	101304863 (leads to Kempenfelt Bay)	HW	B	N/A
<b>MTD</b>	100111090	0.532	10134879	101304879	GL	B	N/A
<b>MTD</b>	100111410	0.663	101308043	101305058	WK	B	N/A
<b>MTD</b>	100111507	22.1	101305584	101304585	LV	B	N/A
<b>MTD</b>	100111514	4.18	101305065, 101305069	101305070	LV	B	N/A
<b>MTD</b>	100111546	2.73	101305094	101305093	WK	B	N/A
<b>MTD</b>	100111684	3.42	101304893	101304894	LV	B	N/A
<b>MTD</b>	100111768	1.09	101307327	101308133	BR	B	N/A
<b>MTD</b>	100111905	3.29	101305141	101305142 (leads to SWMF WK05a)	WK	B	N/A
<b>MTD</b>	100112235	1.87	101305252	101305251	WK	B	N/A
<b>MTD</b>	100112651	17.12	101305432 (Leads out of SWMF LV11)	101305434	LV	B	N/A
<b>MTD</b>	100113822	1.55	101305804	120402082	BK	B	N/A
<b>MTD</b>	100113839	0.742	101305811	101305813	DY	B	N/A
<b>MTD</b>	100113842	0.509	101311285	101311285	HT	B	N/A
<b>MTD</b>	100113856	0.934	101305816	101305817	HT	B	N/A
<b>MTD</b>	100113966	1.36	101303326	101305883	BR	B	N/A

Asset Type	Asset I.D.	Catchment Area (Ha)	Inlet	Outlet	Subwatershed /Watershed	Stormwater Management Level (A, B, C)	Treatment by others
MTD	100114041	0.244	101305932	101305933	LV	B	N/A
MTD	100115156	11.80	101306720	101306719	BR	B	N/A
MTD	100115160	11.80	101306723	101306722	BR	B	N/A
MTD	100115718	0.229	120033225, 101310511	120033226	BK	B	N/A
MTD	100116508	4.10	101307567	101307568	BR	B	N/A
MTD	100117046	0.322	101307816	101307818	HG	B	N/A
MTD	100117261	4.14	101308009	101308008	LV	B	N/A
MTD	100117262	4.14	101308010	101308009	LV	B	N/A
MTD	100117334	0.175	101308038	101308039	WK	B	N/A
MTD	100117933	7.49	101308277	101308278	LV	B	N/A
MTD	100118064	2.64	N/A	101308361	HW	B	N/A
MTD	100118073	2.64	101308364	101308365	HW	B	N/A
MTD	100118092	0.373	101308381	101308382 (leads to Kempenfelt Bay)	HW	B	N/A
MTD	100119691	4.79	101309428	101309427	LT	B	N/A
MTD	100120709	3.38	101310281	101310282 (leads to Kempenfelt Bay)	GL	B	N/A
MTD	100121565	0.979	101310721	101311157	KD	B	N/A
MTD	100121587	0.967	101310738	101310742	LV	B	N/A
MTD	100122606	11.68	101311297	101311298	DY	B	N/A
MTD	100122721	1.48	101303148	101303149	DY	B	N/A
MTD	100122777	0.352	N/A	N/A	LV	B	N/A
MTD	100123186	1.49	101311606	120005644, 101311607	LV	B	N/A
MTD	120003735	0.922	120003732	120003733	BK	B	N/A
MTD	120004160	36.14	120179442	120179443	HW	B	N/A
MTD	120004161	36.14	120179443	101305191	HW	B	N/A
MTD	120004247	0.139	N/A	N/A	SP	B	N/A
MTD	120004271	167.97	120002123	120017736 (leads to Kempenfelt Bay)	WL	B	N/A
MTD	120004695	0.630	120004871	120004914	HT	B	N/A
MTD	120009242	0.536	120075783	120075784 (leads to Kempenfelt Bay)	BK	B	N/A
MTD	120009377	0.848	120187575	120075819 (leads to Kempenfelt Bay)	DY	B	N/A
MTD	120009401	0.397	120085946	120075957	DY	B	N/A
MTD	120010847	1.57	120010886	120010886	LV	B	N/A
MTD	120012430	167.97	120017794	120017795 (leads to Kempenfelt Bay)	WL	B	N/A
MTD	120018563	0.748	120033086, 101310512	120018614	BK	B	N/A
MTD	120075815	0.848	120075817	120187575 (leads to Kempenfelt Bay)	DY	B	N/A
MTD	120078462	0.352	120078479	120078478	LT	B	N/A
MTD	120082301	0.0731	N/A	N/A	ML	B	N/A
MTD	120086289	4.51	120187162, 120320479	101308502	HT	B	N/A
MTD	120179773	4.18	120194600, 120194599	120194618	BR	B	N/A
MTD	120183261	0.677	120253532	120253533	HT	B	N/A
MTD	120183903	0.319	N/A	N/A (located near SWMF LV15)	LV	B	N/A
MTD	120183961	0.147	N/A	101306029	DY	B	N/A
MTD	120187133	1.85	120182826	120182826	HR	B	N/A
MTD	120187134	0.185	120187184	120187192	DY	B	N/A
MTD	120187227	0.201	120271937	120195516	ML	B	N/A
MTD	120193822	2.53	120193832	120193833	LV	B	N/A
MTD	120193823	2.53	120193833	120193834	LV	B	N/A
MTD	120193824	2.13	120193828	120193829	LV	B	N/A
MTD	120193825	2.13	120193827	120193828	LV	B	N/A
MTD	120224935	0.107	120224396	120224397	JH	B	N/A
MTD	120225996	7.71	120226345	120226346	BR	B	N/A
MTD	120230215	2.27	120249510	101302499	KD	B	N/A
MTD	120231445	1.00	120256229	N/A	WK	B	N/A
MTD	120231496	0.798	120256304	120256304, 120256300	WK	B	N/A
MTD	120242563	3.22	120269299	120269300	SV	B	N/A
MTD	120242675	1.70	120268816	120268818	BR	B	N/A
MTD	120251569	0.545	N/A	120251570	ML	B	N/A
	120251917	0.403	101302446	101300086 (discharges into creek)	BK	B	N/A
MTD	120255141	1.92	120255144	120255145	HR	B	N/A
MTD	120256657	0.237	120268526	120267456	WK	B	N/A

Asset Type	Asset I.D.	Catchment Area (Ha)	Inlet	Outlet	Subwatershed /Watershed	Stormwater Management Level (A, B, C)	Treatment by others
MTD	120256714	3.16	120268652	120268655	BR	B	N/A
MTD	120267445	3.28	120267474	120267475	WK	B	N/A
MTD	120295443	2.14	120295433, 120295432	120295434	KD	B	N/A
MTD	120295446	2.87	120295047	120295048	KD	B	N/A
MTD	120295469	0.0337	101307787	101307787	N/A	B	N/A
MTD	120295471	0.218	101307786	120304069	N/A	B	N/A
MTD	120297426	1.27	101308728	120297411, 120297428	HT	B	N/A
MTD	120304383	2.22	120304655	120304656	HW	B	N/A
MTD	120311684	30.04	120311441	120311483	KD	B	N/A
MTD	120311685	30.04	120311439	120311484	KD	B	N/A
MTD	120312141	0.400	120312149	120312152	LV	B	N/A
MTD	120312142	0.467	120312155	120312153	LV	B	N/A
MTD	120317751	10.47	120317750	120317752	SC	B	N/A
MTD	120317754	10.47	120317753	120317755	SC	B	N/A
MTD	120318040	2.24	120318046	120318047	LV	B	N/A
MTD	120318058	0.353	120318070	120318071	LV	B	N/A
MTD	120320451	0.571	N/A	N/A	SP	B	N/A
MTD	120323158	8.41	120323159	120323160	SP	B	N/A
MTD	120323168	4.54	120323164	120323163	SP	B	N/A
MTD	120327976	0.228	120327967	120327968	ML	B	N/A
MTD	120336701	3.29	120336702	120336704	LV	B	N/A
MTD	120328299	9.29	120338302	120338300	LV	B	N/A
MTD	120346559	N/A	SP03	SP03	SP	B	N/A
MTD	120347365	3.26	120347317	120347326	BR	B	N/A
MTD	120347368	2.25	120347350	120347350	BR	B	N/A
MTD	120350661	8.48	120256325	120256325	WK	B	N/A
MTD	120350662	8.48	120350660	120350660	WK	B	N/A
MTD	120364678	0.0997	120364682	120364683	WK	B	N/A
MTD	120364720	6.57	120364722	120364723	WK	B	N/A
MTD	120395355	20.56	120308011	120308011	HW	B	N/A
MTD	120395506	1.02	120395509	120395510	KD	B	N/A
MTD	120395702	4.92	120395712	120395712	SP	B	N/A
MTD	120397814	1.91	120397768	120397769	SP	B	N/A
MTD	120397819	0.686	120397771	120397772	SP	B	N/A
MTD	120401430	14.92	101308385	101308385 (leads to Kempfenfelt Bay)	RT	B	N/A
LID	120224317	0.255	N/A	N/A	HR	A	N/A
LID	120224318	0.00279	N/A	N/A	HR	A	N/A
LID	120224326	0.0102	N/A	N/A	BY	A	N/A
LID	120224327	0.0161	N/A	N/A	BR	A	N/A
LID	120224328	0.0129	N/A	N/A	BR	A	N/A
LID	120224329	0.0115	N/A	N/A	BR	A	N/A
LID	120224330	0.00612	N/A	N/A	BR	A	N/A
LID	120224331	0.0133	N/A	N/A	BR	A	N/A
LID	120224332	0.00789	N/A	N/A	BR	A	N/A
LID	120224334	0.00755	N/A	N/A	BR	A	N/A
LID	120224335	0.0229	N/A	N/A	BR	A	N/A
LID	120224336	0.00677	N/A	N/A	BR	A	N/A
LID	120224337	0.0999	120000843	120000843	LT	A	N/A
LID	120224339	0.00915	N/A	N/A	BR	A	N/A
LID	120224340	0.0103	N/A	N/A	BR	A	N/A
LID	120224341	0.00709	N/A	N/A	BR	A	N/A
LID	120224342	0.0183	N/A	N/A	BR	A	N/A
LID	120224343	0.192	N/A	N/A	HR	A	N/A
LID	120224344	0.192	N/A	N/A	HR	A	N/A
LID	120224345	0.192	N/A	N/A	HR	A	N/A
LID	120224346	0.192	N/A	N/A	HR	A	N/A
LID	120224347	0.009206	N/A	N/A	BR	A	N/A
LID	120224348	0.00671	N/A	N/A	BY	A	N/A
LID	120224349	0.0440	N/A	N/A	BY	A	N/A
LID	120224350	0.0203	N/A	N/A	BY	A	N/A
LID	120296879	0.00893	N/A	N/A	BR	A	N/A
LID	120296880	0.0109	N/A	N/A	BR	A	N/A
LID	120296881	0.0132	N/A	N/A	BR	A	N/A
LID	120296882	0.00360	N/A	N/A	BR	A	N/A
LID	120296883	0.00981	N/A	N/A	BR	A	N/A
LID	120296884	0.00445	N/A	N/A	BR	A	N/A
LID	120296885	0.0206	N/A	N/A	BR	A	N/A
LID	120296886	0.00604	N/A	N/A	BR	A	N/A
LID	120296887	0.00966	N/A	N/A	BR	A	N/A
LID	120296888	0.00471	N/A	N/A	BR	A	N/A
LID	120301801	0.0234	N/A	120301802	N/A	A	N/A

Asset Type	Asset I.D.	Catchment Area (Ha)	Inlet	Outlet	Subwatershed /Watershed	Stormwater Management Level (A, B, C)	Treatment by others
LID	120302403	0.645	N/A	N/A	WK	A	N/A
LID	120302407	0.00145	N/A	N/A	WK	A	N/A
LID	120302409	0.00132	N/A	N/A	WK	A	N/A
LID	120302415	0.00189	N/A	N/A	WK	A	N/A
LID	120302429	0.0578	N/A	N/A	KD	A	N/A
LID	120302770	0.0705	N/A	N/A	HW	A	N/A
LID	120306488	0.800	120306567	N/A	SP	A	N/A
LID	120308015	1.31	120308013, 120308014	120395393	HW	A	N/A
LID	120311480	0.214	120311439	120311484	KD	A	N/A
LID	120311481	0.214	120311441	120311483	KD	A	N/A
LID	120311482	0.214	120311484, 120311483, 120311444	N/A	KD	A	N/A
LID	120311694	0.1168	120304656	N/A	HW	A	N/A
LID	120313922	0.00324	N/A	120313924	LV	A	N/A
LID	120314100	0.00365	N/A	120314102	LV	A	N/A
LID	120314172	0.0114	N/A	N/A	LV	A	N/A
LID	120314173	0.00941	N/A	N/A	LV	A	N/A
LID	120314174	0.0111	N/A	N/A	LV	A	N/A
LID	120314175	0.0104	N/A	N/A	LV	A	N/A
LID	120314176	0.0186	N/A	N/A	LV	A	N/A
LID	120314177	0.00908	N/A	N/A	LV	A	N/A
LID	120314178	0.0179	N/A	N/A	LV	A	N/A
LID	120314179	0.0129	N/A	N/A	LV	A	N/A
LID	120314180	0.0141	N/A	N/A	LV	A	N/A
LID	120318073	0.0298	N/A	N/A	LV	A	N/A
LID	120318074	0.0275	N/A	N/A	LV	A	N/A
LID	120318075	0.0245	N/A	N/A	LV	A	N/A
LID	120318081	0.0313	N/A	N/A	LV	A	N/A
LID	120318082	0.0312	N/A	N/A	LV	A	N/A
LID	120318083	0.0271	N/A	N/A	LV	A	N/A
LID	120318085	0.0267	N/A	N/A	LV	A	N/A
LID	120318111	0.0165	N/A	N/A	LV	A	N/A
LID	120318112	0.0237	N/A	N/A	LV	A	N/A
LID	120318123	0.0164	N/A	N/A	WK	A	N/A
LID	120318124	0.0546	N/A	N/A	WK	A	N/A
LID	120318825	0.178	101309740 (watercourse), 120318835	120318793, 101309740 (watercourse)	HW	A	N/A
LID	120321065	0.0124	120321064	N/A	BK	A	N/A
LID	120321066	0.0136	N/A	120321066	BK	A	N/A
LID	120321067	0.0280	N/A	120321048	BK	A	N/A
LID	120321071	0.0283	120321049	120321053	BK	A	N/A
LID	120321194	0.0169	N/A	N/A	ML	A	N/A
LID	120321195	0.0157	N/A	N/A	ML	A	N/A
LID	120321253	0.0133	N/A	N/A	ML	A	N/A
LID	120321254	0.0185	N/A	N/A	ML	A	N/A
LID	120321276	0.0358	N/A	N/A	ML	A	N/A
LID	120321277	0.0155	N/A	N/A	ML	A	N/A
LID	120321297	0.0183	N/A	101310091	SP	A	N/A
LID	120321298	0.0170	N/A	N/A	SP	A	N/A
LID	120321312	0.00784	N/A	N/A	SP	A	N/A
LID	120321313	0.0200	N/A	N/A	SP	A	N/A
LID	120321328	0.0218	N/A	N/A	SP	A	N/A
LID	120321329	0.0171	N/A	N/A	SP	A	N/A
LID	120321344	0.00311	N/A	N/A	SP	A	N/A
LID	120321345	0.00346	N/A	N/A	SP	A	N/A
LID	120321346	0.00305	N/A	N/A	SP	A	N/A
LID	120324621	0.275	120324499	120324559	HW	A	N/A
LID	120328029	0.0986	120268655	N/A	BR	A	N/A
LID	120328911	0.323	120328902	120328906	LV	A	N/A
LID	120328954	0.323	120328953, 120328961	N/A	LV	A	N/A
LID	120331155	0.0154	N/A	120303452	HW	A	N/A
LID	120331167	0.0472	N/A	120320119	HW	A	N/A
LID	120331168	0.0450	N/A	120320117	HW	A	N/A
LID	120331173	0.0332	N/A	120320221	HW	A	N/A
LID	120331174	0.0477	N/A	120320223	HW	A	N/A
LID	120331175	0.0663	N/A	120320225, 120352009	HW	A	N/A
LID	120336699	0.339	120336704, 120336474, 120336707	N/A	LV	A	N/A



Asset Type	Asset I.D.	Catchment Area (Ha)	Inlet	Outlet	Subwatershed /Watershed	Stormwater Management Level (A, B, C)	Treatment by others
LID	120337584	0.00972	N/A	N/A	LV	A	N/A
LID	120337585	0.00766	N/A	N/A	LV	A	N/A
LID	120337586	0.0131	N/A	N/A	LV	A	N/A
LID	120337587	0.00772	N/A	N/A	LV	A	N/A
LID	120337588	0.00947	N/A	N/A	LV	A	N/A
LID	120337589	0.00504	N/A	N/A	LV	A	N/A
LID	120337590	0.00493	N/A	N/A	LV	A	N/A
LID	120337591	0.00571	N/A	N/A	LV	A	N/A
LID	120337592	0.00564	N/A	N/A	LV	A	N/A
LID	120337593	0.00513	N/A	N/A	LV	A	N/A
LID	120338525	0.00639	N/A	N/A	LV	A	N/A
LID	120338526	0.00813	N/A	N/A	LV	A	N/A
LID	120338527	0.0269	N/A	N/A	LV	A	N/A
LID	120338528	0.0179	N/A	N/A	LV	A	N/A
LID	120338529	0.0176	N/A	N/A	LV	A	N/A
LID	120339033	0.0601	N/A	N/A	HW	A	N/A
LID	120339214	0.0104	N/A	120339212	WK	A	N/A
LID	120339219	0.00441	N/A	N/A	WK	A	N/A
LID	120343523	0.0204	N/A	N/A	LV	A	N/A
LID	120346223	0.182	N/A	N/A	LV	A	N/A
LID	120347228	0.0162	120304605	N/A	HW	A	N/A
LID	120348222	0.189	N/A	N/A	LV	A	N/A
LID	120348224	0.117	120348217	120348217	LV	A	N/A
LID	120348225	0.0274	N/A	N/A	LV	A	N/A
LID	120348503	0.0665	120021301	120021301	BR	A	N/A
LID	120350637	0.318	N/A	120256394	WK	A	N/A
LID	120351319	0.282	N/A	120351329	HT	A	N/A
LID	120352447	0.0116	120352006	120352007	HW	A	N/A
LID	120352448	0.00542	120352005	120352006	HW	A	N/A
LID	120352449	0.0136	120352005	120352005	HW	A	N/A
LID	120352450	0.0151	120352004	120352005	HW	A	N/A
LID	120352451	0.0206	120352004	120352004	HW	A	N/A
LID	120352452	0.0222	N/A	120352004	HW	A	N/A
LID	120352453	0.0197	N/A	N/A	HW	A	N/A
LID	120352454	0.0236	120351998	120351999	HW	A	N/A
LID	120352455	0.0280	N/A	120351998	HW	A	N/A
LID	120352808	0.0361	N/A	120352809	WK	A	N/A
LID	120364373	0.119	N/A	N/A	LV	A	N/A
LID	120364412	0.0467	120364420, 120364418	N/A	LV	A	N/A
LID	120365758	0.0132	N/A	N/A	BK	A	N/A
LID	120365759	0.0132	N/A	N/A	BK	A	N/A
LID	120365760	0.0132	N/A	N/A	BK	A	N/A
LID	120365761	0.0132	N/A	N/A	BK	A	N/A
LID	120365762	0.0132	N/A	N/A	BK	A	N/A
LID	120365782	0.00142	N/A	N/A	BK	A	N/A
LID	120365783	0.00125	N/A	N/A	BK	A	N/A
LID	120365784	0.000903	N/A	N/A	BK	A	N/A
LID	120365785	0.000820	N/A	N/A	BK	A	N/A
LID	120378900	0.0254	N/A	N/A	HW	A	N/A
LID	120394101	0.537	120394100	N/A	BR	A	N/A
LID	120396151	0.307	120396150, 120396167, 120396157	120396160	WL	A	N/A
Outfall	101300890	N/A	N/A	HW Watershed Tributary, leads to Kempenfelt Bay	N/A	C	N/A
Outfall	101308383	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101307282	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101309637	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101300647	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101304875	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101300445	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101310283	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101308834	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101300323	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101308637	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101305984	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120017736	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101306027	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120017796	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101306023	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101303404	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101305913	N/A	N/A	Kempenfelt Bay	N/A	C	N/A



Asset Type	Asset I.D.	Catchment Area (Ha)	Inlet	Outlet	Subwatershed /Watershed	Stormwater Management Level (A, B, C)	Treatment by others
Outfall	120083111	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120075584	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120083920	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120075909	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120075563	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120075566	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120083919	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101305918	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101303290	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101310289	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101310290	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101310226	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101300056	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101310689	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101302382	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120398267	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101305720	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101305719	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187233	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120026516	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187097	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101305728	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187098	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120028365	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120025561	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187099	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187100	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187101	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187102	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120026513	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187013	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120367114	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120395515	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187104	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187106	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187109	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101310524	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101310527	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187107	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187110	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120026519	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187111	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187112	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187113	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101300117	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187114	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101300119	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120395536	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187115	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101300112	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120187120	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101300114	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101311273	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	120224378	N/A	N/A	Kempenfelt Bay	N/A	C	N/A
Outfall	101305962	N/A	N/A	HW Watershed Tributary	N/A	C	N/A
Outfall	101305961	N/A	N/A	HW Watershed Tributary	N/A	C	N/A
Outfall	101305491	N/A	N/A	HW Watershed Tributary	N/A	C	N/A
Outfall	101305492	N/A	N/A	HW Watershed Tributary	N/A	C	N/A
Outfall	101304759	N/A	N/A	HW Watershed Tributary	N/A	C	N/A
Outfall	101304385	N/A	N/A	HW Watershed Tributary	N/A	C	N/A
Outfall	101304760	N/A	N/A	HW Watershed Tributary	N/A	C	N/A
Outfall	101300884	N/A	N/A	HW Watershed Tributary	N/A	C	N/A
Outfall	120367122	N/A	N/A	HW Watershed Tributary	N/A	C	N/A
Outfall	101300888	N/A	N/A	HW Watershed Tributary	N/A	C	N/A
Outfall	101300890	N/A	N/A	HW Watershed Tributary	N/A	C	N/A
Outfall	101304416	N/A	N/A	HW Watershed Tributary	N/A	C	N/A
Outfall	101304415	N/A	N/A	HW Watershed Tributary	N/A	C	N/A
Outfall	120230349	N/A	N/A	HW Watershed Tributary	N/A	C	N/A
Outfall	101310134	N/A	N/A	HW Watershed Tributary	N/A	C	N/A
Outfall	101304330	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101308283	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101308282	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101307811	N/A	N/A	LV Watershed Tributary	N/A	C	N/A

Asset Type	Asset I.D.	Catchment Area (Ha)	Inlet	Outlet	Subwatershed /Watershed	Stormwater Management Level (A, B, C)	Treatment by others
Outfall	101305077	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101305072	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101304536	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101311065	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101305963	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101300949	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101305421	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101300950	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101305962	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	120298402	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101303539	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101303540	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101303541	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101311758	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101308962	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	120294735	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101300994	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101305107	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101307131	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	120032751	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101304527	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101310964	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101304490	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	120346107	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101310695	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	120354962	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101304493	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101311609	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101304492	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309050	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101305729	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101305730	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101304561	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	120354960	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309049	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	120186950	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309215	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309216	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101304426	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	100300969	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309761	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309843	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101300967	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101300360	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101300478	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	120252159	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101307391	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101307388	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	120354964	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101310136	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309796	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309245	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309226	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309991	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309992	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309989	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101303538	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101305872	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309843	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309197	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309196	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309230	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309217	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309219	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101310743	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309229	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309212	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309213	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309214	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309211	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101311405	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309234	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309220	N/A	N/A	LV Watershed Tributary	N/A	C	N/A

Asset Type	Asset I.D.	Catchment Area (Ha)	Inlet	Outlet	Subwatershed /Watershed	Stormwater Management Level (A, B, C)	Treatment by others
Outfall	101309222	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309221	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101305077	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309974	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309970	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309833	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	123067089	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309828	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309827	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101309834	N/A	N/A	LV Watershed Tributary	N/A	C	N/A
Outfall	101305062	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101305925	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101305924	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101305009	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101304966	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101306688	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101305053	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101305886	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101304945	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101308053	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101308050	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101311354	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101311368	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101308581	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101308587	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101304338	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101304289	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	120402482	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	120402483	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101306471	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101306469	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101303418	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101307497	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	120255767	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101303583	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101305593	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	120345955	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101303584	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	120255932	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	120255944	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	120255945	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101303582	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	120256320	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101304288	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101300316	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	120354936	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	120402397	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	120402398	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101304287	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	120402399	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101301016	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	120073015	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	120364791	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101301017	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101304342	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101304331	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101308690	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101305037	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	120182430	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101309144	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	120182462	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101305051	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101305594	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101305052	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101305595	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101309016	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101306008	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101308415	N/A	N/A	WK Watershed Tributary	N/A	C	N/A
Outfall	101309099	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101309098	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	120081620	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	120081619	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	120297425	N/A	N/A	HT Watershed Tributary	N/A	C	N/A

Asset Type	Asset I.D.	Catchment Area (Ha)	Inlet	Outlet	Subwatershed /Watershed	Stormwater Management Level (A, B, C)	Treatment by others
Outfall	101308729	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101305111	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101308492	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101307965	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101305597	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101300202	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101301073	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101303653	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	120187751	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	120187752	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	120187545	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	120187547	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	120187771	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101303615	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101304812	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101307937	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101307936	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101307935	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101307934	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101307932	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101307931	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101303581	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	120195769	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101305928	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	120195766	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101307894	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	120195768	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101307944	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101303491	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101303821	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	120193286	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	120193579	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101307893	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	120230991	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101303703	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101307877	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101303625	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101303508	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101305874	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101301723	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101301127	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101307958	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101303616	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101305855	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101307954	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101307956	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	120186889	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101308699	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	120367317	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	120367319	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	120367321	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101308697	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101303628	N/A	N/A	HT Watershed Tributary	N/A	C	N/A
Outfall	101305574	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101305915	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	120075956	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101308710	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101308708	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101308243	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101308269	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101308268	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101302468	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101302393	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101311294	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101302467	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	120395524	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101305846	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101302510	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101303071	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101309129	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101300184	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101301124	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101303151	N/A	N/A	DY Watershed Tributary	N/A	C	N/A

Asset Type	Asset I.D.	Catchment Area (Ha)	Inlet	Outlet	Subwatershed /Watershed	Stormwater Management Level (A, B, C)	Treatment by others
Outfall	101305848	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101303060	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101303061	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101305849	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101305850	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101305851	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101305852	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101305853	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101305854	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101311148	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101303022	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101303031	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101303214	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101300140	N/A	N/A	DY Watershed Tributary	N/A	C	N/A
Outfall	101305919	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101305920	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101305921	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101305922	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101300086	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101308257	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101308260	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101305947	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101305949	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101305946	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101305945	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101305966	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101302447	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101310561	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101310554	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101305970	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101305807	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101305808	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101305806	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	120186997	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101300072	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	120183906	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101300146	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101302439	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101302443	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101300070	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101301724	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101302465	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101302440	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101302441	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101302442	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101310497	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101306898	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101300815	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101300001	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101311089	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	120003727	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101301694	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	120401628	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101301689	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101300071	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101300102	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101300074	N/A	N/A	BK Watershed Tributary	N/A	C	N/A
Outfall	101308826	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	120295452	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101300057	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101302454	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101310491	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101302455	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101310494	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101310517	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101310519	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101308867	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101308871	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101306685	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101306684	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101302394	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	120008149	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101300103	N/A	N/A	KD Watershed Tributary	N/A	C	N/A



Asset Type	Asset I.D.	Catchment Area (Ha)	Inlet	Outlet	Subwatershed /Watershed	Stormwater Management Level (A, B, C)	Treatment by others
Outfall	120183216	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101301787	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101302833	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101305891	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101305979	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101305982	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101300845	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101300844	N/A	N/A	KD Watershed Tributary	N/A	C	N/A
Outfall	101310028	N/A	N/A	SP Watershed Tributary	N/A	C	N/A
Outfall	120178478	N/A	N/A	SP Watershed Tributary	N/A	C	N/A
Outfall	101306677	N/A	N/A	SP Watershed Tributary	N/A	C	N/A
Outfall	101306676	N/A	N/A	SP Watershed Tributary	N/A	C	N/A
Outfall	120295026	N/A	N/A	SP Watershed Tributary	N/A	C	N/A
Outfall	101309440	N/A	N/A	SP Watershed Tributary	N/A	C	N/A
Outfall	101307549	N/A	N/A	SP Watershed Tributary	N/A	C	N/A
Outfall	101300021	N/A	N/A	SP Watershed Tributary	N/A	C	N/A
Outfall	120187002	N/A	N/A	SP Watershed Tributary	N/A	C	N/A
Outfall	101306287	N/A	N/A	SP Watershed Tributary	N/A	C	N/A
Outfall	101300046	N/A	N/A	GR Watershed Tributary	N/A	C	N/A
Outfall	101301084	N/A	N/A	GR Watershed Tributary	N/A	C	N/A
Outfall	101300034	N/A	N/A	GR Watershed Tributary	N/A	C	N/A
Outfall	101300576	N/A	N/A	GR Watershed Tributary	N/A	C	N/A
Outfall	101301095	N/A	N/A	GR Watershed Tributary	N/A	C	N/A
Outfall	101300036	N/A	N/A	LT Watershed Tributary	N/A	C	N/A
Outfall	101306583	N/A	N/A	LT Watershed Tributary	N/A	C	N/A
Outfall	101307258	N/A	N/A	LT Watershed Tributary	N/A	C	N/A
Outfall	101307260	N/A	N/A	LT Watershed Tributary	N/A	C	N/A
Outfall	101308005	N/A	N/A	LT Watershed Tributary	N/A	C	N/A
Outfall	101302063	N/A	N/A	LT Watershed Tributary	N/A	C	N/A
Outfall	120196196	N/A	N/A	LT Watershed Tributary	N/A	C	N/A
Outfall	101305285	N/A	N/A	LT Watershed Tributary	N/A	C	N/A
Outfall	120180498	N/A	N/A	LT Watershed Tributary	N/A	C	N/A
Outfall	101302339	N/A	N/A	LT Watershed Tributary	N/A	C	N/A
Outfall	101302335	N/A	N/A	LT Watershed Tributary	N/A	C	N/A
Outfall	101305889	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	101303359	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	101303360	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	120031929	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	101303504	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	120076372	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	101306091	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	101303744	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	101305447	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	101306719	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	101301117	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	101303745	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	101303743	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	120367644	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	120372542	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	120354951	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	101300776	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	101303742	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	120194550	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	101304504	N/A	N/A	BR Watershed Tributary	N/A	C	N/A
Outfall	120317732	N/A	N/A	SC Watershed Tributary	N/A	C	N/A

Notes:

- Assets identified as having “Private” ownership were excluded from the above inventory
- All assets identified as having “City” ownership were included in the above inventory, GIS does not have a field to filter based on ECA applicability
- N/A = Not applicable

BY: Bayshore  
BR: Bear Creek  
BK: Bunkers Creek  
DY: Dyments Creek  
GR: Georgian  
GL: Gray Lane  
HW: Hewitts Creek  
HG: Holgate Creek  
HT: Hotchkiss Creek

KD: Kidds Creek  
LT: Little Lake  
LV: Lovers Creek  
MT: Minets  
ML: Mulcaster  
NL: Nelson  
RN: Rodney  
RT: Royal Oak  
HR: Huronia Creek

JH: Johnson  
SC: Sandy Cove  
SP: Sophia Creek  
SV: St. Vincent  
WK: Whisky Creek  
WL: Williams

# CLI-ECA Schedule E – Table E2. Storm Sewershed and Associated Treatment

Stormwater Management Level	Total Number of Outlets to Environment	Total Sewershed Catchment Area (ha)
Level A	235	6,548
Level B	133	678
Level C	438	2,981
<b>Total</b>	<b>806</b>	<b>9,901*</b>

## Notes:

- Table E2 is not a sum of the information in Table E1. Table E2 removes any overlap in watersheds created by assets that are located in close proximity, e.g., LIDs.
- The star (\*) denotes the total sewershed catchment area (9,901), as the area within the City of Barrie Boundary. The values for Level A, B, and C for the total sewershed catchment area do not sum to the value due to overlapping catchment areas.
- Assets identified as having “Private” ownership were not excluded from the summary
- All assets identified as having “City” ownership were included in the summary, GIS does not have a field to filter based on ECA applicability

Appendix B – Completed Inspections



## Summary of Completed Inspections

ECA Asset Group	Description	Total
Inspection - Catch Basin	Inspection - Catch Basin	12921
<b>Inspection - Catch Basin Total</b>		<b>12921</b>
Inspection - Culvert	Inspection - Culvert	202
<b>Inspection - Culvert Total</b>		<b>202</b>
Inspection - Headwall	Inspection - Headwall	239
<b>Inspection - Headwall Total</b>		<b>239</b>
Inspection - LID	LID - Inspection (Spring)	37
<b>Inspection - LID Total</b>		<b>37</b>
Inspection - MTD	Inspect Sedimentation MTD	76
	Inspect Filtration MTD	2
<b>Inspection - MTD Total</b>		<b>78</b>
Inspection - Sewer - per KM	Inspection - Sewer - per KM	43
<b>Inspection - Sewer - per KM Total</b>		<b>43</b>
Inspection - SWMF	SWMF Inspection	83
	Inspection - Marta Cres	49
<b>Inspection - SWMF Total</b>		<b>132</b>
Inspection - Watercourse	Watercourse Inspection	83
<b>Inspection - Watercourse Total</b>		<b>83</b>
<b>Grand Total</b>		<b>13735</b>

Appendix C – Completed Maintenance

## Summary of Completed Maintenance

ECA Asset Group	Description	Total
Maintenance - Catch Basin	Catch Basin Maintenance	19
	Catch Basin Repair	13
	Maintenance - Catch Basin	12999
	Rear Yard Catchbasin Maintenance	3
<b>Maintenance - Catch Basin Total</b>		<b>13034</b>
Maintenance - Culvert	Culvert Maintenance	46
	OSIM Maintenance - Culvert	14
	Repair Railing at Culvert	1
<b>Maintenance - Culvert Total</b>		<b>61</b>
Maintenance - Ditch	Clean Ditch - Reset Grade	1
	Ditch Inlet Maintenance	2
<b>Maintenance - Ditch Total</b>		<b>3</b>
Maintenance - Lateral	Storm Lateral Maintenance	4
<b>Maintenance - Lateral Total</b>		<b>4</b>
Maintenance - LID	LID - Debris/Litter Removal	3
	LID - Inlet Maintenance/Repair	4
	LID - Mulch Maintenance	15
	LID - Overflow Outlet Maintenance/Repair	1
	LID - Sluice Gate Fall Close	3
	LID - Sluice Gate Spring Open	3
	Maintenance - LID	11
<b>Maintenance - LID Total</b>		<b>40</b>
Maintenance - Maintenance Hole	Maintenance Hole Maintenance	23
	Storm Maintenance Hole Repair	13
<b>Maintenance - Maintenance Hole Total</b>		<b>36</b>
Maintenance - MTD	Alter Elevation of Sedimentation MTD Lid and Frame	1
	Clean Filtration MTD	2
	Clean Sedimentation MTD	76
<b>Maintenance - MTD Total</b>		<b>79</b>
Maintenance - Sewer	Sewer Outfall Rehab	2
	Stormwater Mains Maintenance	3
<b>Maintenance - Sewer Total</b>		<b>5</b>
Maintenance - SWMF	Access Road Maintenance at SWMF	5
	Berm Maintenance/Repair	1
	Clean Up Illegal Dumping at SWMF	2
	Hickenbottom Repair	1
	Inlet Repair in SWMF	8
	Install Sign	11
	Install/Remove Staff Gauge	87
	Internal Pipe Maintenance in SWMF	1
	Marta Cresc Pumping Requests	13
	Monitor Staff Gauge	78
	Outlet Repair in SWMF	8
	Pond SW Monitoring	123
	Remove Debris from SWMF	14
	Remove Graffiti - SWMF	2
	Remove Litter from SWMF	6
	Repair Cable Mat at SWMF	1
	Repair Fence in SWMF	3
	Repair Gate at SWMF	1
	Repair Grate at SWMF	4
	Replace Lock at SWMF	1
	Sediment Removal	4

## Summary of Completed Maintenance

Maintenance - SWMF	Sediment Removal in SWMF	2
	Spillway Maintenance at SWMF	2
	SWMF - Valve Exercising	17
	SWMF - Valve Maintenance/Repair	6
	Tree Cutting and Trimming in SWMF	5
	Varmint Control in SWMF	3
	Vegetation Cutting and Removal in SWMF	41
<b>Maintenance - SWMF Total</b>		<b>450</b>
Maintenance - Watercourse	Debris Removal from Watercourse	2
	Easement Maintenance	1
	Gate Clearing	123
	Litter Removal from Watercourse	1
	Repair Outlet Gate	1
	Watercourse Maintenance	35
	Watercourse SW Monitoring	117
<b>Maintenance - Watercourse Total</b>		<b>280</b>
Maintenance - Ditch - per M	Maintenance - Ditch - per M	2280
<b>Maintenance - Ditch - per M Total</b>		<b>2280</b>
Maintenance - Sewer - per M	Maintenance - Sewer - per M	867
<b>Maintenance - Sewer - per M Total</b>		<b>867</b>
<b>Grand Total</b>		<b>17139</b>

Appendix D – Field Duplicate Laboratory Analysis

SWMF Field Duplicates Analytical Results

LegacyID	Date	Ammonia, total (as N)	Chloride	Nitrate (as N)	Nitrite (as N)	pH	Phosphorus, total	Solids, total suspended (TSS)
BR08b	11-Jul-2024	0.0131	2.28	0.108	<0.010	7.68	0.0639	<3.0
	20-Aug-2024	0.0130	10.6	<0.020	<0.010	8.08	0.0478	<3.0
BR10	30-Oct-2024	0.0427	67.2	0.716	0.021	8.03	0.069	5.9
BR14	20-Aug-2024	0.232	303	<0.100	<0.050	8.31	0.0616	<3.0
BR22	25-Sep-2024	0.0097	79.3	0.026	<0.010	8.28	0.0136	<3.0
DY04	11-Jul-2024	0.0067	83.4	0.117	<0.010	8.37	0.0217	<3.0
HW01	15-Jul-2024	0.104	15.8	0.057	<0.010	8.17	0.0616	<3.0
LT02	30-Oct-2024	0.0335	54.6	0.026	<0.010	7.95	0.0460	4.0
LV22	12-Jul-2024	0.0346	160	0.136	<0.010	8.01	0.0234	3.3
	20-Aug-2024	0.0481	680	0.100	<0.050	8.22	0.0316	5.0
LV23	20-Aug-2024	0.0438	55.7	<0.020	<0.010	8.07	0.0286	3.5

Watercourse Field Duplicate Analytical Results

LegacyID	Date	Ammonia, total (as N)	Chloride	Nitrate (as N)	Nitrite (as N)	pH	Phosphorus, total	Solids, total suspended (TSS)
BR01	17-Sep-2024	0.0124	97.4	0.546	<0.010	8.45	0.0360	<3.0
BR04	11-Jun-2024	<0.0050	144	2.67	<0.050	8.4	0.0076	5.2
	01-Aug-2024	0.0073	135	2.38	<0.010	8.47	0.0198	18.9
DY01	29-Jul-2024	0.633	388	0.521	0.088	8.22	0.0295	3.9
KD03	30-Jul-2024	0.0074	298	4.36	<0.050	8.22	0.0120	4.3
LT01	12-Sep-2024	0.0345	118	0.406	<0.010	8.48	0.0542	<3.0
LV02	12-Jun-2024	0.0059	188	1.21	<0.050	8.43	0.0114	<3.0
LV03	16-Sep-2024	0.0252	137	1.96	<0.010	8.54	0.0216	<3.0
SC01	30-Jul-2024	0.0265	99.7	1.67	<0.010	8.29	0.0162	<3.0
SP03	10-Jun-2024	0.0599	188	0.197	0.031	8.2	0.0477	17.6
WK01	10-Jun-2024	0.0303	313	0.969	<0.050	8.37	0.0237	6.6
WK02	13-Sep-2024	<0.0050	1160	2.49	<0.050	8.17	0.0155	<3.0

Appendix E – Calibration Records

Summery of Equipment Calibrations

Inspection ID	Calibration Type	Monitoring Program	Date of Calibration	Time of Calibration	Meter/Probe Serial Number	pH (4.01)	pH (7.01)	pH (10.00)	Conductivity (1413 us/cm)	pH Requires Recalibration	Conductivity Recalibration Required	Marked Out of Service
443970	Initial calibration	Pond	2024-01-10	1:00 PM	17A101263/17A101207	6.53	9.53	9.72	0	Yes	Yes	Yes
443959	Initial calibration	Pond	2024-01-10	10:00 AM	17A101264/17A101208	4.09	7.07	10.13	1374	Yes	No	No
443957	Recalibration	Pond	2024-01-10	10:00 AM	17A101264/17A101208	4.04	7.01	10.03	1374	No	No	No
443964	Initial calibration	Pond	2024-01-10	10:30 AM	17C104448/17D106945	4.02	7.03	9.98	1205	No	Yes	No
443967	Recalibration	Pond	2024-01-10	10:30 AM	17C104448/17D106945	4.02	7.03	9.98	1413	No	No	No
443971	Initial calibration	Pond	2024-01-11	8:30 AM	17A101263/17A101207	6.41	8.79	10.47	0	Yes	Yes	Yes
443972	Recalibration	Pond	2024-01-11	8:30 AM	17A101263/17A101207	3.6	6.97	9.41	0	Yes	Yes	Yes
444027	Recalibration	Pond	2024-01-11	3:00 PM	17C104447/17D105935	4.67	7.71	9.5	0	Yes	Yes	Yes
443853	Initial calibration	Creek	2024-06-10	7:45 AM	17A101263/17A101207	6.49	9.13	12.62	1427	Yes	No	Yes
443934	Initial calibration	Creek	2024-06-10	7:45 AM	17A101263/17A101207	6.49	9.13	12.62	1427	Yes	No	Yes
443856	Initial calibration	Creek	2024-06-10	8:30 AM	17A101264/17A101208	4.16	7.04	1	1	Yes	Yes	No
443948	Initial calibration	Creek	2024-06-10	8:30 AM	17A101264/17A101208	4.16	7.04	10	1413	Yes	No	No
443857	Recalibration	Creek	2024-06-10	8:00 AM	17A101264/17A101208	4.23	7.18	9.96	1343	Yes	No	No
443858	Recalibration	Creek	2024-06-10	8:15 AM	17A101264/17A101208	4.06	7.09	10.01	1373	No	No	No
443949	Recalibration	Creek	2024-06-10	8:30 AM	17A101264/17A101208	4.23	7.18	9.96	1343	Yes	No	No
443950	Recalibration	Creek	2024-06-10	8:30 AM	17A101264/17A101208	4.06	7.09	10.01	1373	No	No	No
443842	Initial calibration	Creek	2024-06-10	8:36 AM	17C104448/17D106945	4.01	6.93	10.02	1100	No	Yes	No
443943	Initial calibration	Creek	2024-06-10	8:36 AM	17C104448/17D106945	4.01	6.93	10.02	1100	No	Yes	No
443845	Recalibration	Pond	2024-06-10	8:36 AM	17C104448/17D106945	4.01	6.93	10.02	1415	No	No	No
443946	Recalibration	Creek	2024-06-10	8:36 AM	17C104448/17D106945	4.01	6.93	10.02	1415	No	No	No
443861	Initial calibration	Creek	2024-06-11	7:15 AM	17A101264/17A101208	4	7	9.92	1654	No	Yes	No
443954	Initial calibration	Creek	2024-06-11	7:15 AM	17A101264/17A101208	4	7.08	9.92	1654	No	Yes	No
443862	Recalibration	Creek	2024-06-11	7:45 AM	17A101264/17A101208	4	7.08	9.92	1413	No	No	No
443958	Recalibration	Creek	2024-06-11	7:15 AM	17A101264/17A101208	4	7.08	9.92	1413	No	No	No
443864	Initial calibration	Creek	2024-06-11	7:30 AM	17C104448/17D106945	4.11	7.09	9.99	1366	No	No	No
443960	Initial calibration	Creek	2024-06-11	8:00 AM	17C104448/17D106945	4.11	7.09	9.95	1366	No	No	No
443866	Initial calibration	Creek	2024-06-12	7:40 AM	17A101264/17A101208	4.03	7	9.94	1487	No	No	No
443963	Initial calibration	Creek	2024-06-12	7:40 AM	17A101264/17A101208	4.03	7	9.94	1487	No	No	No
444029	Initial calibration	Pond	2024-07-05	8:00 AM	17A101264/17A101208	4.1	7.08	10	1560	No	Yes	No
444030	Recalibration	Pond	2024-07-05	8:00 AM	17A101264/17A101208	4.1	7.08	10	1552	No	No	No
444028	Initial calibration	Pond	2024-07-05	3:00 PM	17C104448/17D106945	4.08	6.95	9.94	1440	No	No	No
443881	Initial calibration	Pond	2024-07-10	7:50 AM	17A101264/17A101208	4.09	7	9.94	1522	No	No	No
443884	Initial calibration	Pond	2024-07-11	7:50 AM	17A101264/17A101208	4.08	7.05	9.93	1509	No	No	No
443885	Initial calibration	Pond	2024-07-12	8:09 AM	17A101264/17A101208	4.09	7.08	10.09	1501	No	No	No
443892	Initial calibration	Pond	2024-07-15	8:01 AM	17A101264/17A101208	4.12	7.05	10.12	1492	Yes	No	No
443894	Recalibration	Pond	2024-07-15	8:10 AM	17A101264/17A101208	4.09	7.05	10	1492	No	No	No
443895	Initial calibration	Pond	2024-07-16	7:36 AM	17A101264/17A101208	4.04	6.93	10.01	1479	No	No	No
443868	Initial calibration	Creek	2024-07-29	7:45 AM	17A101264/17A101208	4.02	6.94	9.97	1416	No	No	No
443909	Initial calibration	Creek	2024-07-29	7:50 AM	17A101264/17A101208	4.06	6.96	10.04	1386	No	No	No



Summery of Equipment Calibrations

Inspection ID	Calibration Type	Monitoring Program	Date of Calibration	Time of Calibration	Meter/Probe Serial Number	pH (4.01)	pH (7.01)	pH (10.00)	Conductivity (1413 us/cm)	pH Requires Recalibration	Conductivity Recalibration Required	Marked Out of Service
443910	Initial calibration	Creek	2024-07-30	7:37 AM	17A101264/17A101208	4.07	7.08	10	1431	No	No	No
443912	Initial calibration	Creek	2024-08-01	7:54 AM	17A101263/17A101207	0	11	0	0	Yes	Yes	Yes
443913	Initial calibration	Creek	2024-08-01	8:26 AM	17C104448/17D106945	4.09	7.06	9.94	1381	No	No	No
443899	Initial calibration	Pond	2024-08-19	7:46 AM	17A101264/17A101208	4.07	6.95	9.95	1450	No	No	No
443900	Initial calibration	Pond	2024-08-19	8:01 AM	17C104448/17D106945	4.09	6.99	10	1441	No	No	No
443905	Initial calibration	Pond	2024-08-20	7:34 AM	17A101264/17A101208	4.08	7.01	9.94	980	No	Yes	No
443906	Recalibration	Pond	2024-08-20	7:45 AM	17A101264/17A101208	4.08	7.01	9.94	1414	No	No	No
443901	Initial calibration	Pond	2024-08-20	7:45 AM	17C104448/17D106945	4.12	7.05	9.87	1369	Yes	No	No
443902	Recalibration	Pond	2024-08-20	7:56 AM	17C104448/17D106945	4	7.05	10	1369	No	No	No
419231	Initial calibration	Creek	2024-09-12	7:15 AM	17C104448/17D106945	4.06	7.1	10.02	722	No	Yes	No
443924	Initial calibration	Creek	2024-09-12	7:15 AM	17C104448/17D106945	4.06	7.1	10.02	722	No	Yes	No
419422	Recalibration	Creek	2024-09-12	7:22 AM	17C104448/17D106945	4.06	7.1	10.02	1453	No	No	No
443931	Recalibration	Creek	2024-09-12	7:22 AM	17C104448/17D106945	4.06	7.1	10.02	1453	No	No	No
419430	Initial calibration	Creek	2024-09-13	7:45 AM	17C104448/17D106945	4.15	7.08	0	1483	Yes	No	No
443919	Initial calibration	Creek	2024-09-13	7:45 AM	17C104448/17D106945	4.15	7.08	0	1783	Yes	Yes	No
419431	Recalibration	Creek	2024-09-13	8:15 AM	17C104448/17D106945	4.04	7.01	10.02	1452	No	No	No
443920	Recalibration	Creek	2024-09-13	8:25 AM	17C104448/17D106945	4.04	7.01	10.02	1752	No	No	No
419424	Initial calibration	Creek	2024-09-16	8:00 AM	17C104448/17D106945	4.09	6.99	10.03	1444	No	No	No
443923	Initial calibration	Creek	2024-09-16	8:00 AM	17C104448/17D106945	4.09	6.99	10.03	1444	No	No	No
419429	Initial calibration	Creek	2024-09-17	8:10 AM	17C104448/17D106945	4.1	6.99	10.03	1464	No	No	No
443921	Initial calibration	Creek	2024-09-17	8:10 AM	17C104448/17D106945	4.1	6.99	10.03	1464	No	No	No
420127	Initial calibration	Creek	2024-09-25	7:45 AM	17C104448/17D106945	4.09	7.1	9.96	1204	No	No	No
420371	Initial calibration	Pond	2024-09-26	8:00 AM	17C104448/17D106945	4.11	7.01	9.96	571	No	Yes	Yes
425358	Initial calibration	Pond	2024-10-28	8:45 AM	17C104448/17D106945	4.1	7.05	10.04	1419	No	No	No
425480	Initial calibration	Pond	2024-10-30	7:50 AM	17C104448/17D106945	4.11	6.99	10.03	1471	No	No	No

Appendix F – Laboratory Analysis – SWMFs

SWMF Water Quality Key Performance Indicator Trends

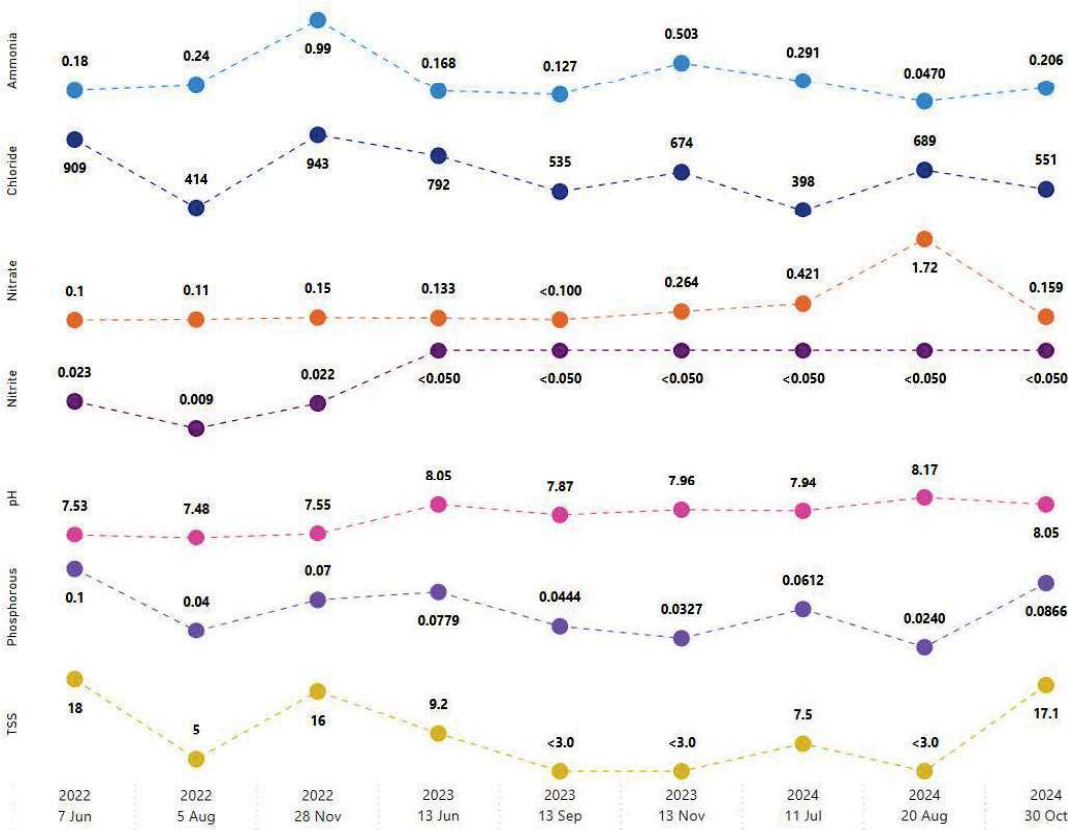


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Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

BK08

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented



SWMF Water Quality Key Performance Indicator Trends

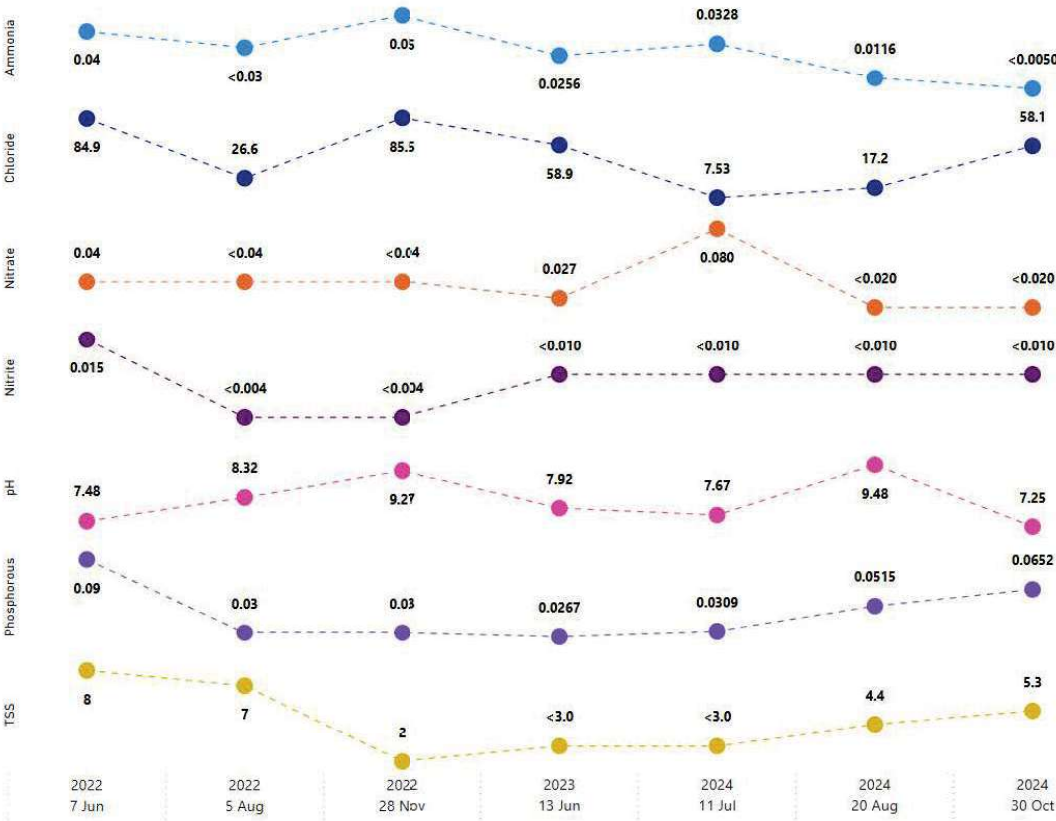


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Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

BR06



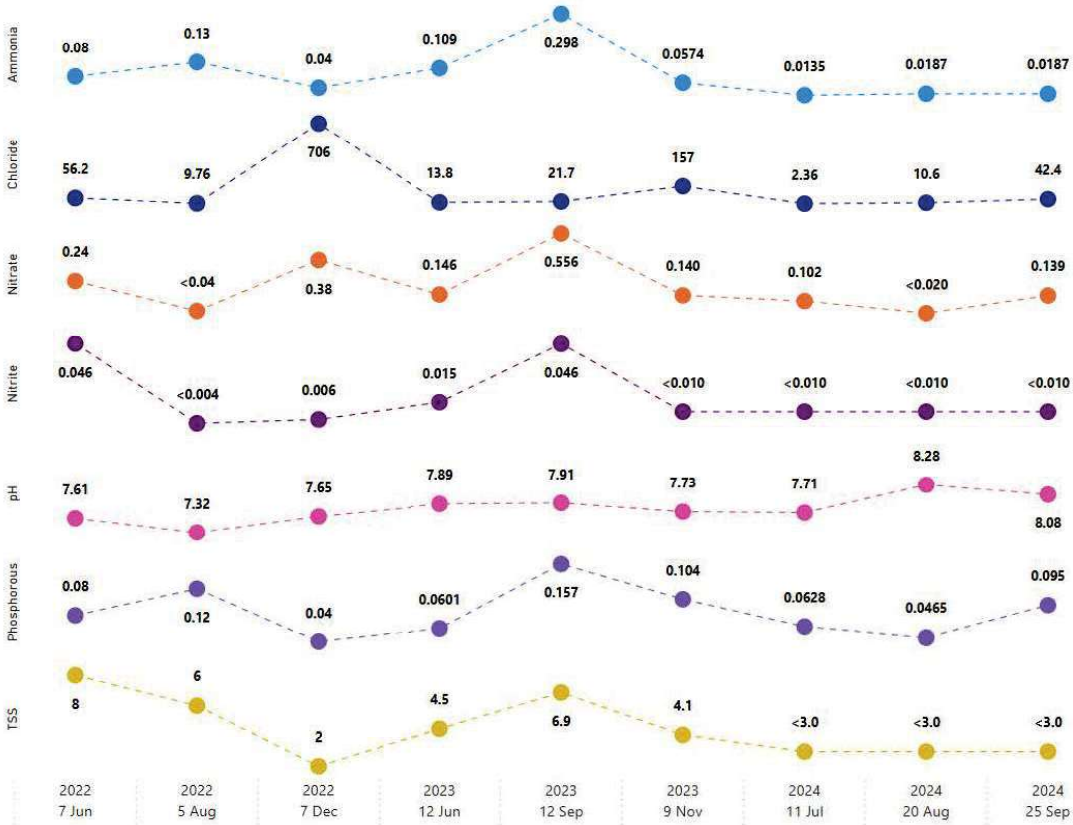
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

BR08b

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented





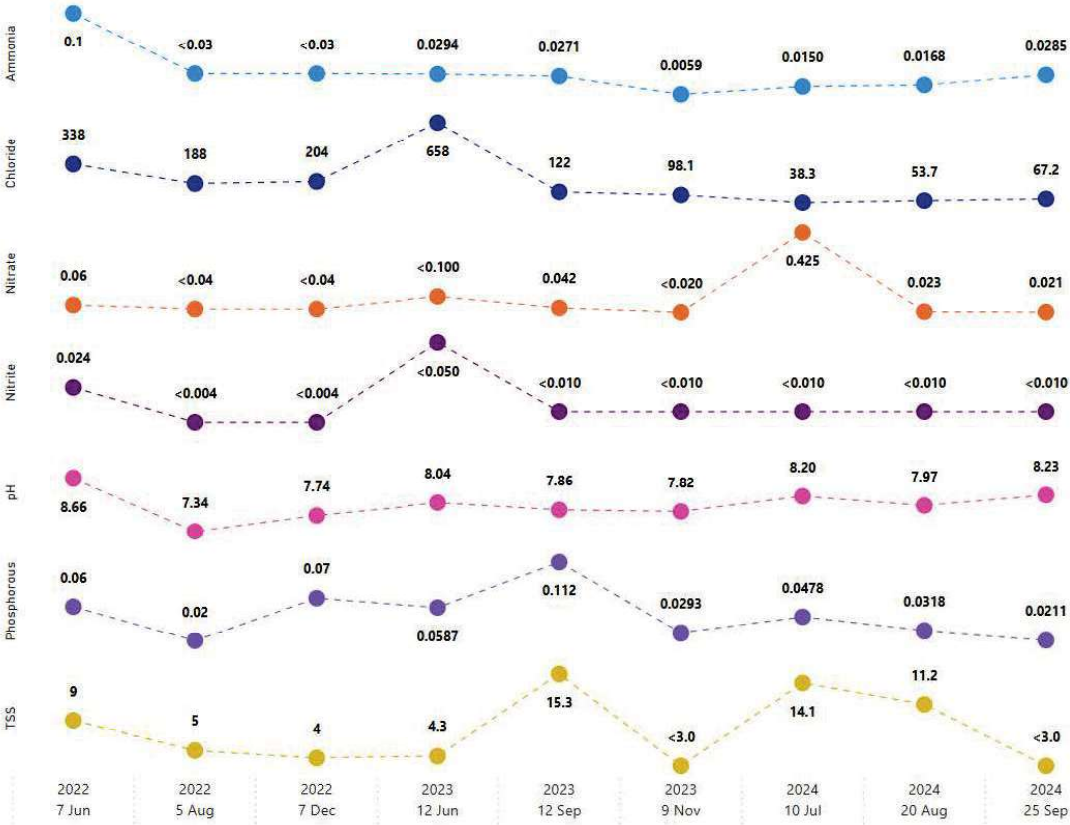
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

BR09



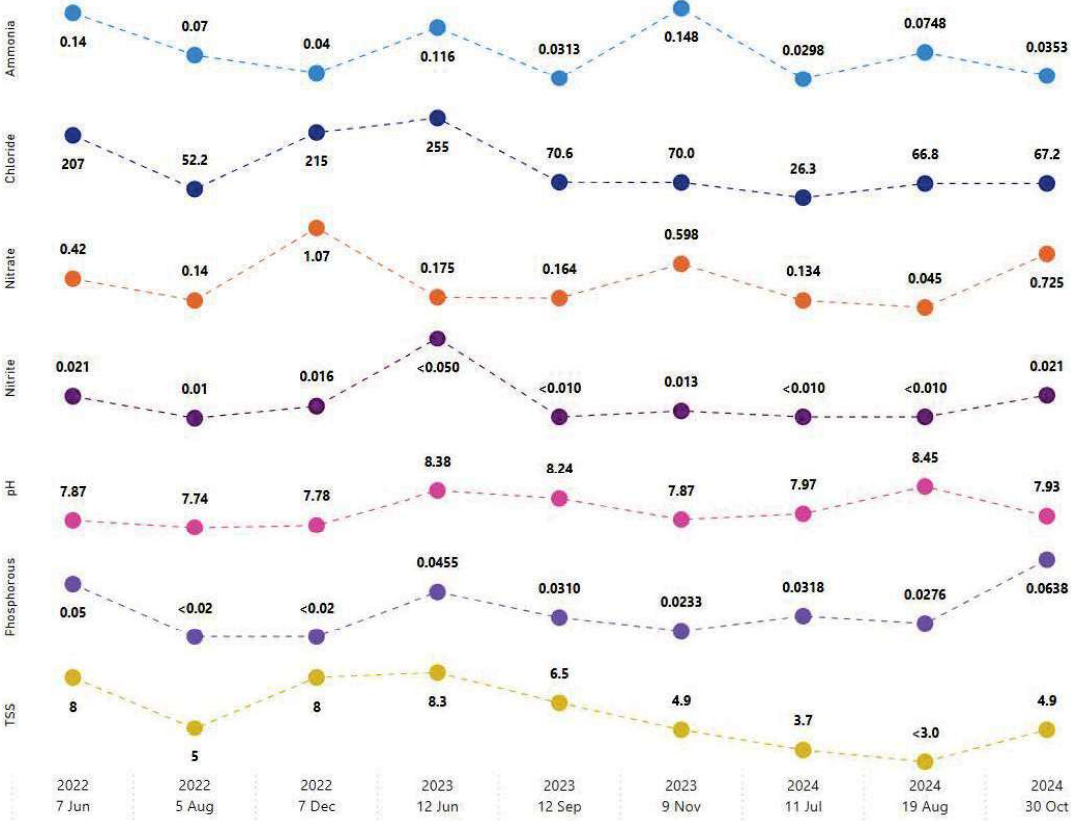
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

BR10



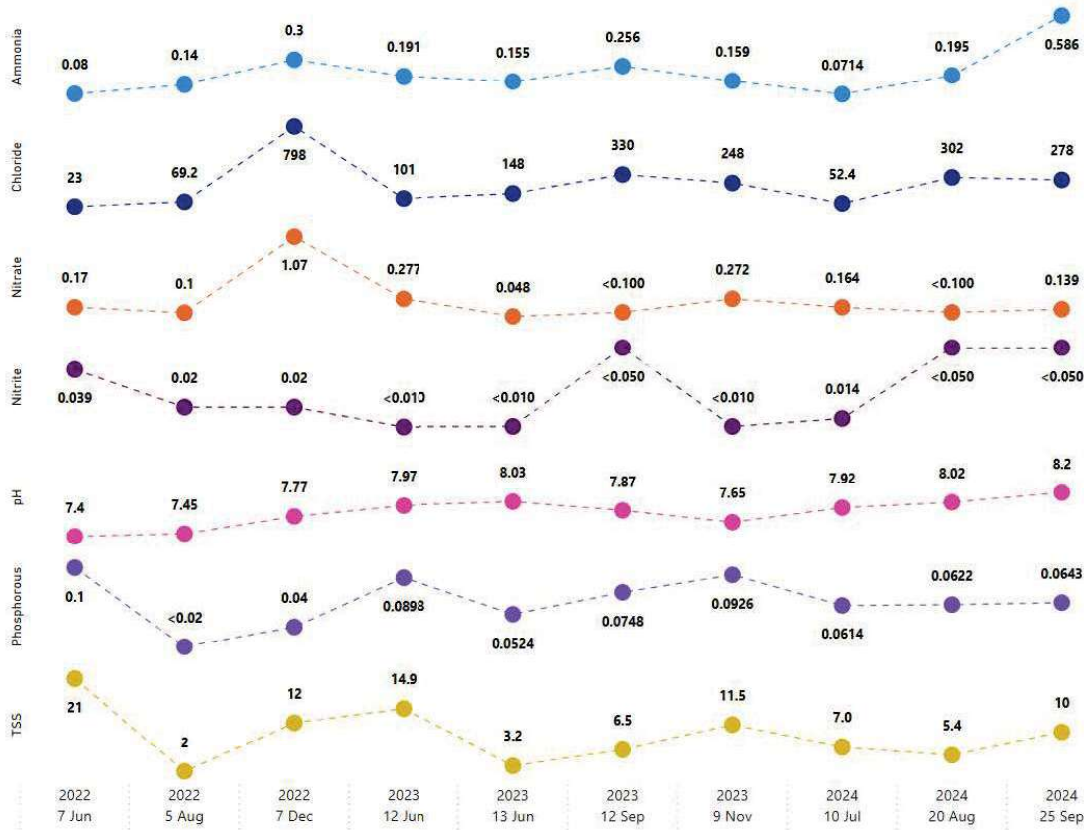
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

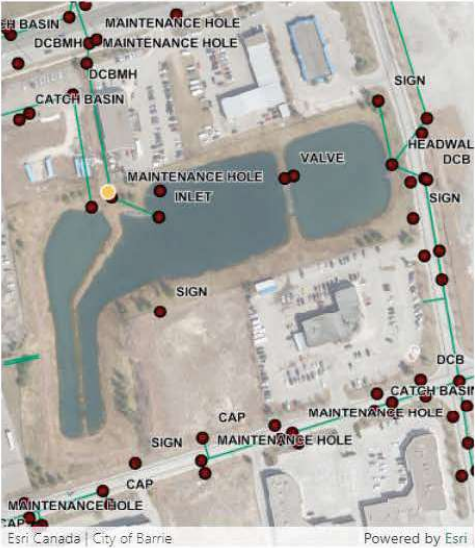
All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

BR14





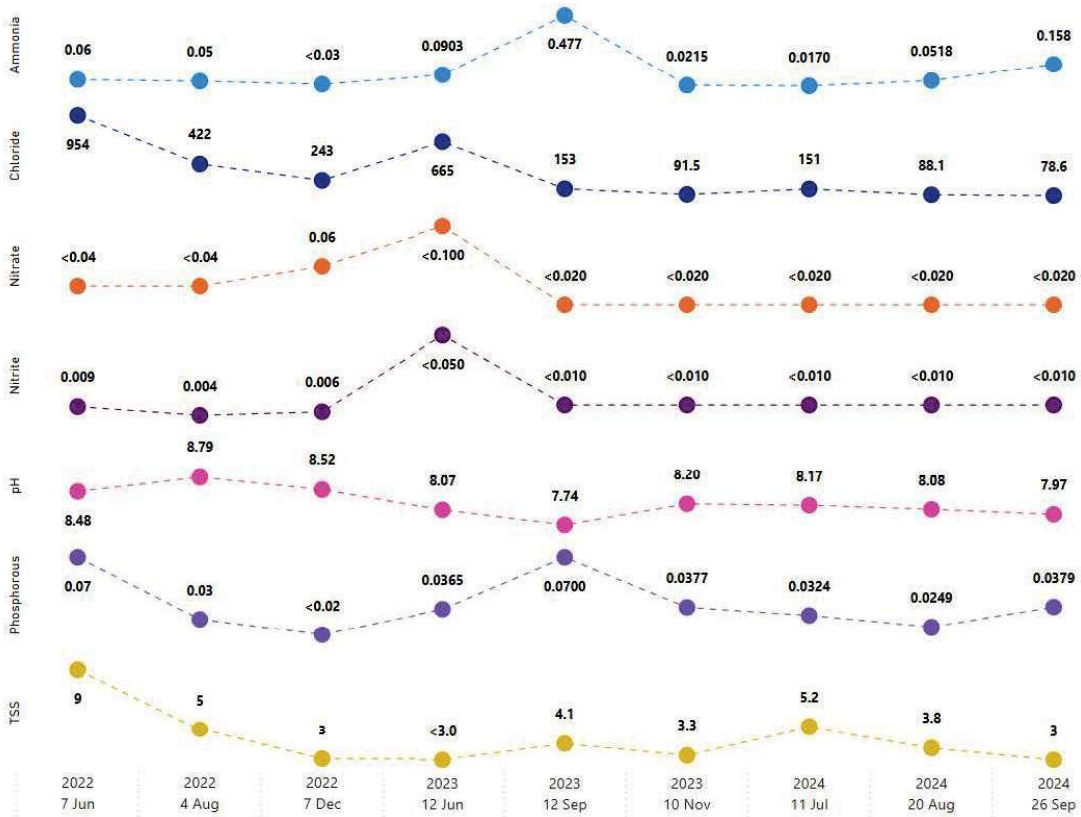
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

BR16



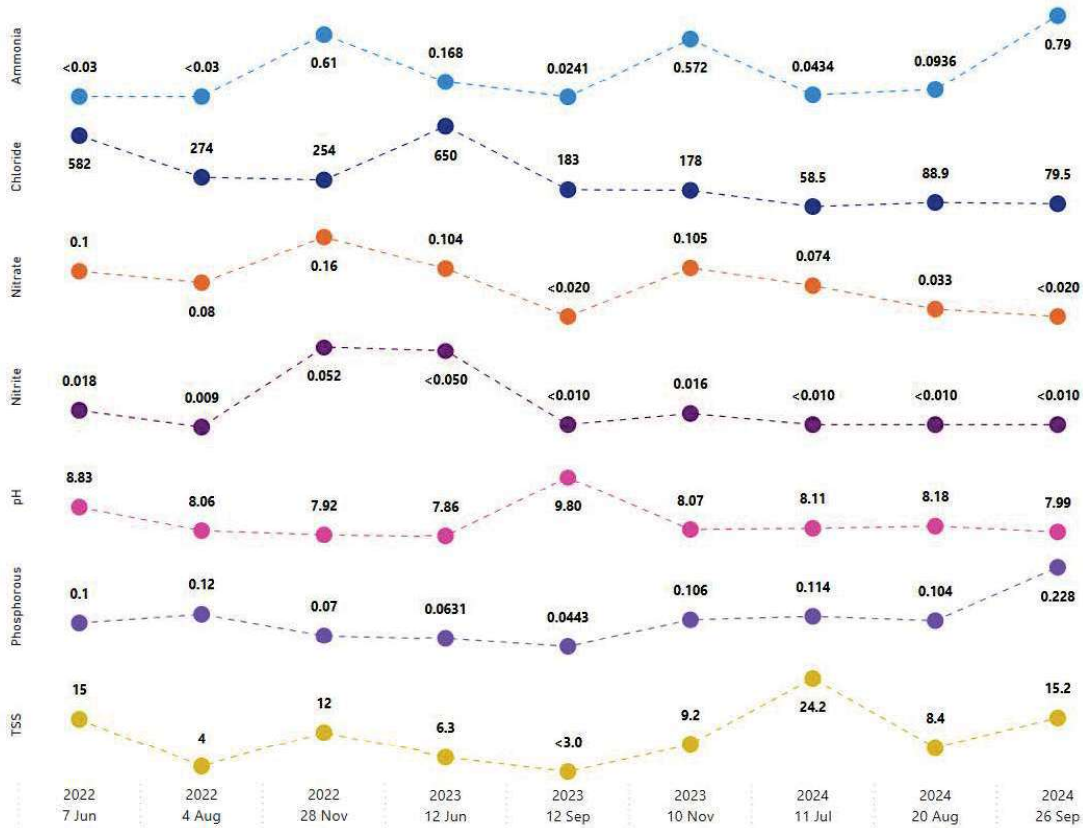
SWMF Water Quality Key Performance Indicator Trends



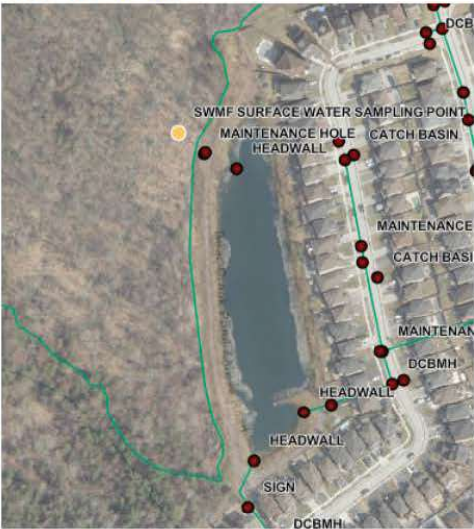
Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes;  
Each graph is scaled based on the data presented

BR20



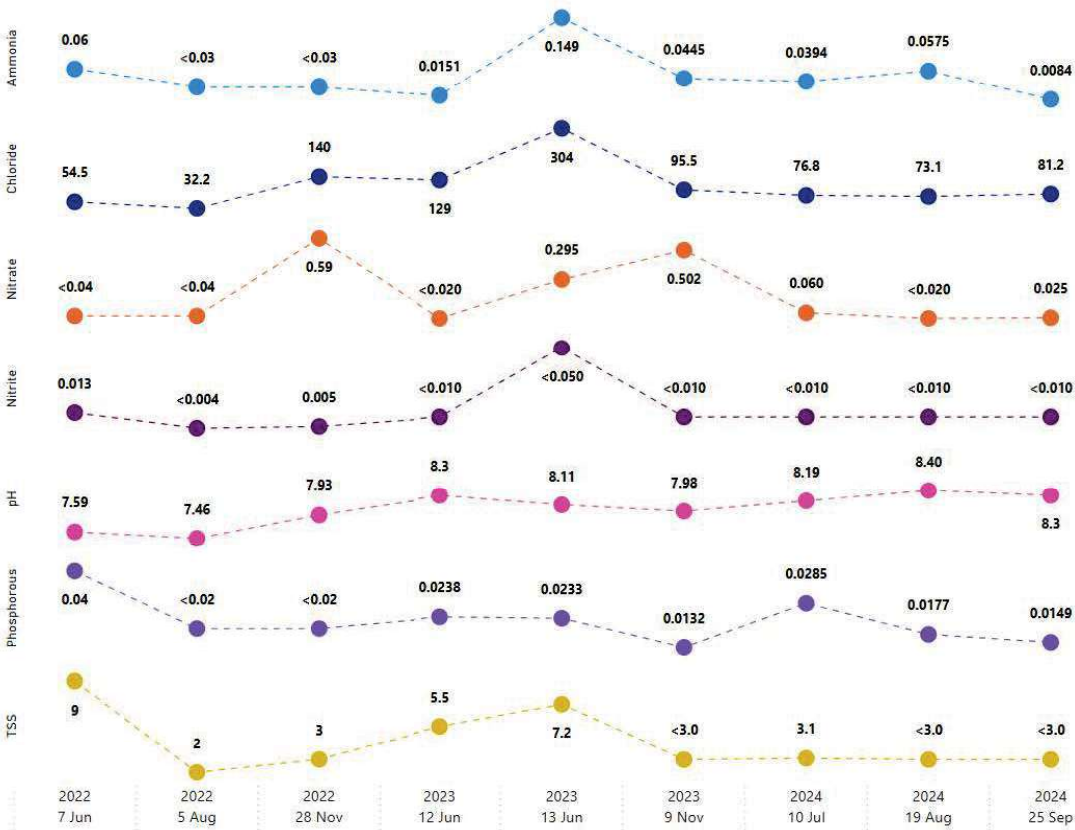
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

BR22



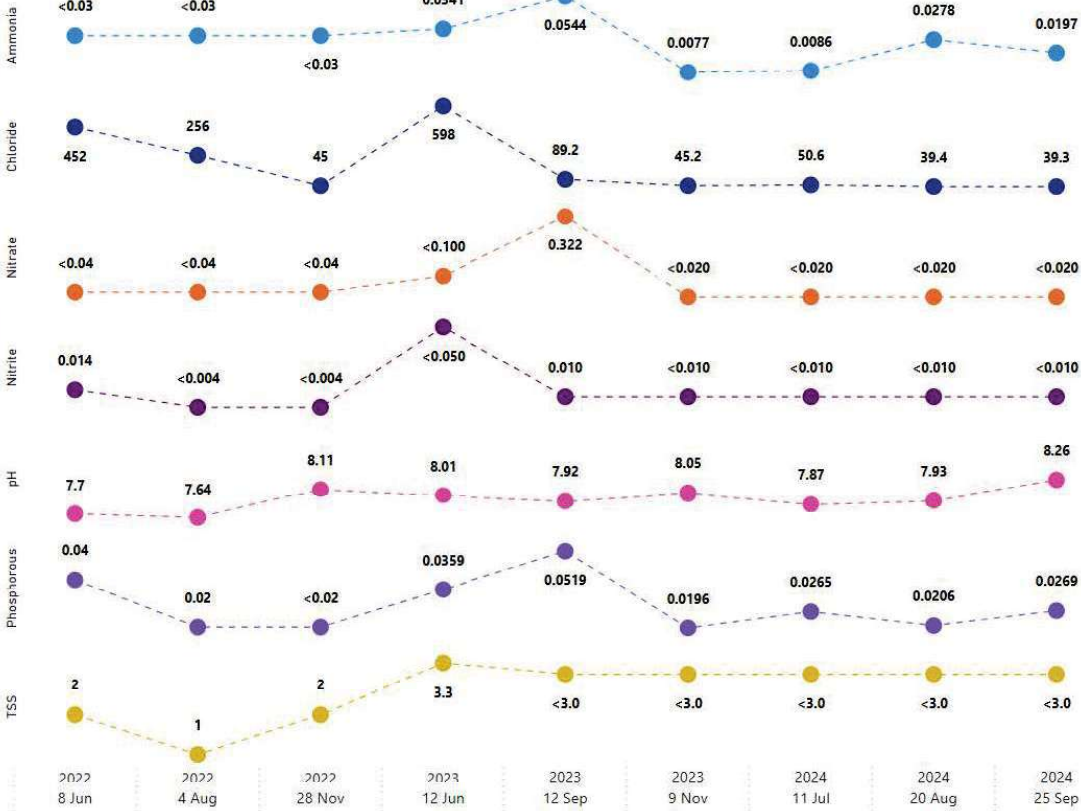
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

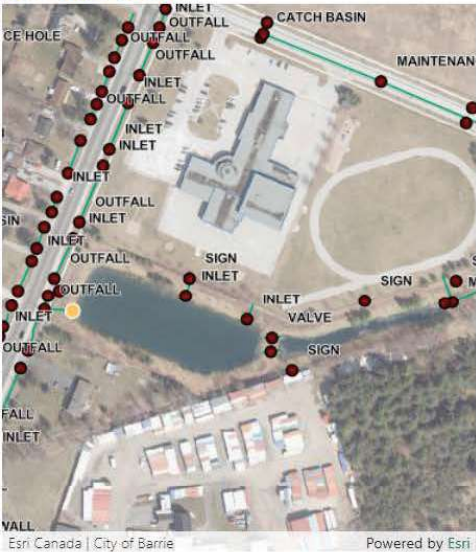
All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (MDL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

BR24





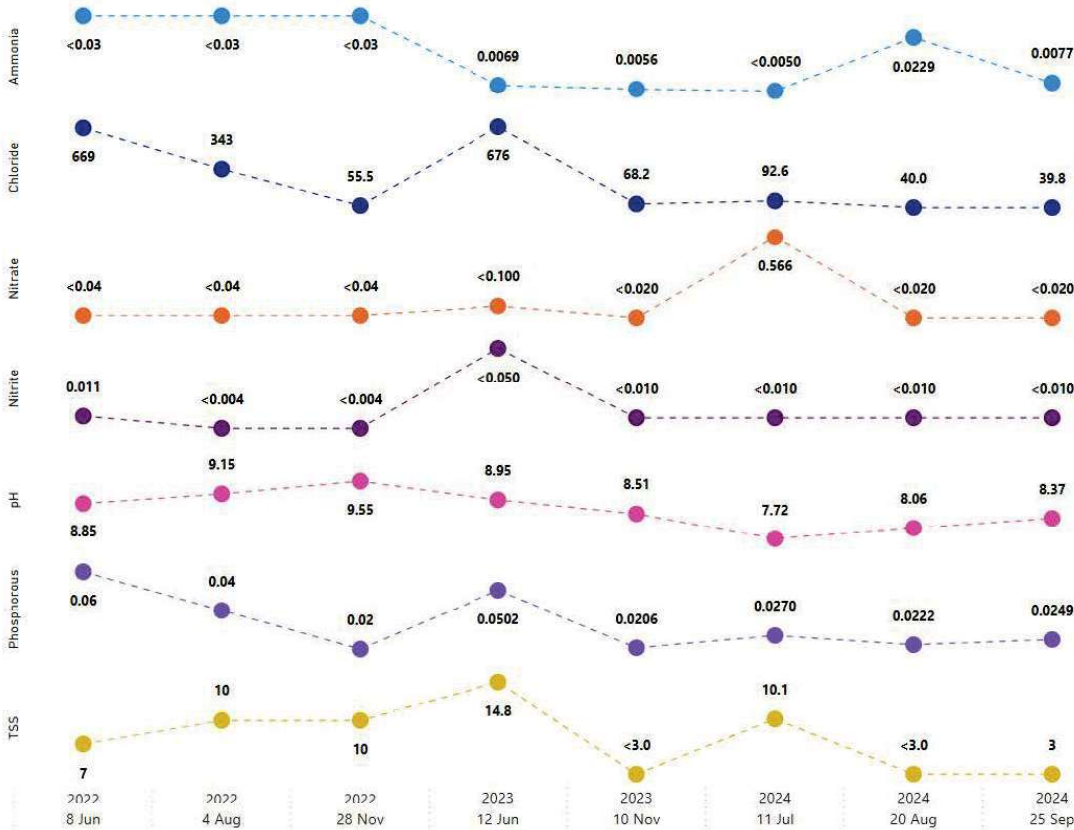
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

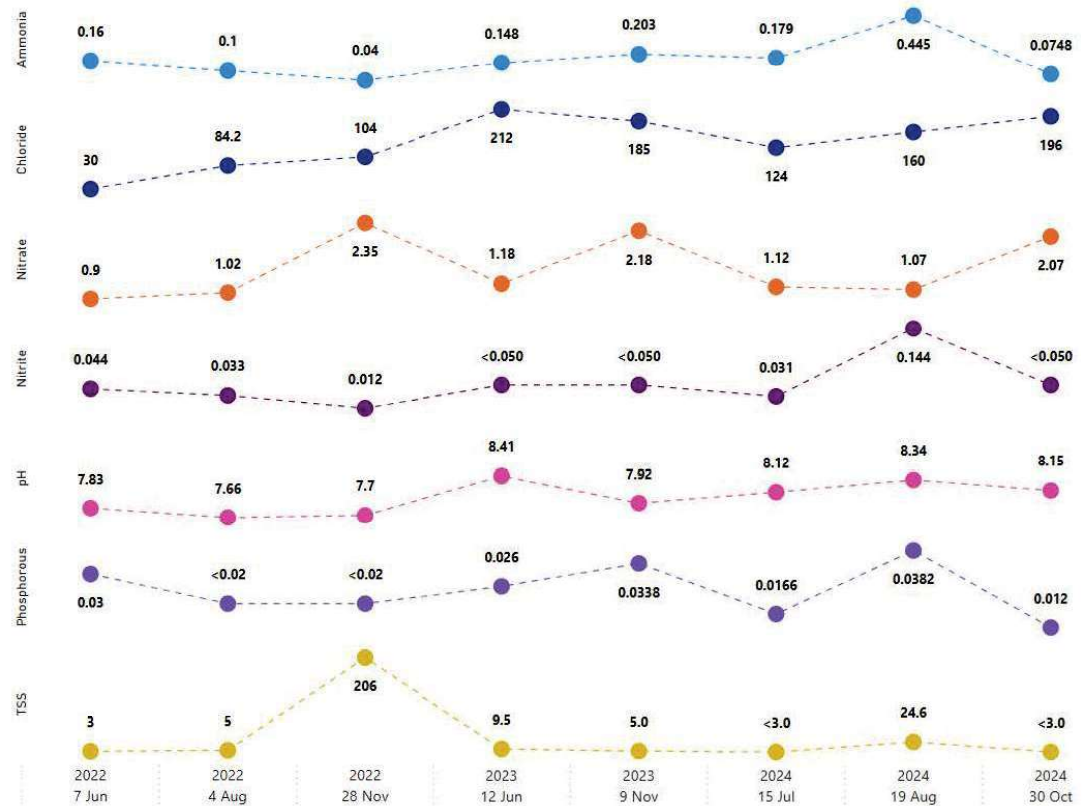
All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (MDL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

BR25



[illegible]

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented



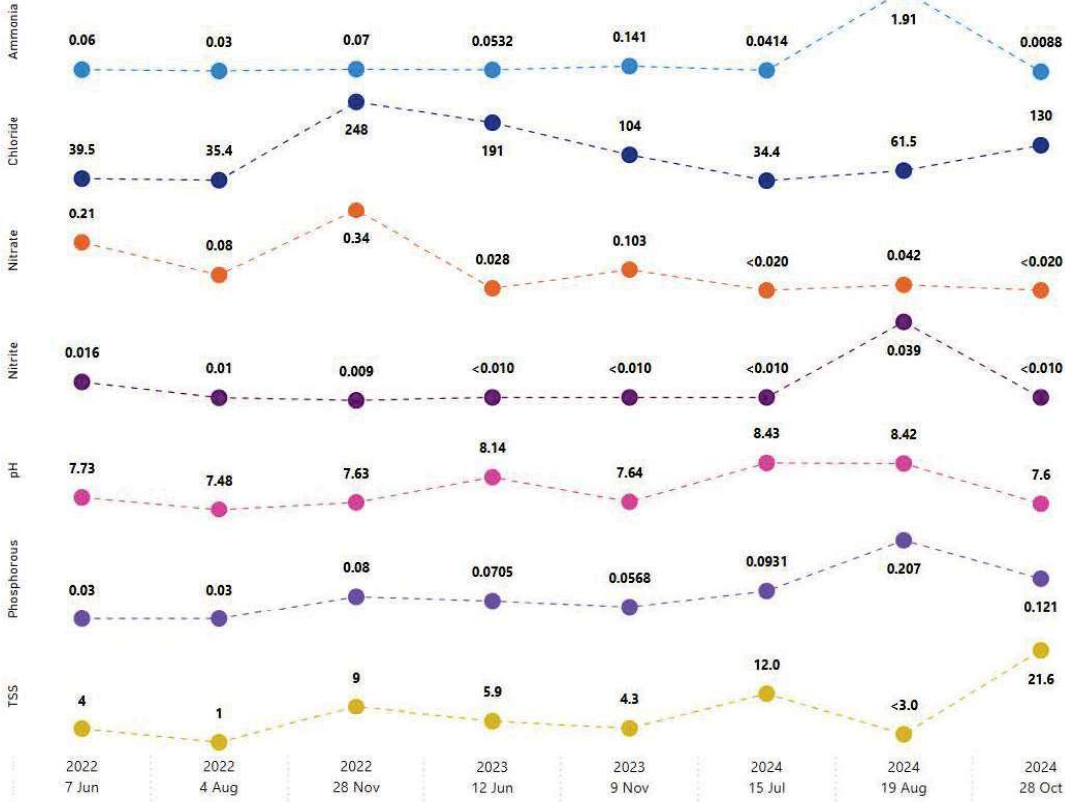
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

BY03



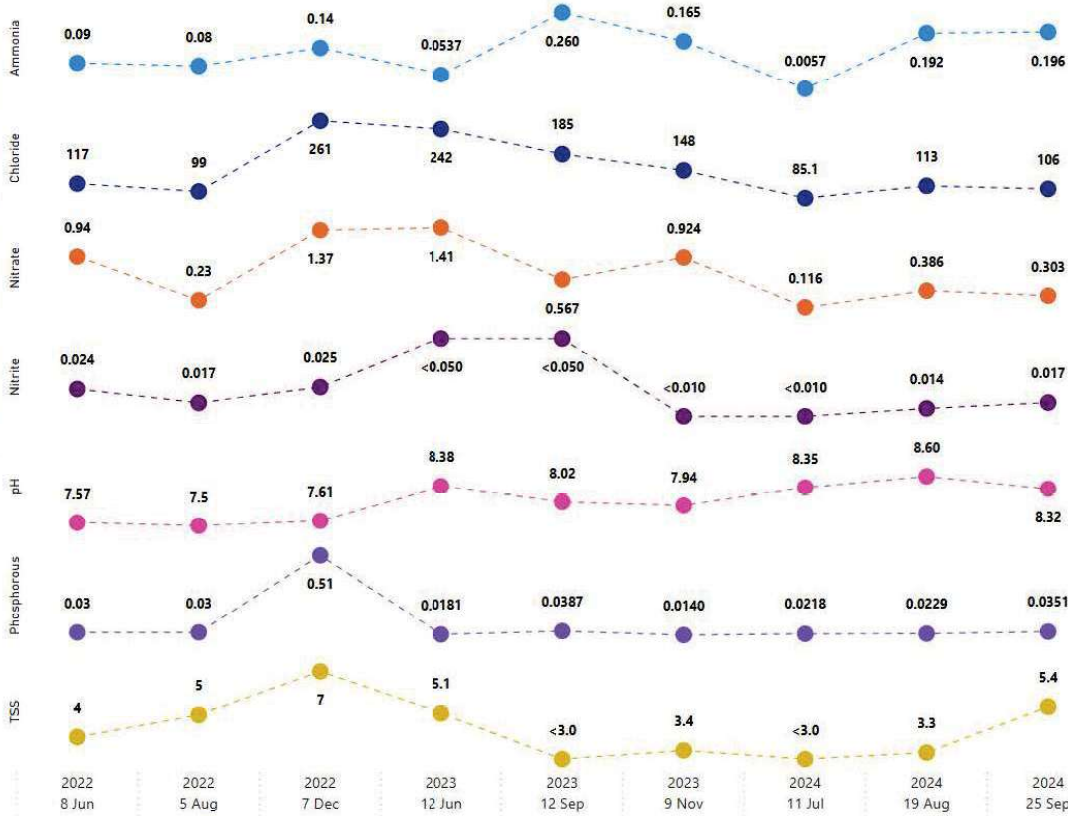
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia – Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

DY04





SWMF Water Quality Key Performance Indicator Trends



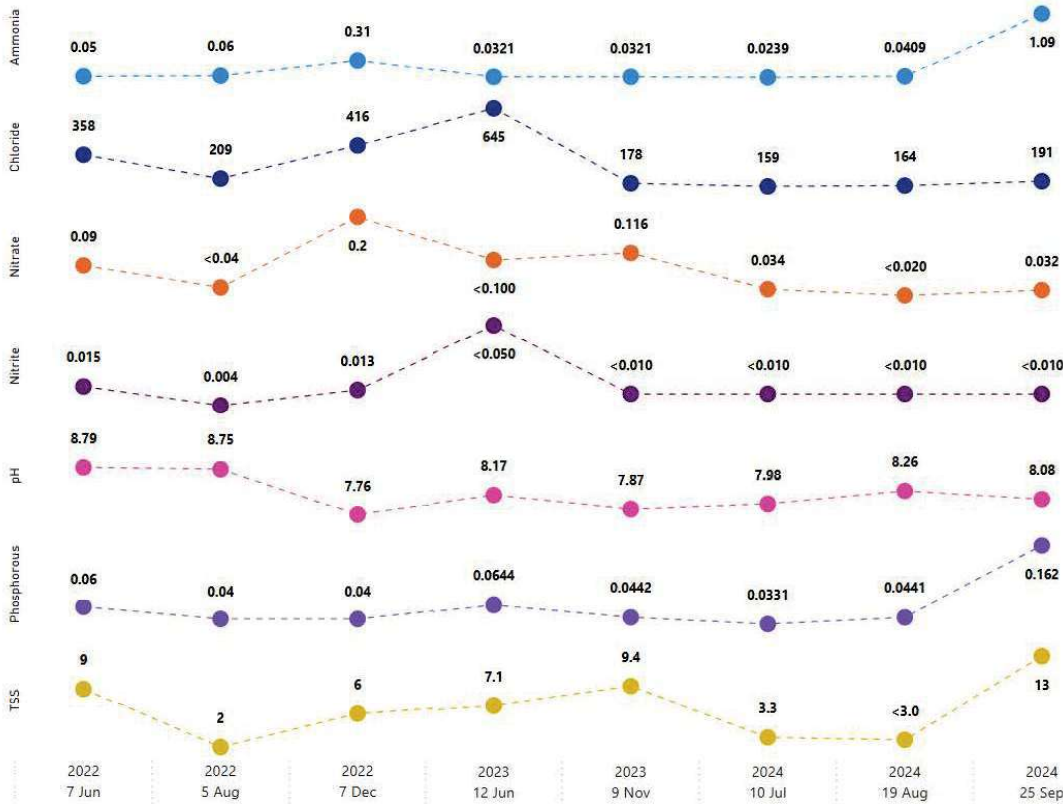
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Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

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GR05



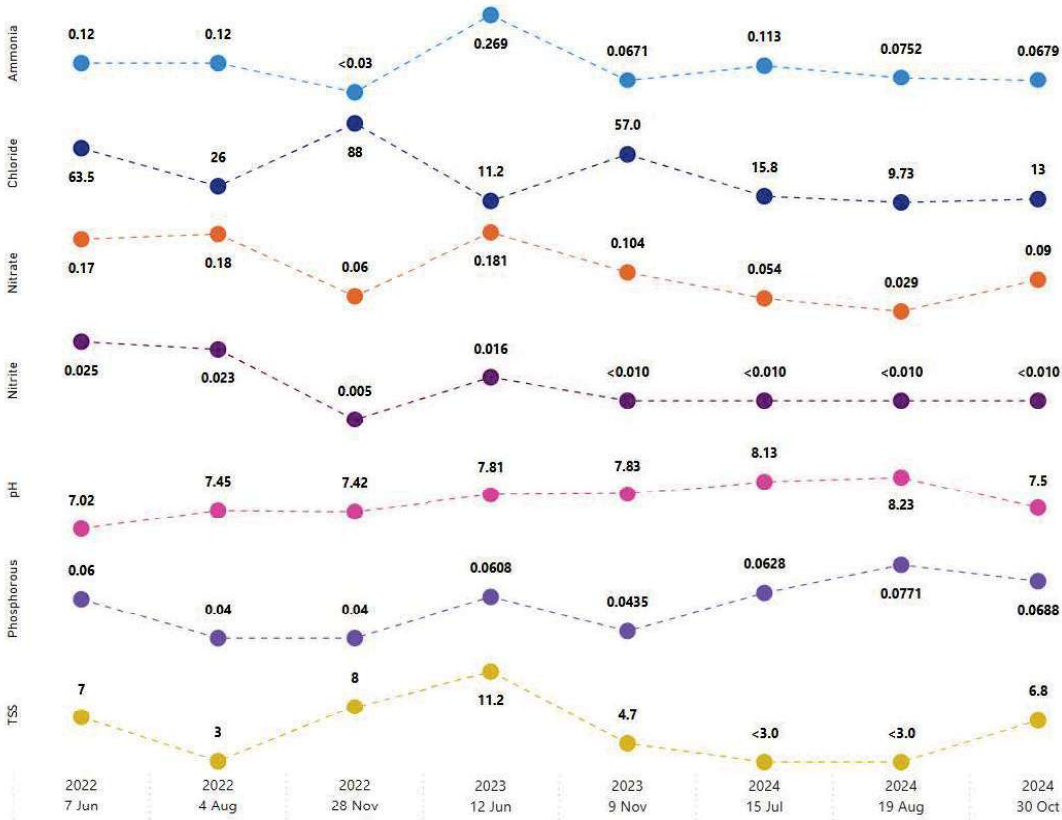
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

HW01



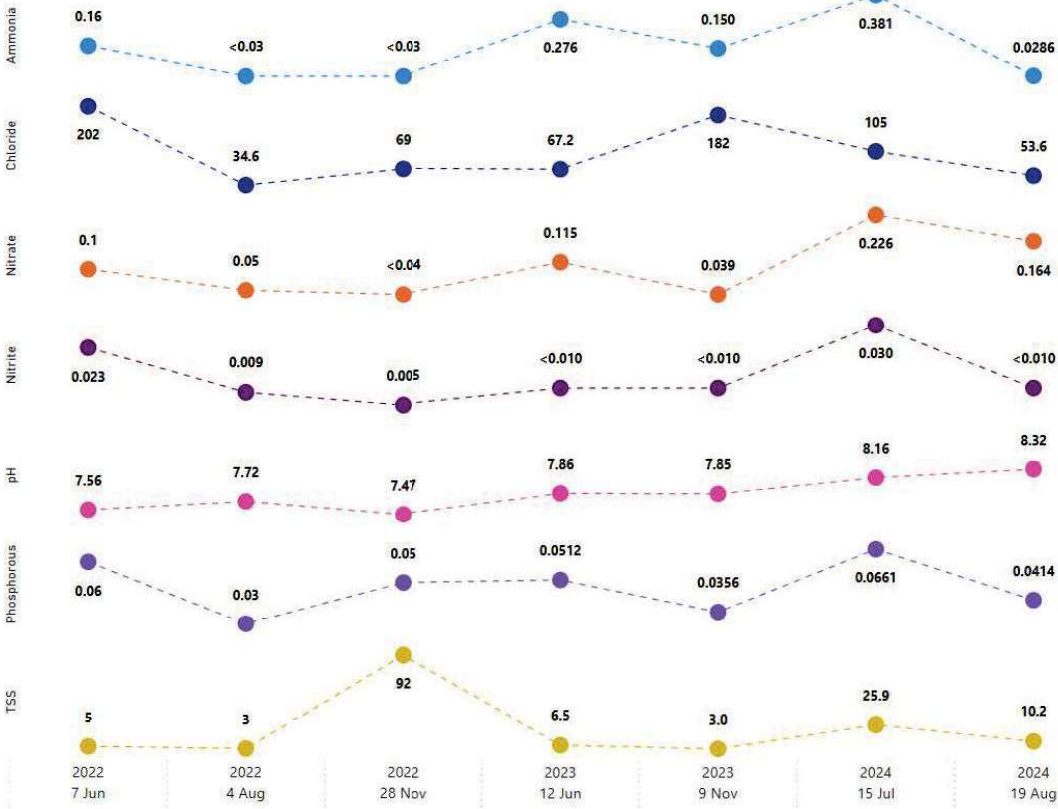
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

HW04



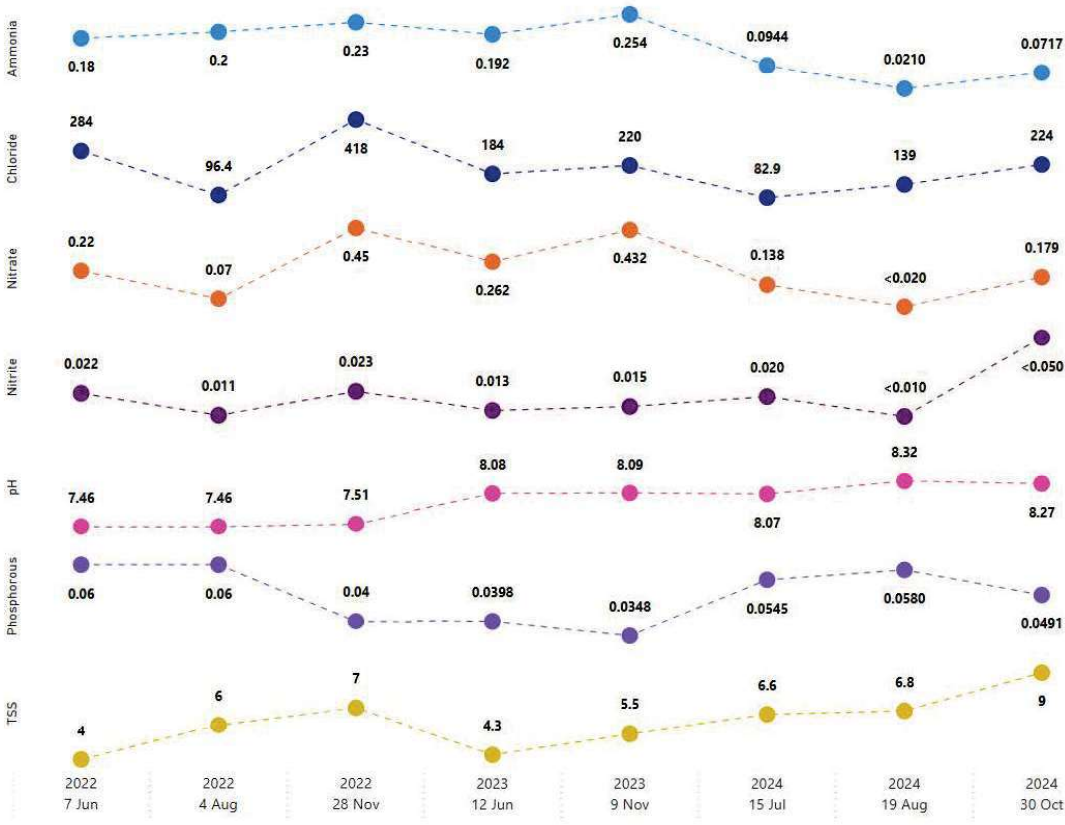
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

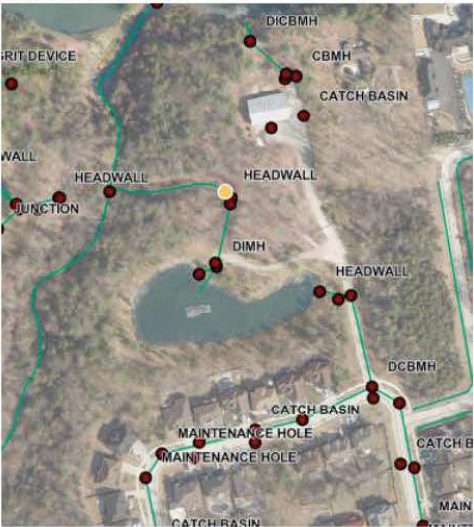
HW05

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented





SWMF Water Quality Key Performance Indicator Trends



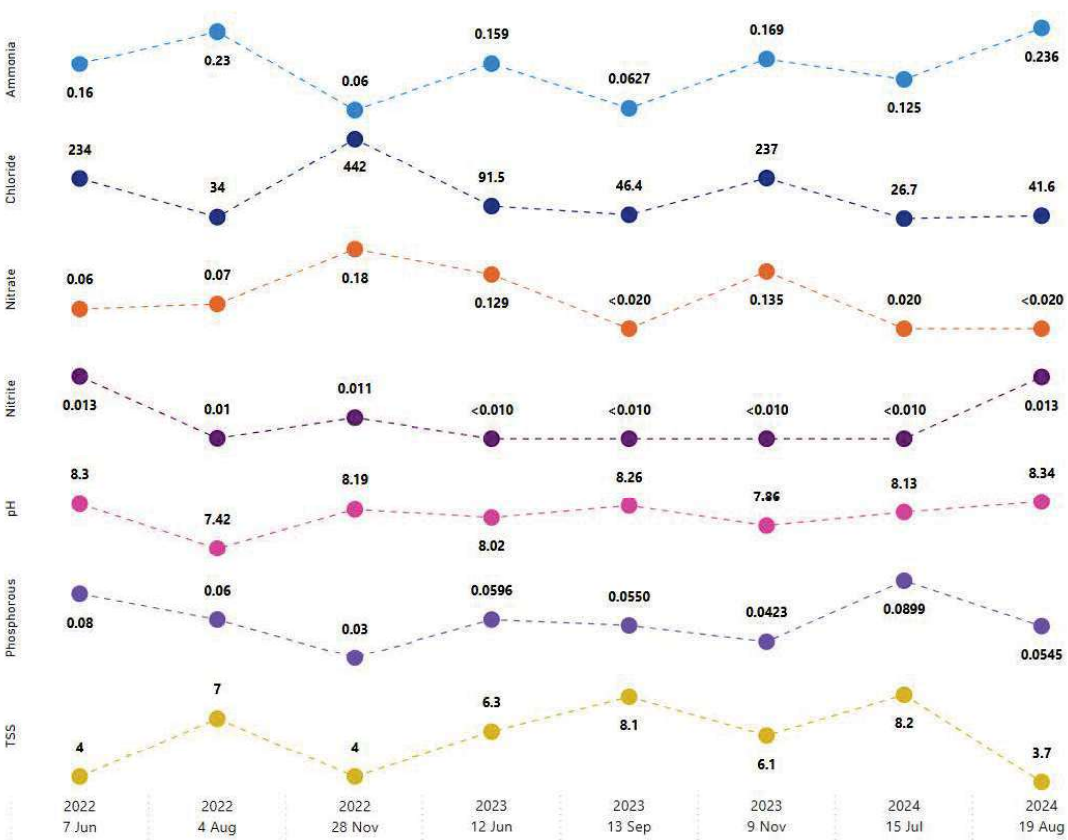
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Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

HW06

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented



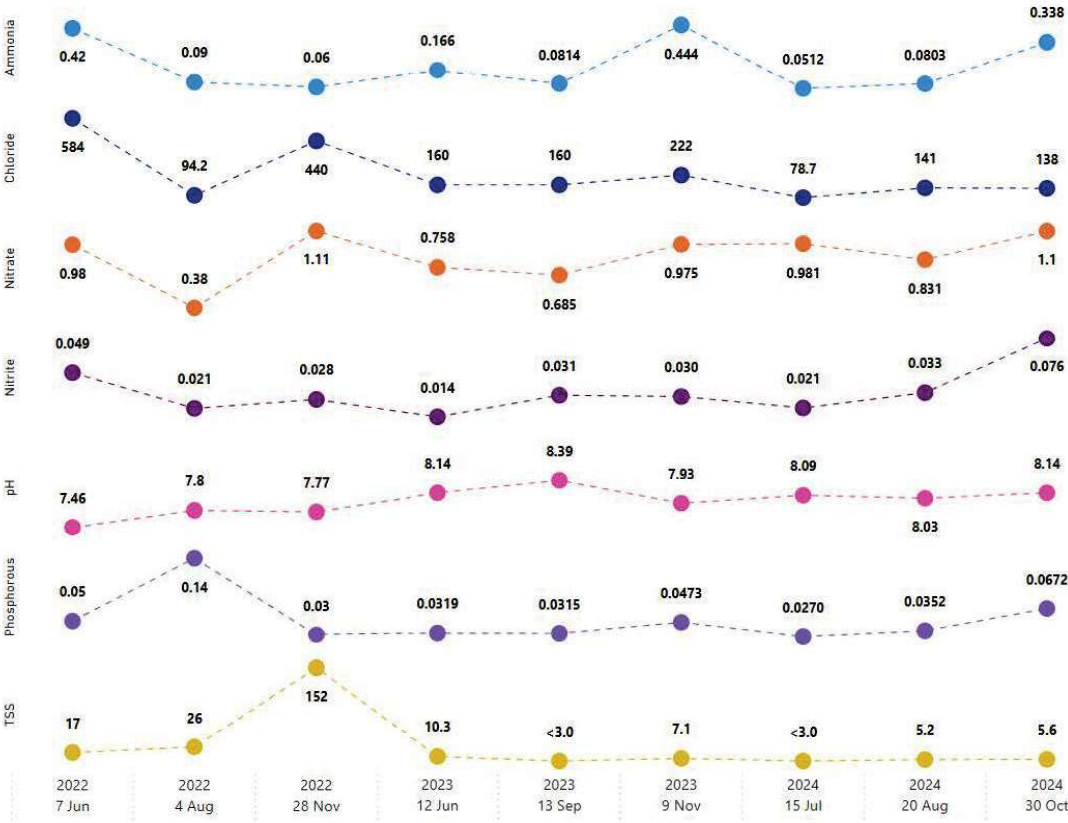
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

HW08



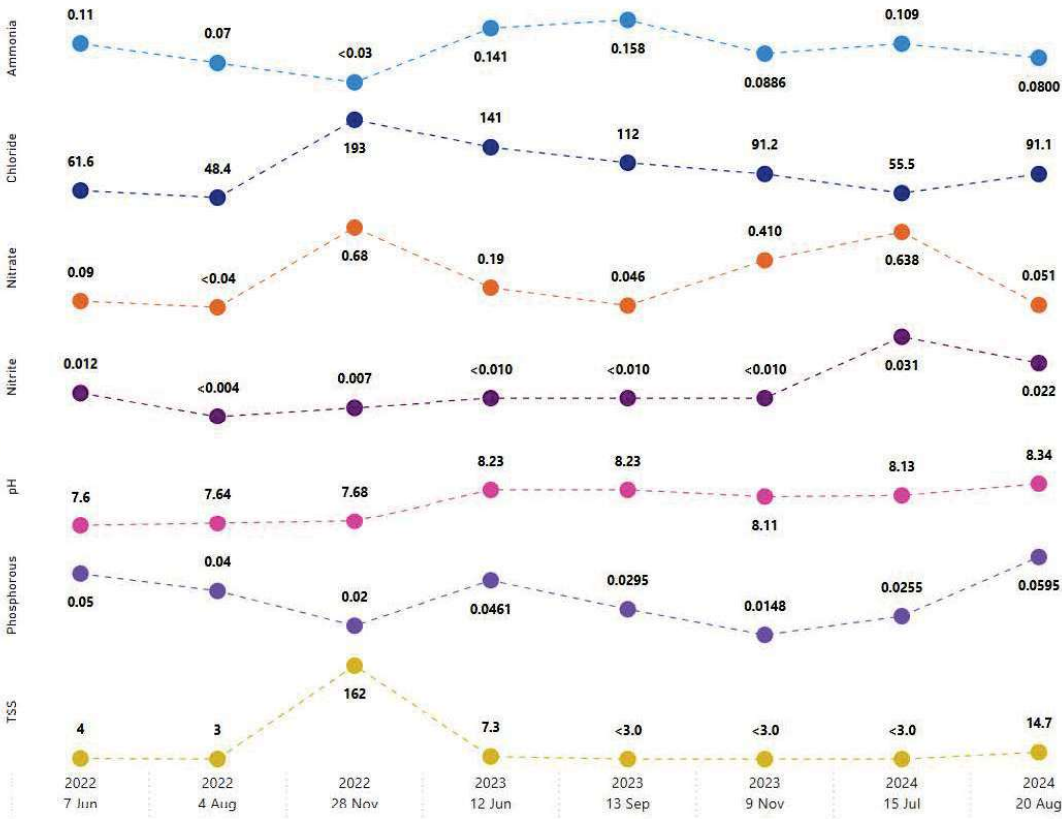
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

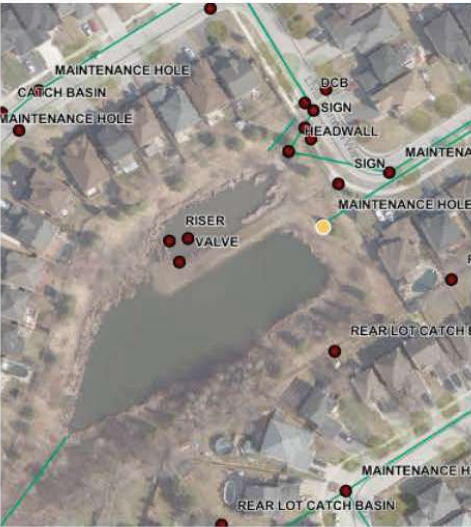
All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

HW09





SWMF Water Quality Key Performance Indicator Trends

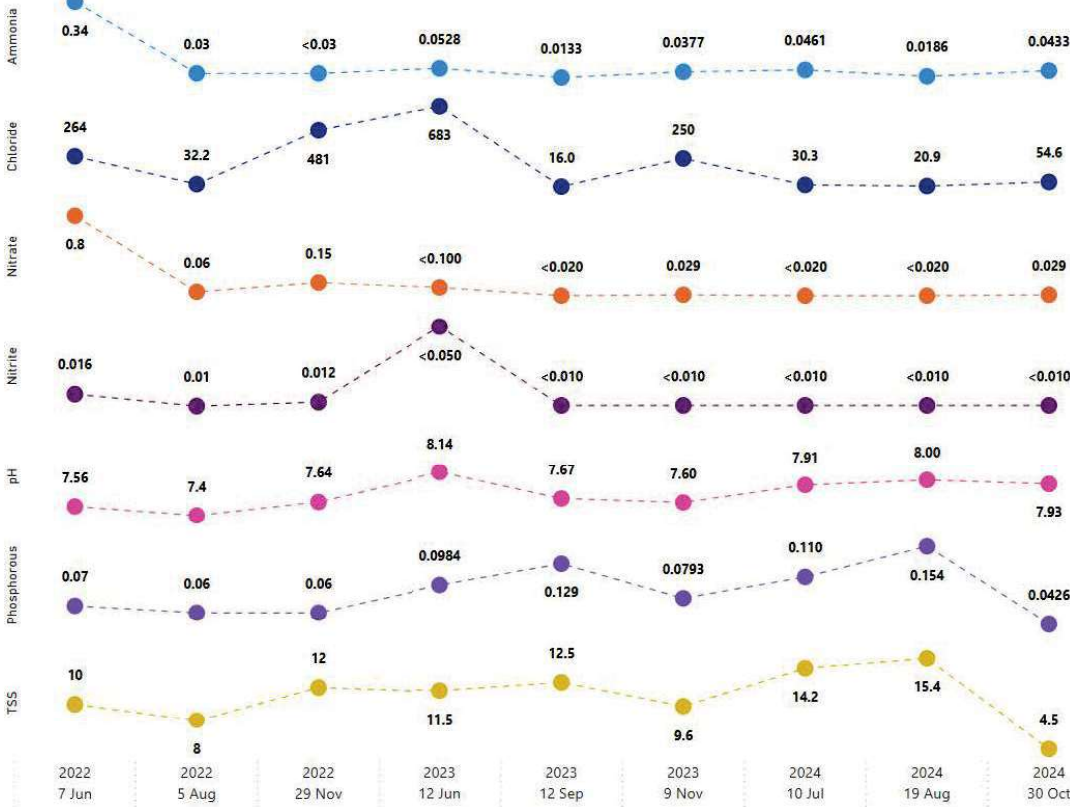


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LT02

Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units.  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented





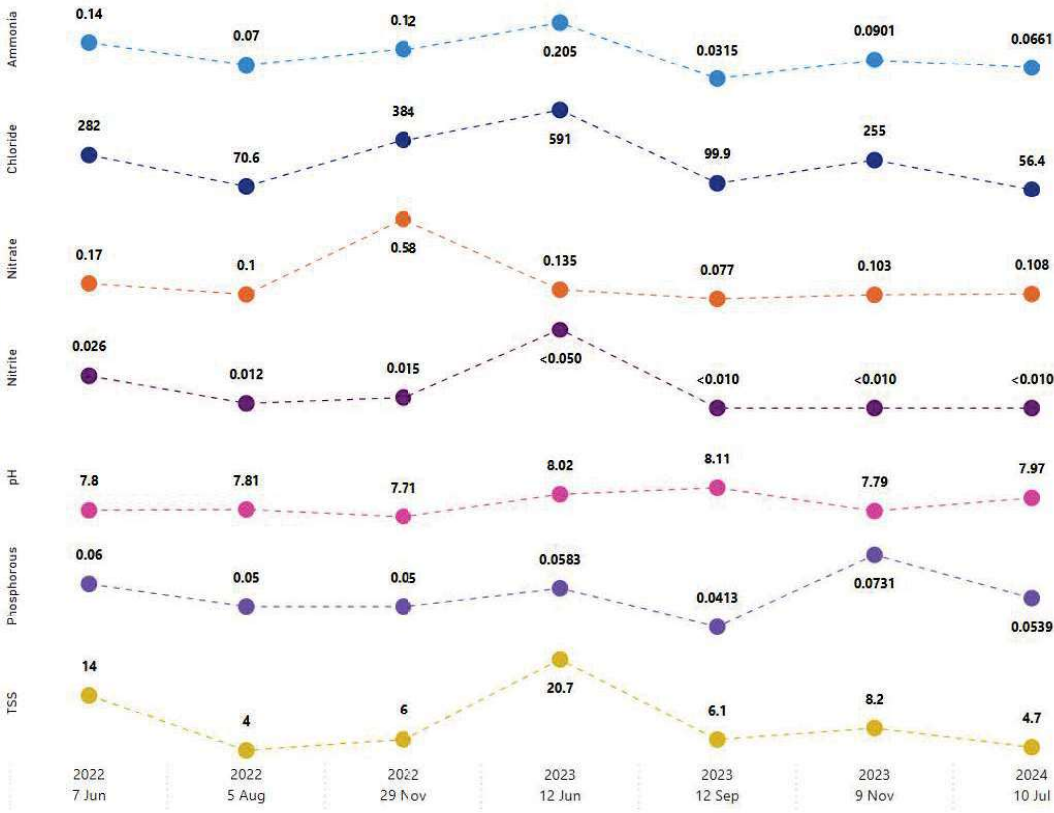
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LT04



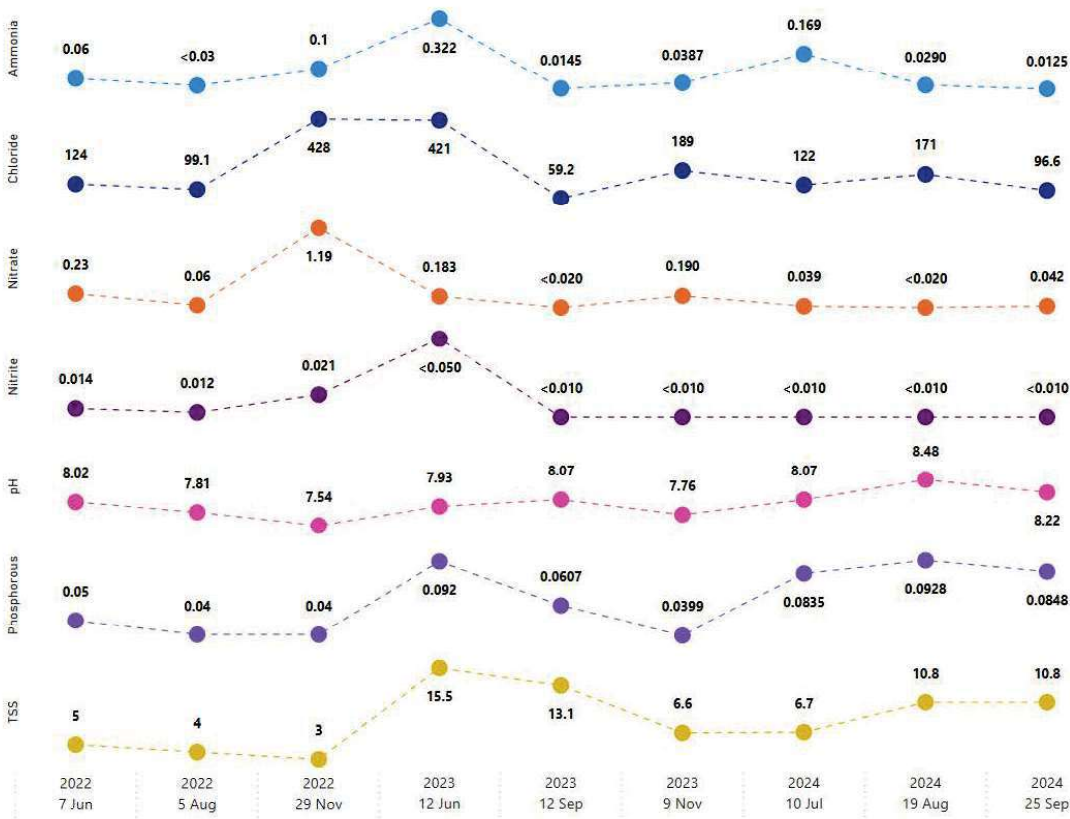
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LT06



SWMF Water Quality Key Performance Indicator Trends

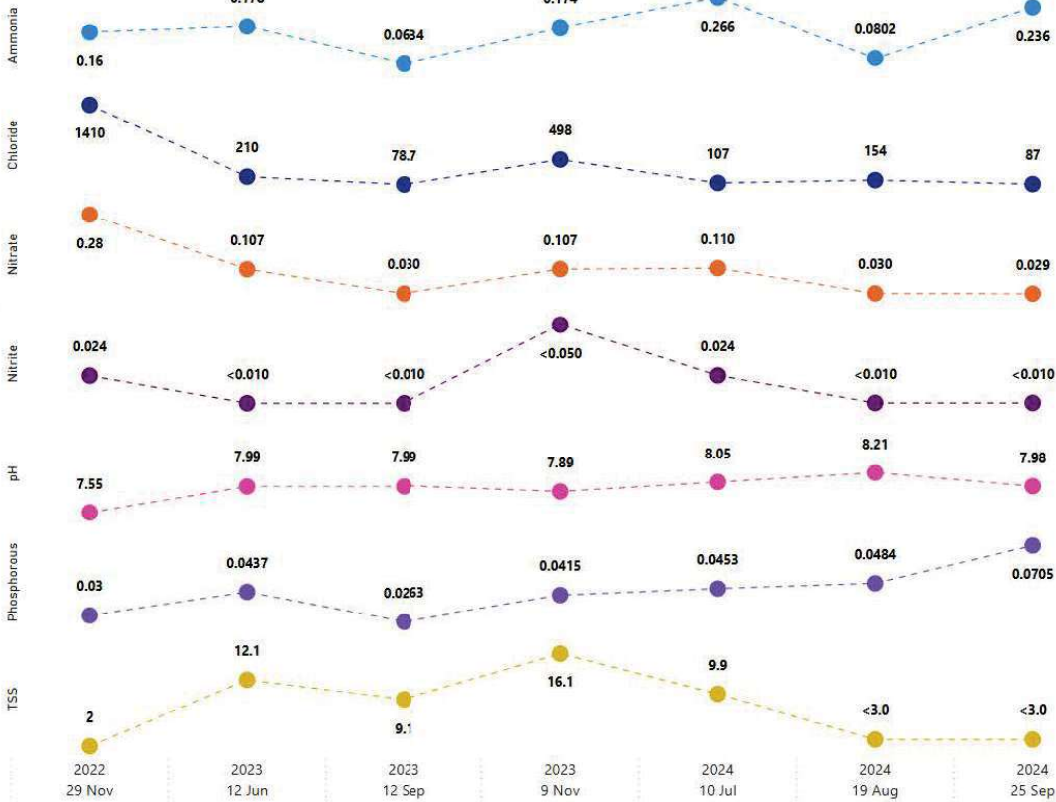


Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.

Each graph is scaled based on the data presented

LT14



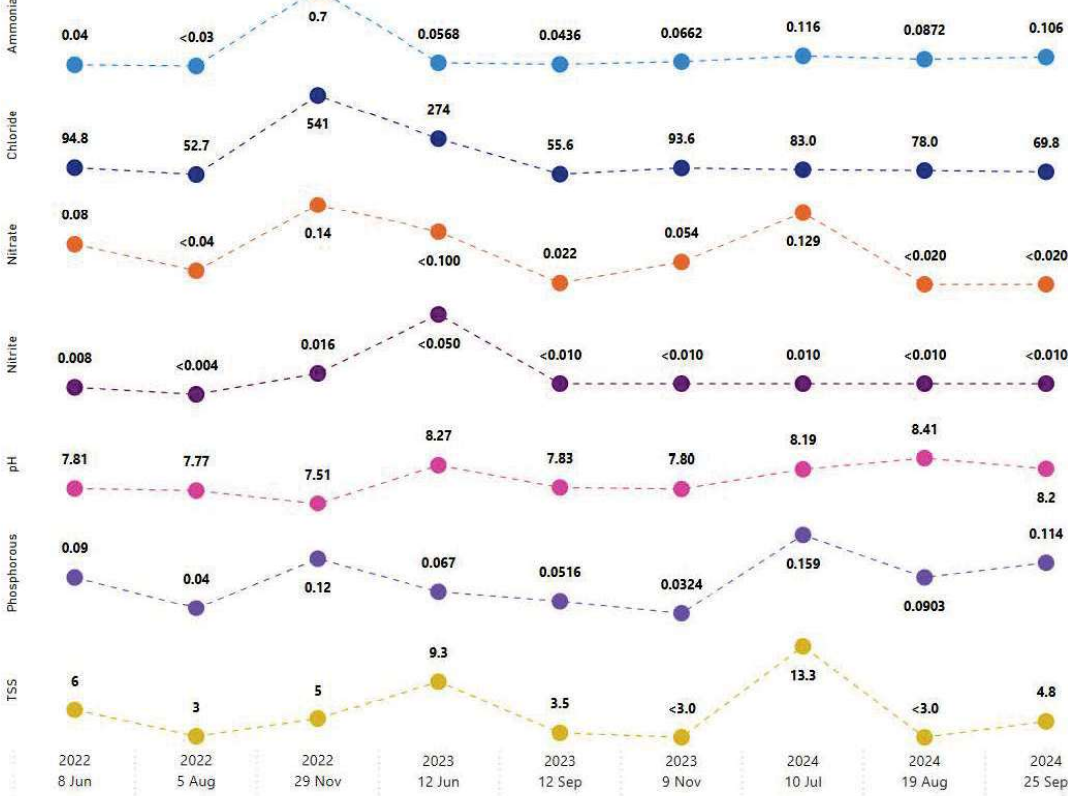
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LT17





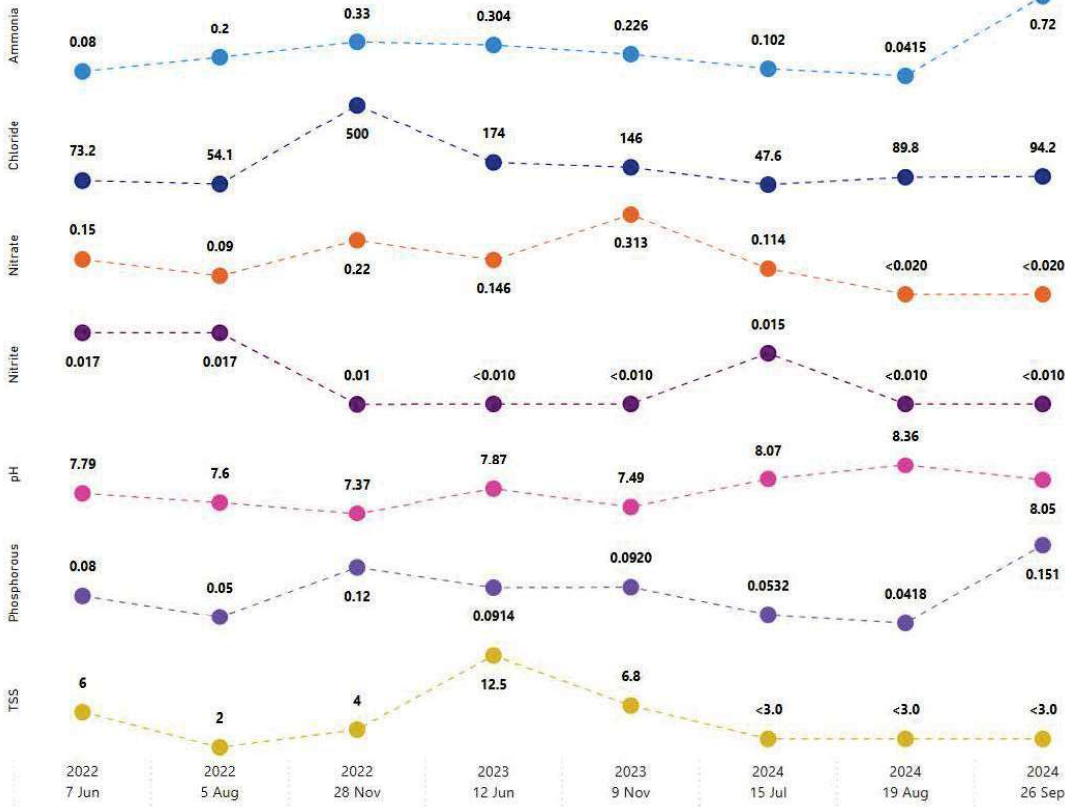
SWMF Water Quality Key Performance Indicator Trends



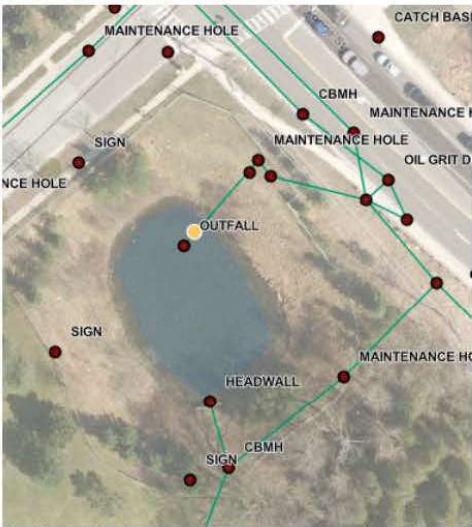
Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LV01



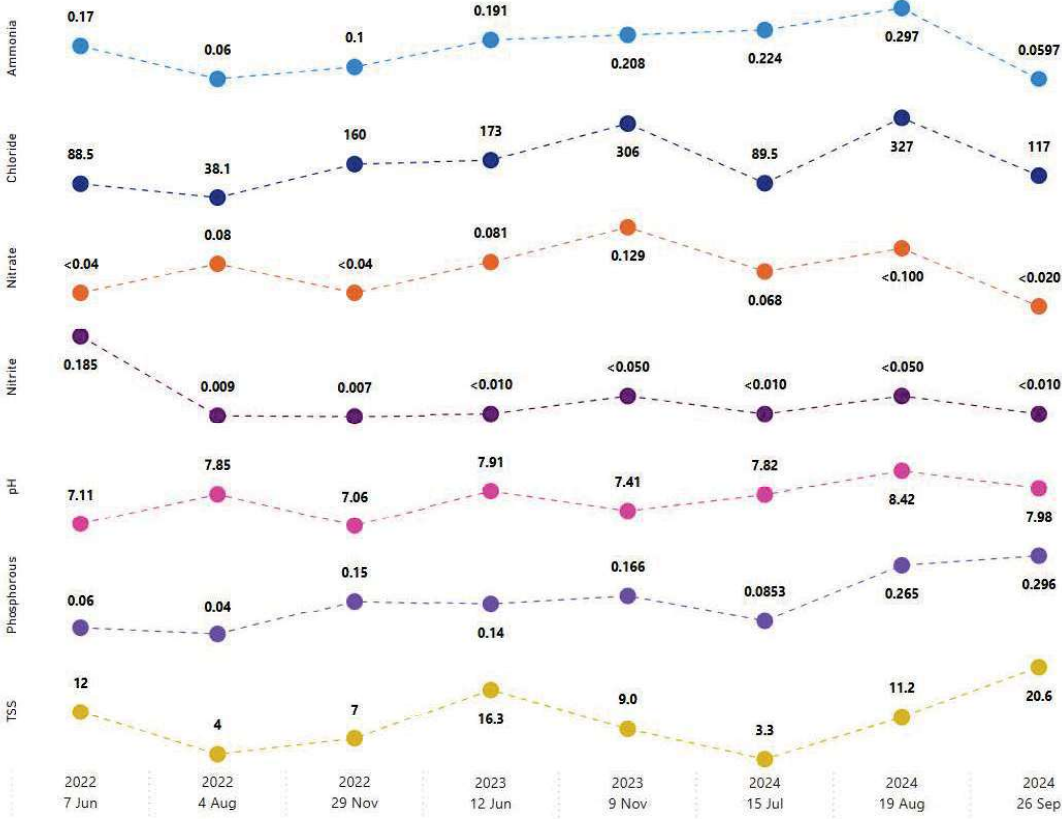
SWMF Water Quality Key Performance Indicator Trends



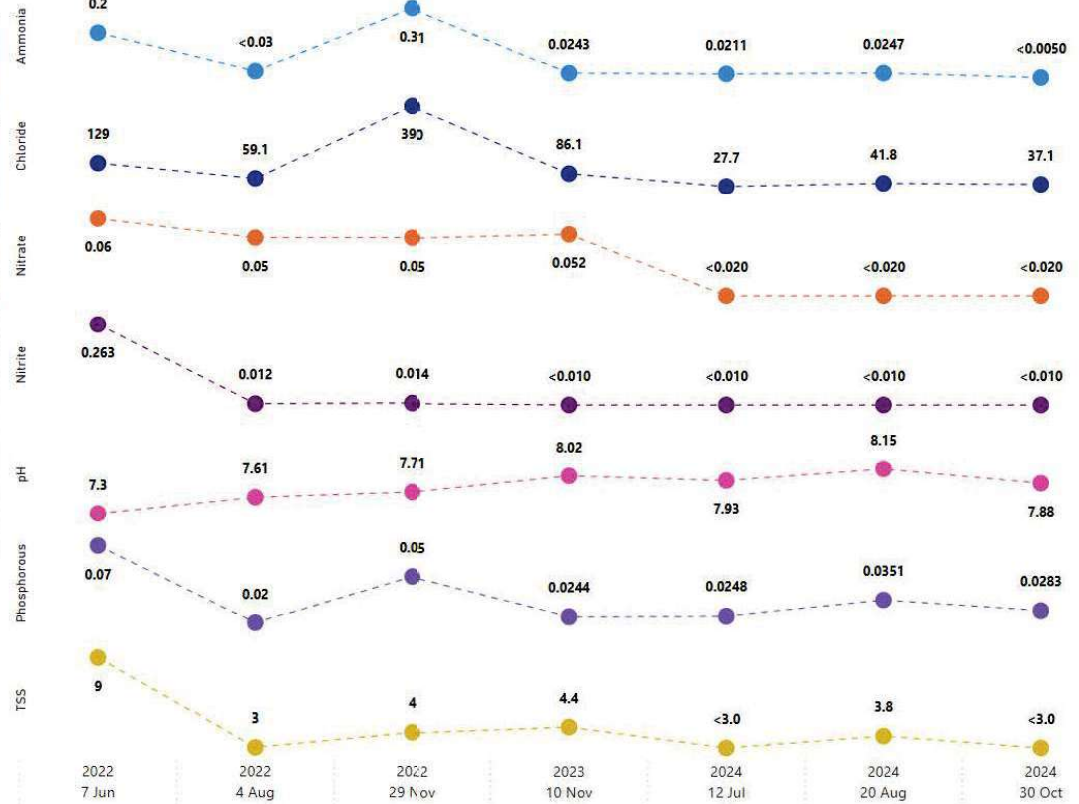
Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LV11



All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented





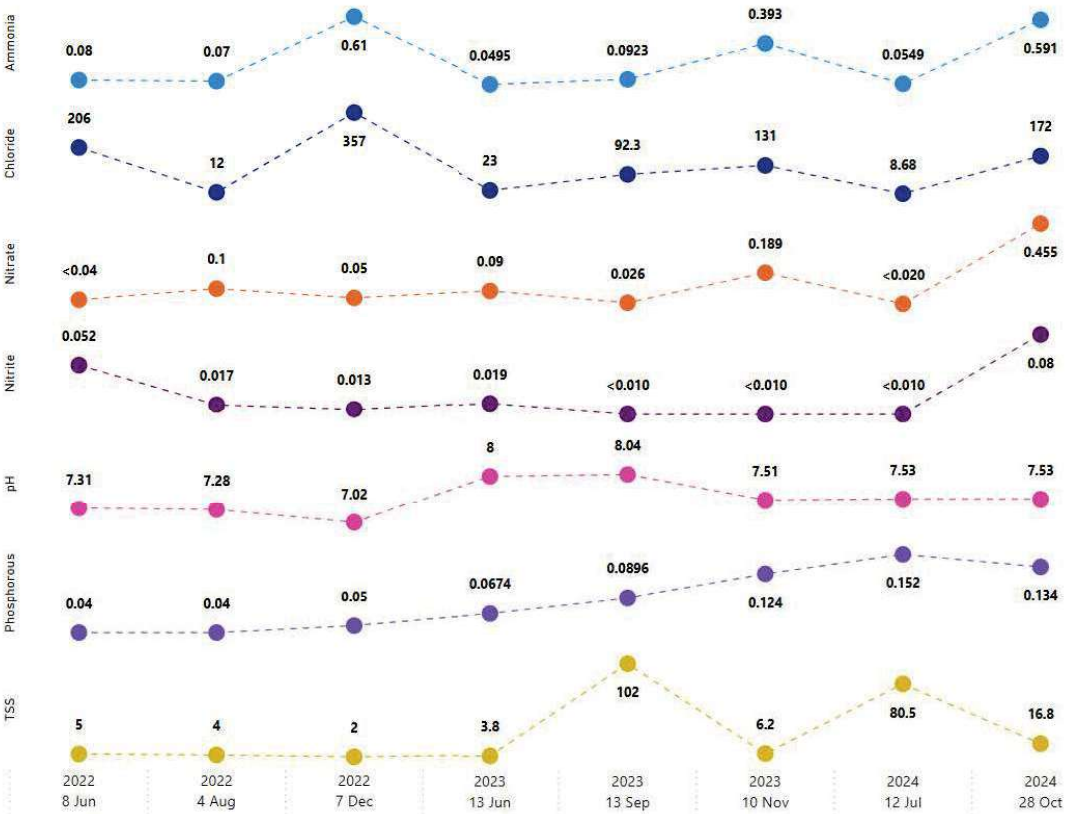
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LV18



SWMF Water Quality Key Performance Indicator Trends

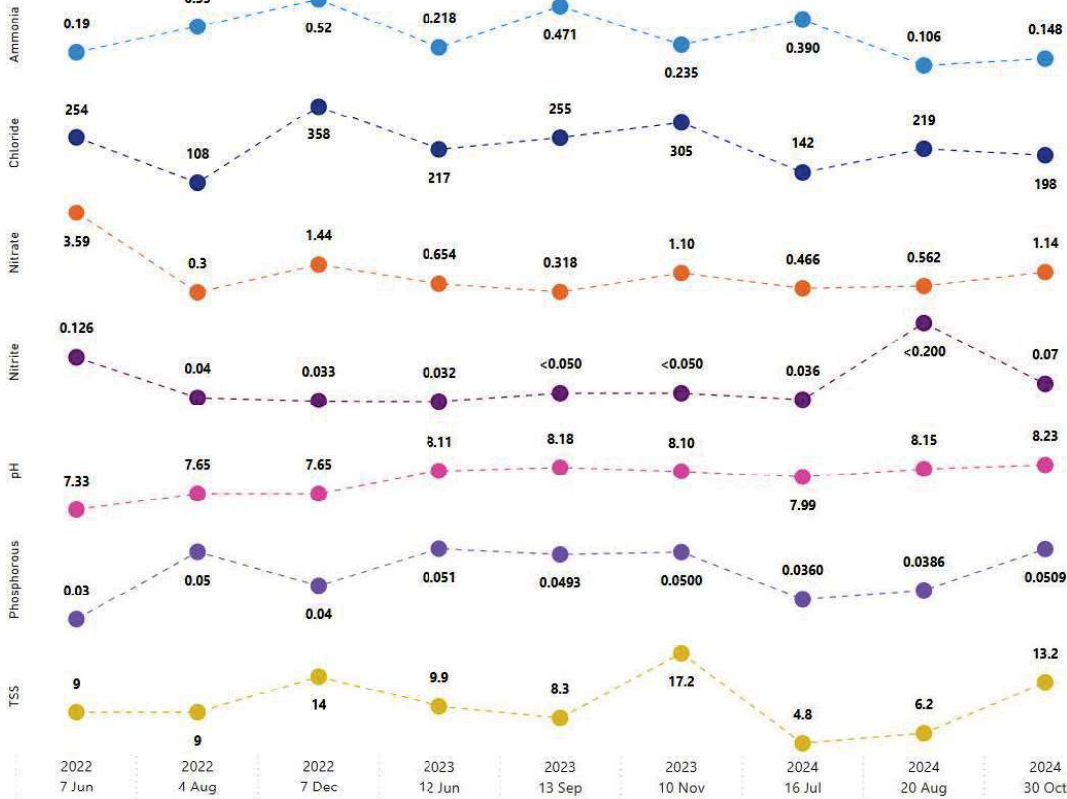


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Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units.  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LV19



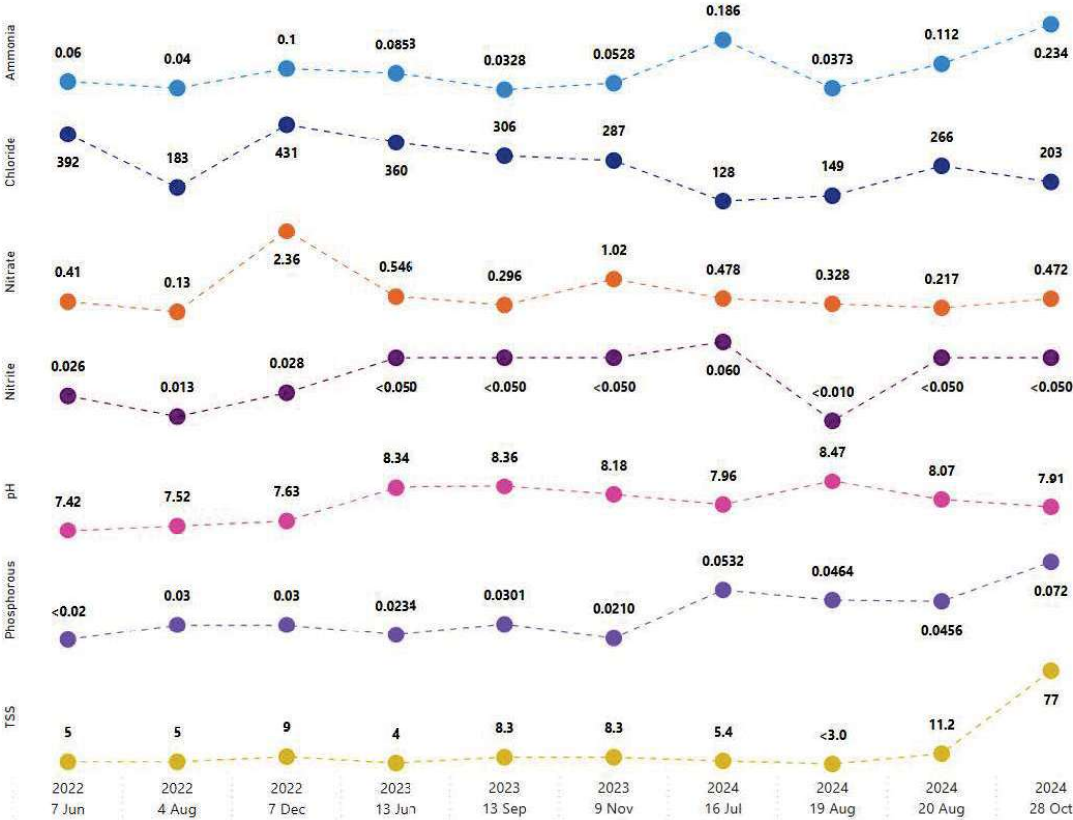
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LV20





SWMF Water Quality Key Performance Indicator Trends

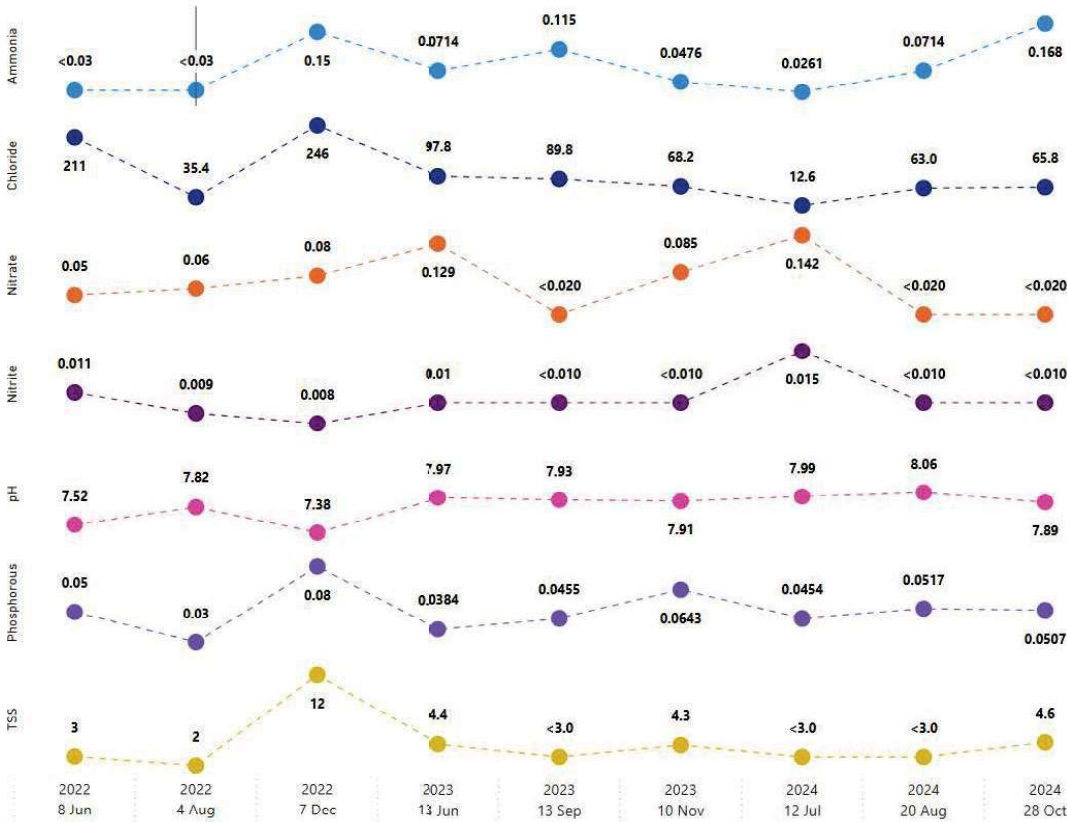


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Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LV21



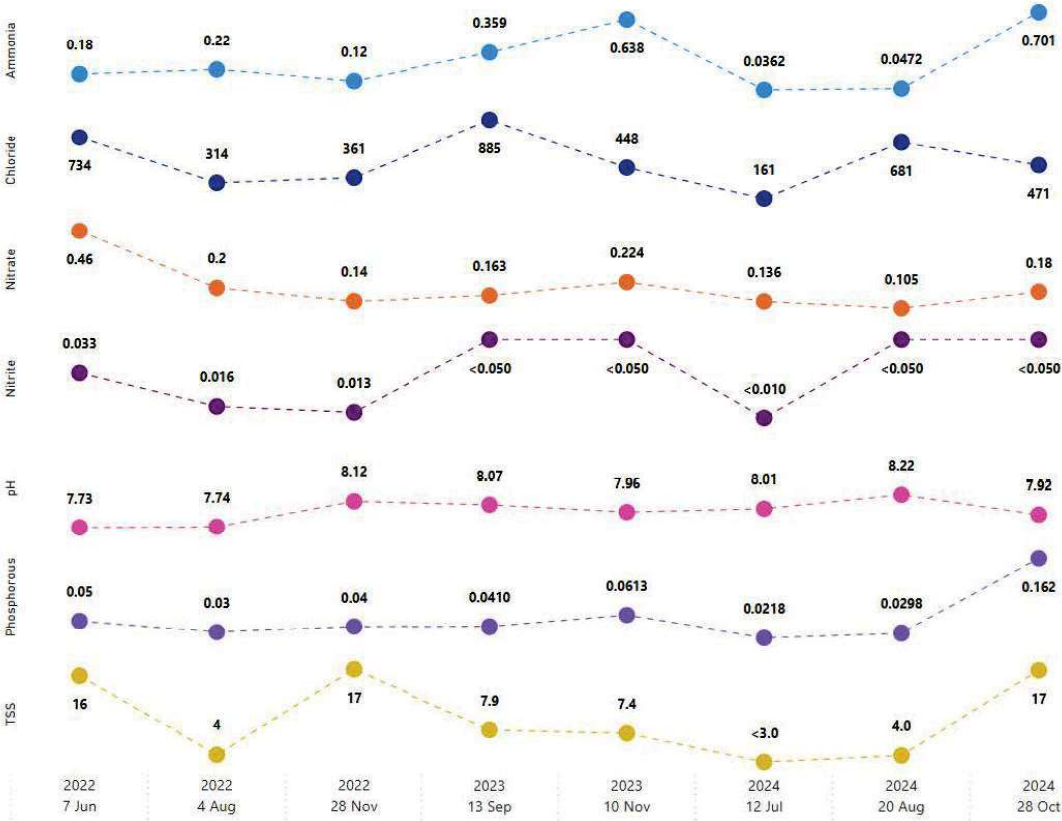
SWMF Water Quality Key Performance Indicator Trends



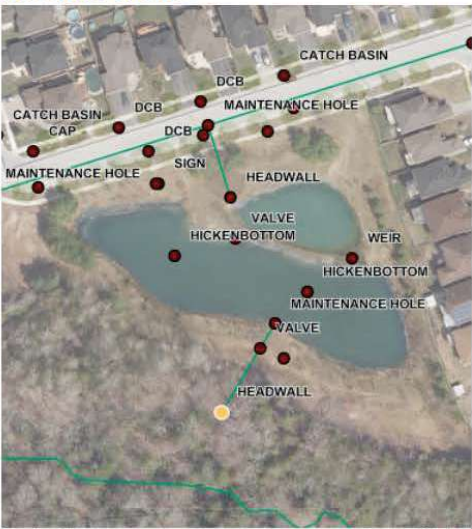
Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LV22



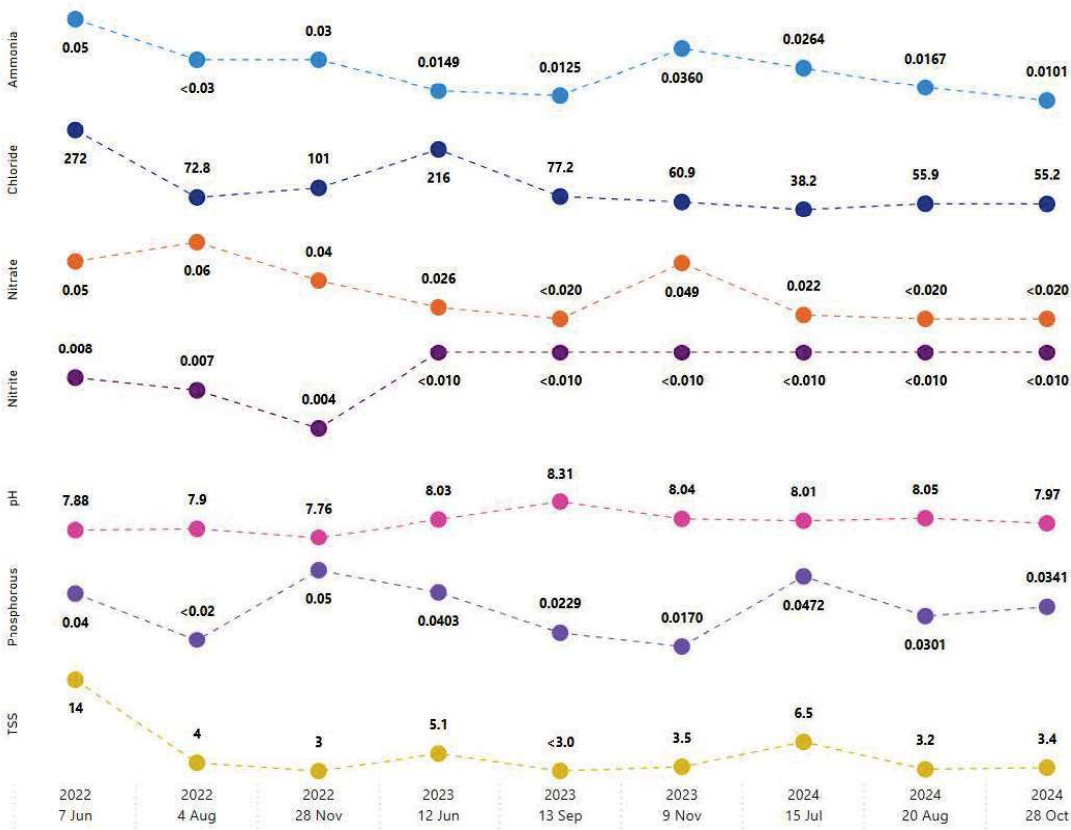
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LV23



SWMF Water Quality Key Performance Indicator Trends

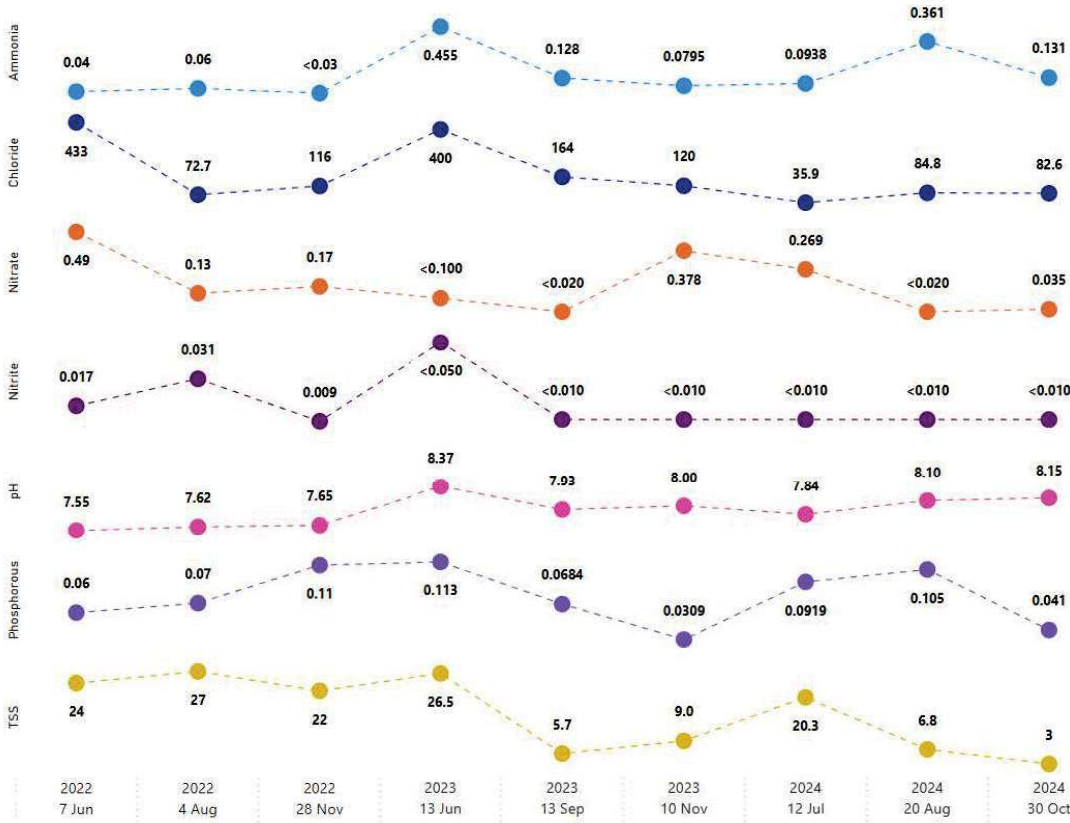


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Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units.  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LV25





SWMF Water Quality Key Performance Indicator Trends

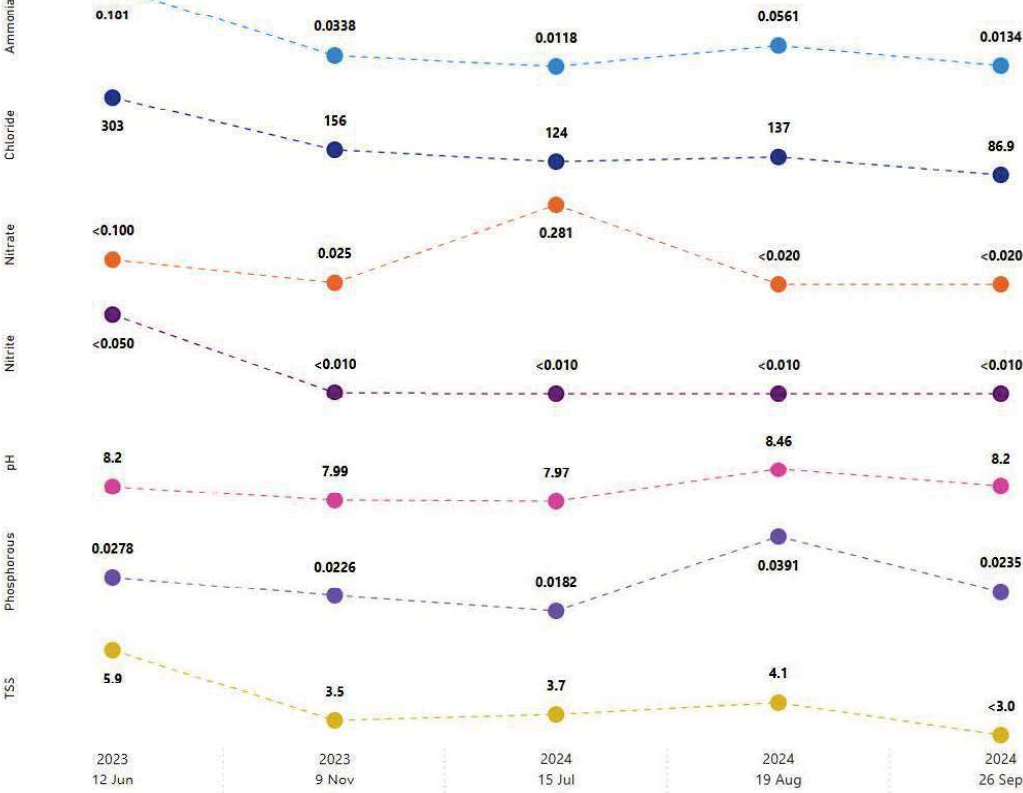


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Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LV27



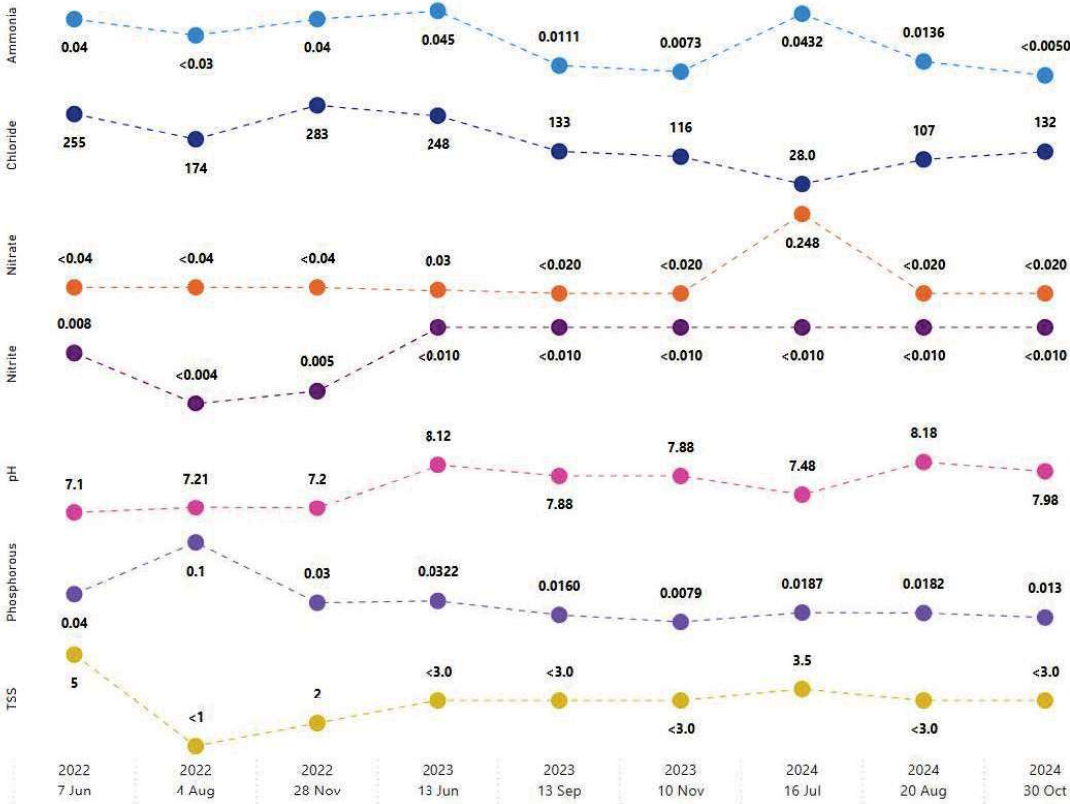
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LV49



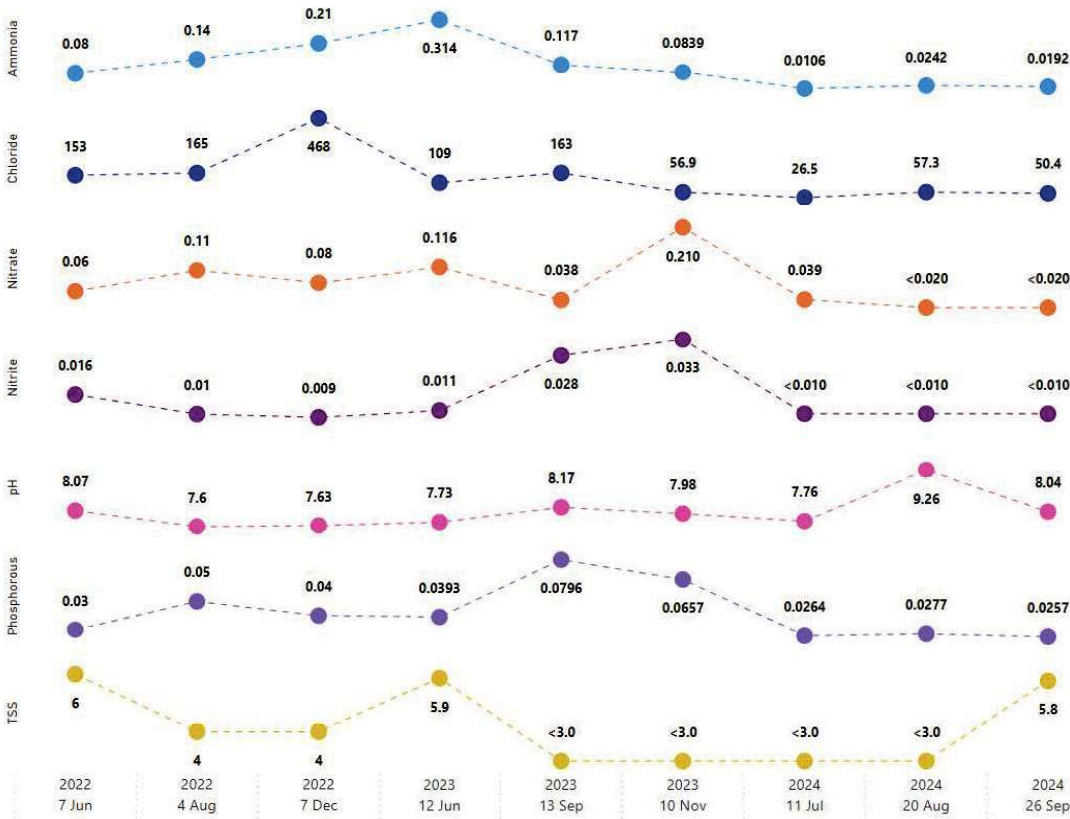
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

LV50

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented



SWMF Water Quality Key Performance Indicator Trends

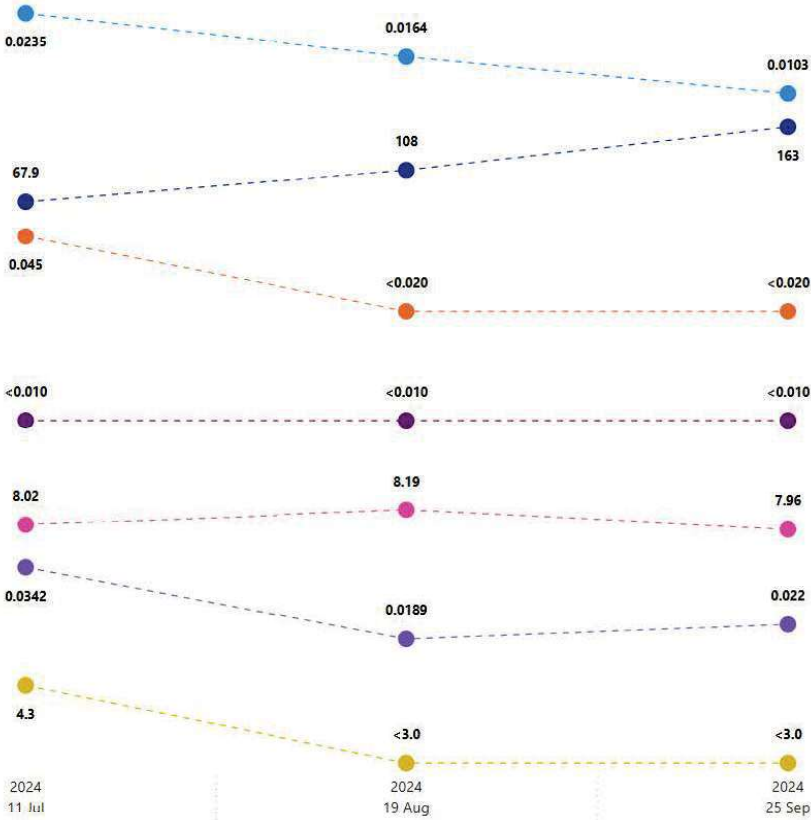


Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes  
Each graph is scaled based on the data presented

SP03

Ammonia  
Chloride  
Nitrate  
Nitrite  
pH  
Phosphorous  
TSS





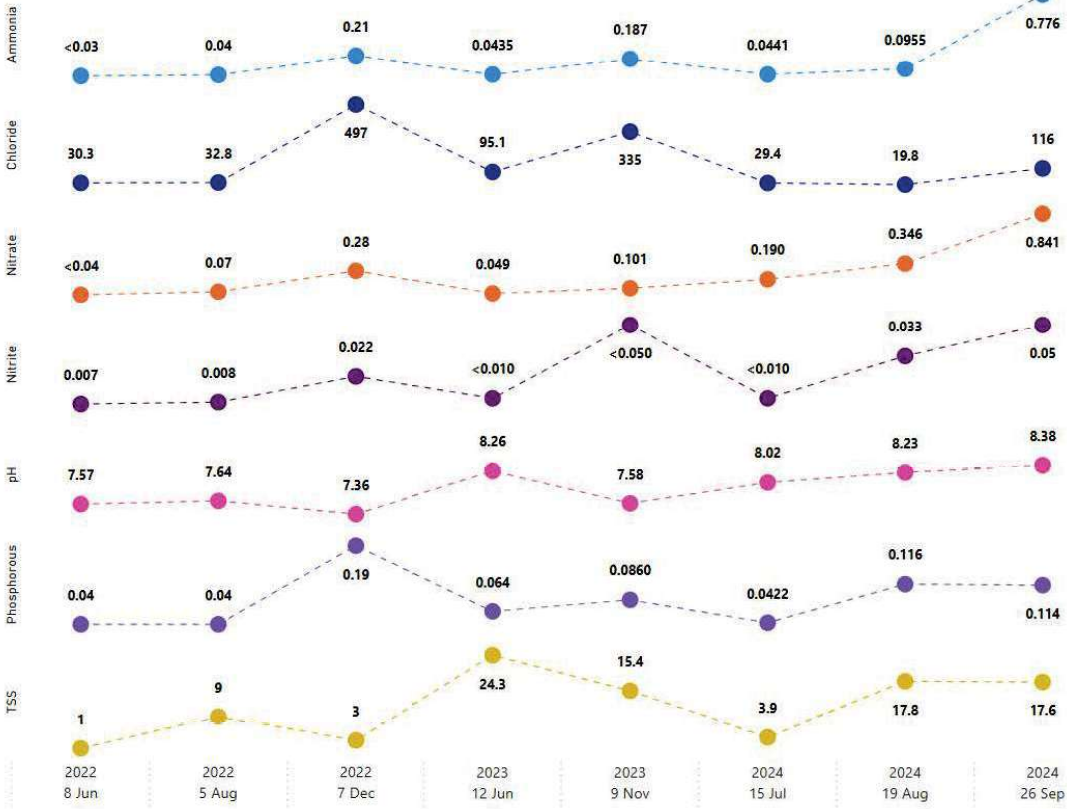
SWMF Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

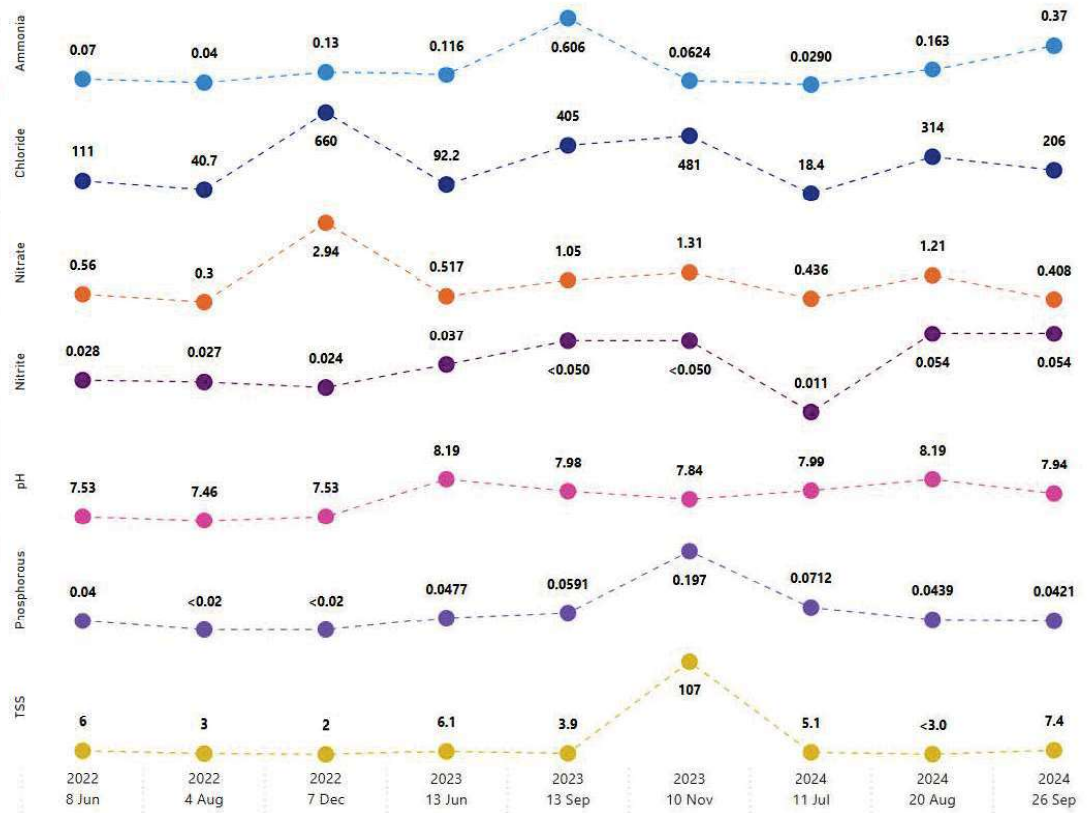
All units in mg/L, except pH in pH units.  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

WK04



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

WK05



Appendix G – Laboratory Analysis – Watercourses



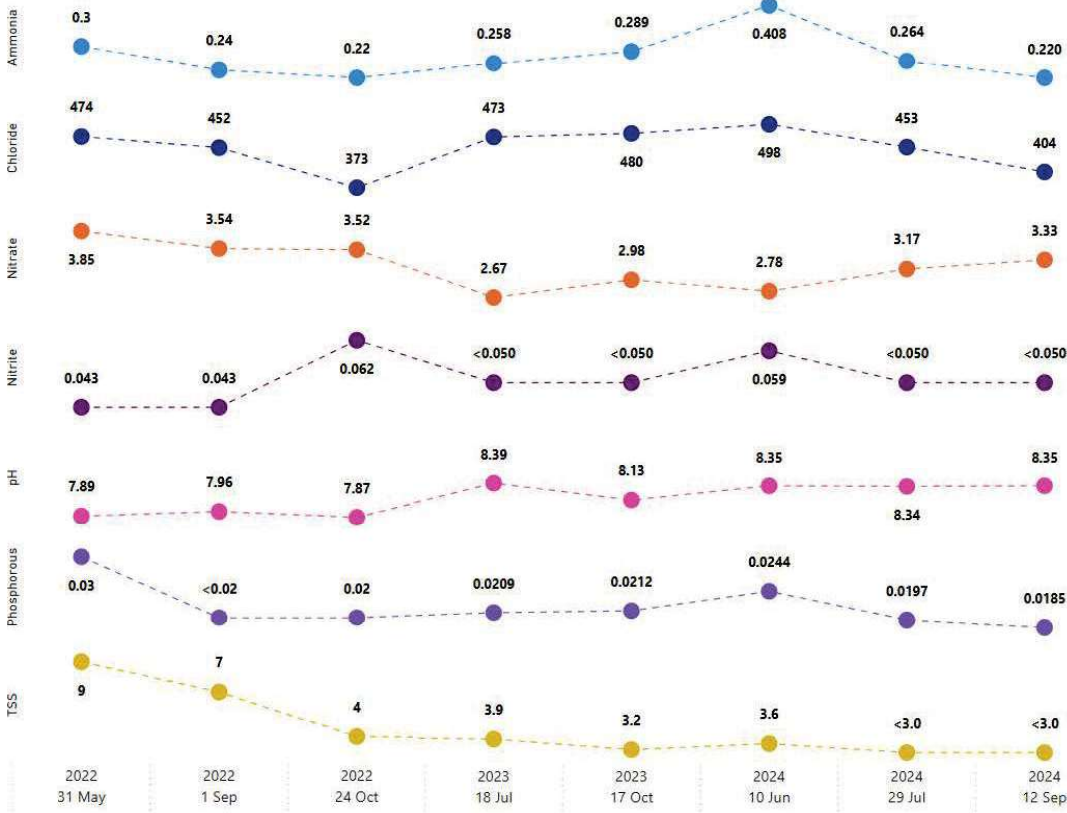
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

BK01



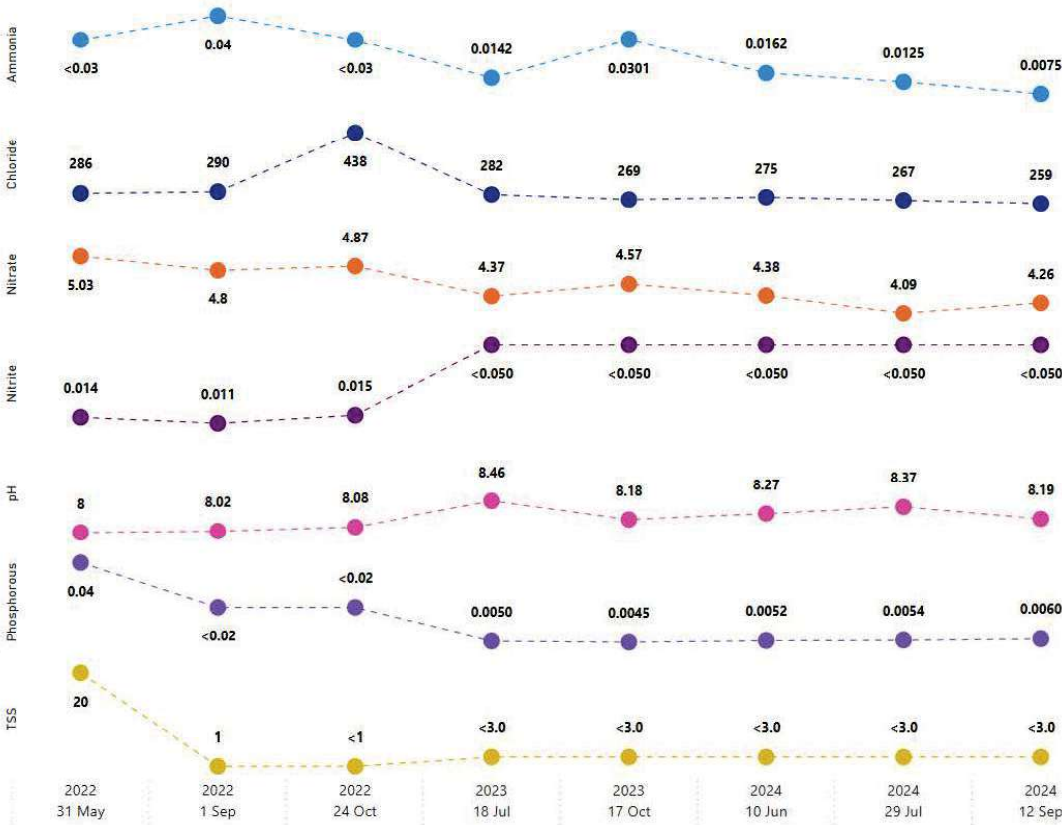
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

BK02



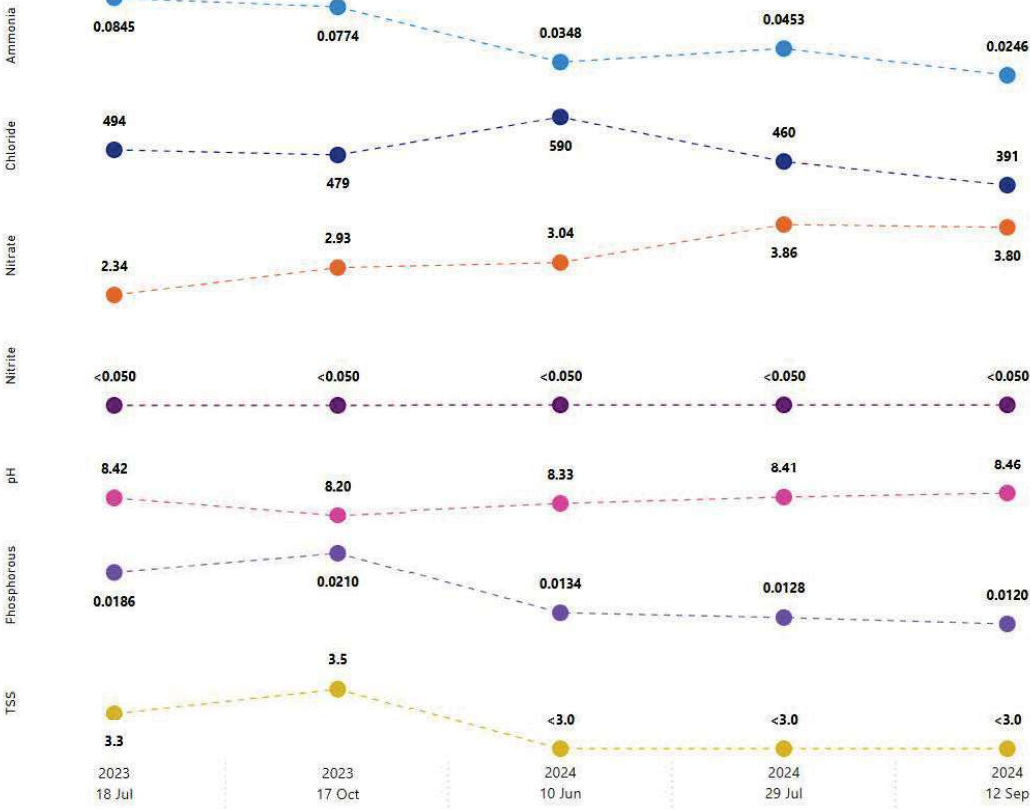
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

BK03



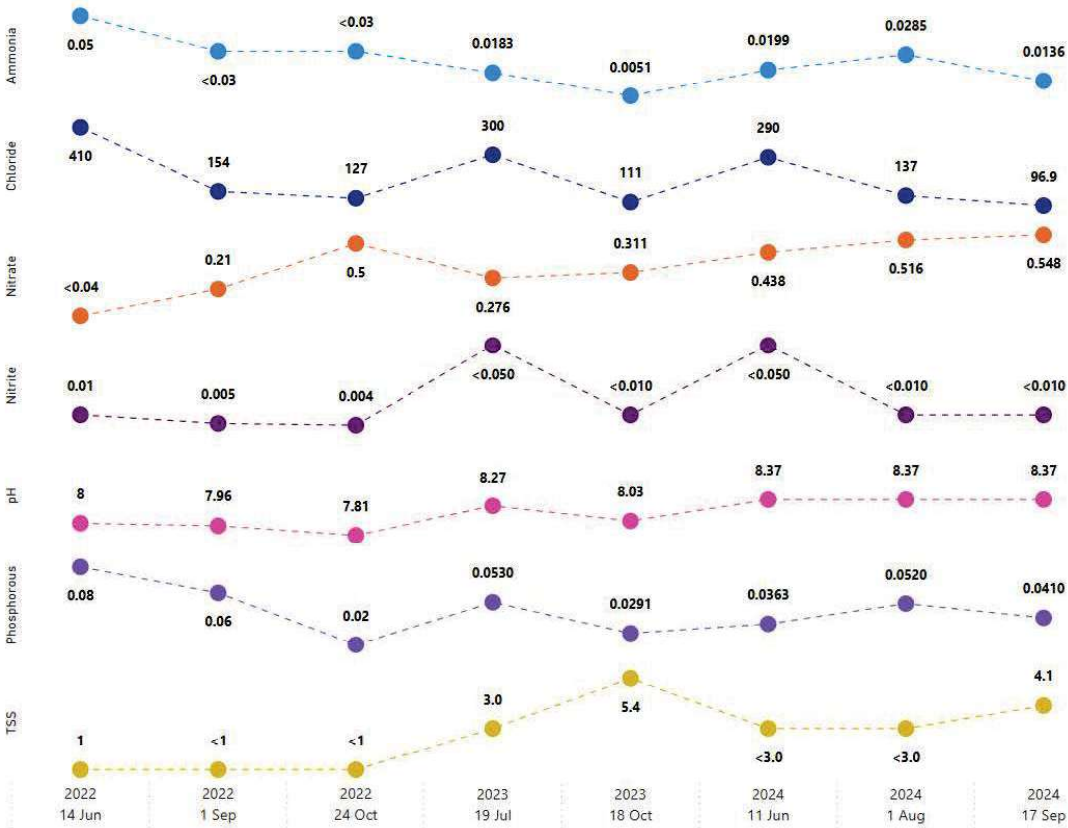
Watercourse Water Quality Key  
Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

BR01



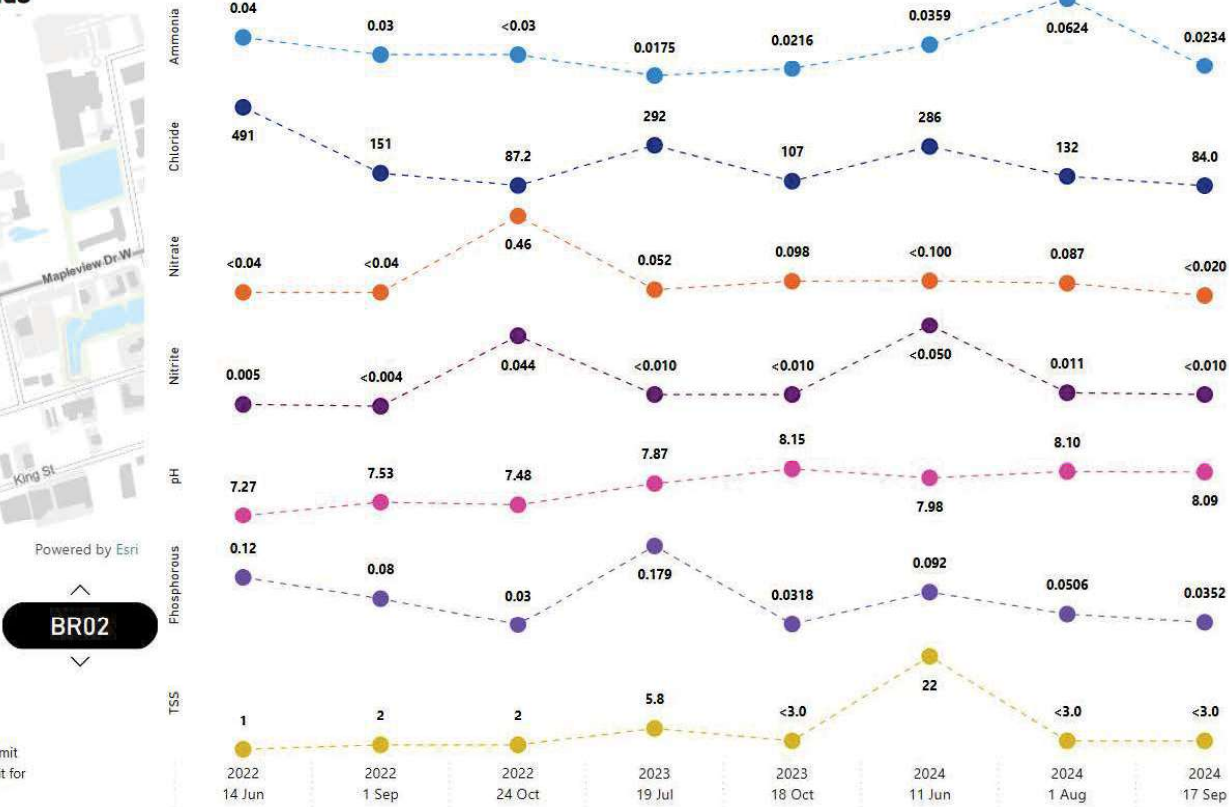


Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented



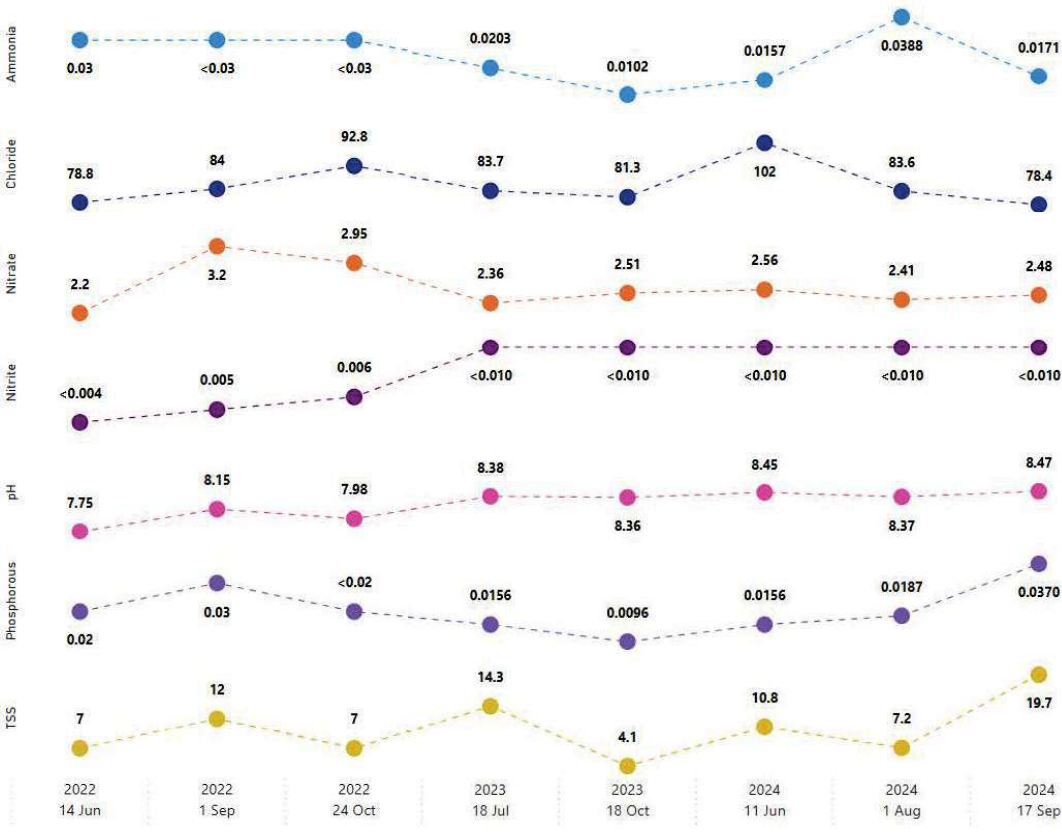
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

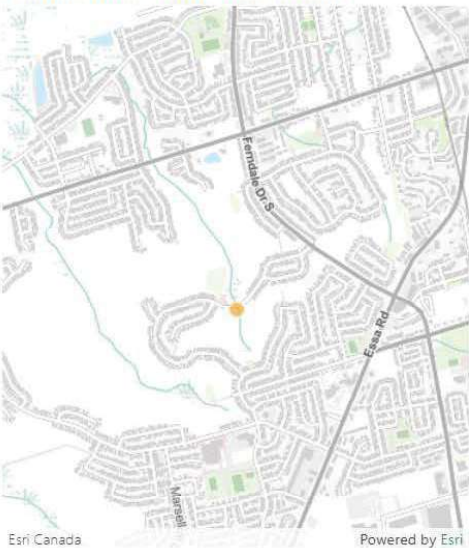
All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

BR03





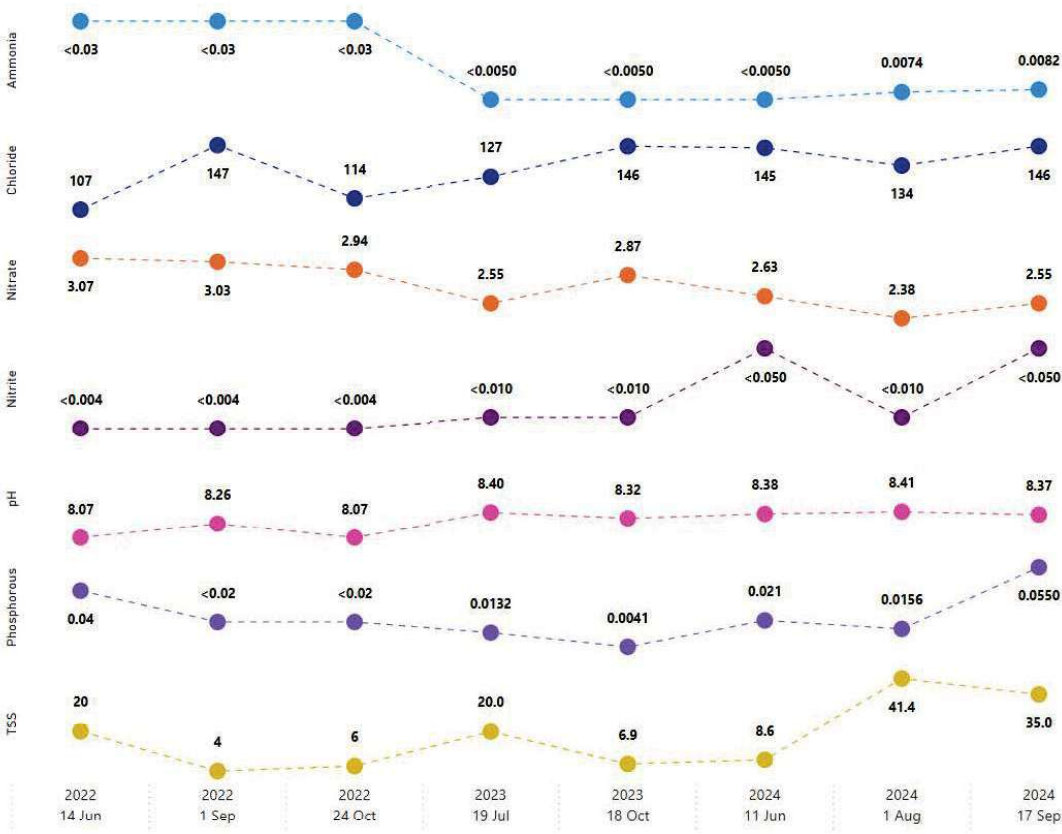
Watercourse Water Quality Key Performance Indicator Trends



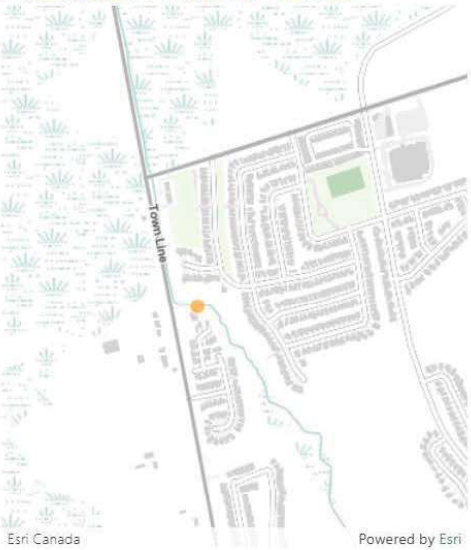
Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

BR04



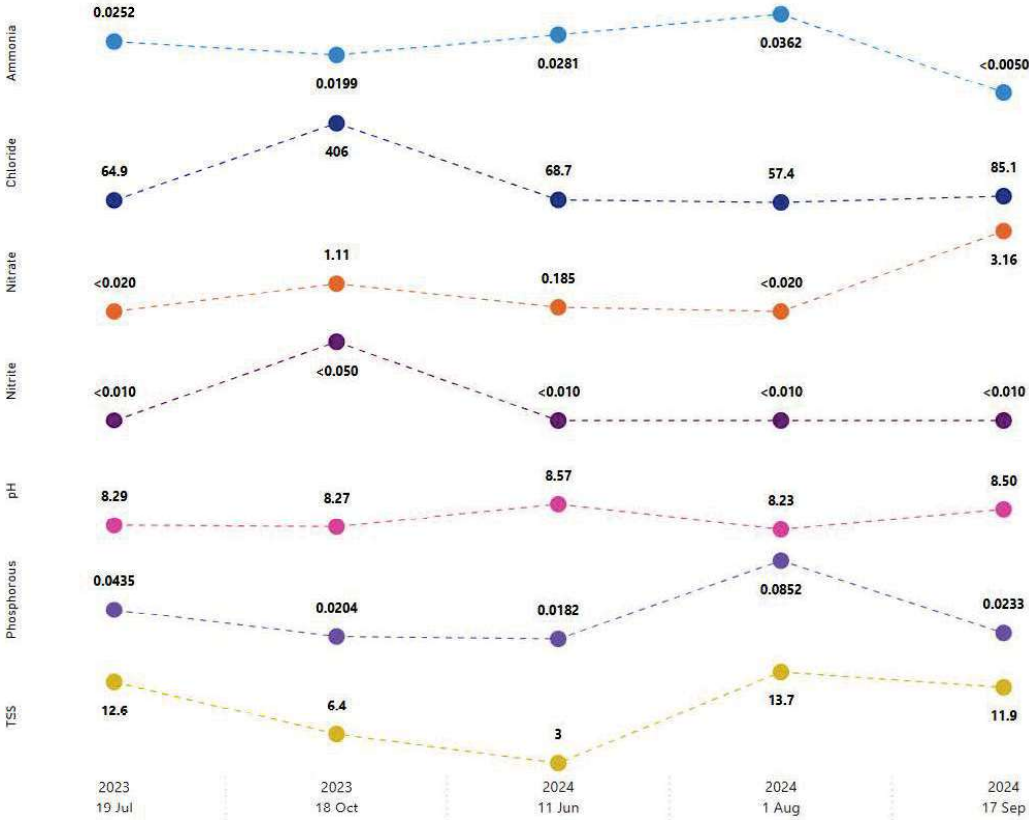
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

BR05



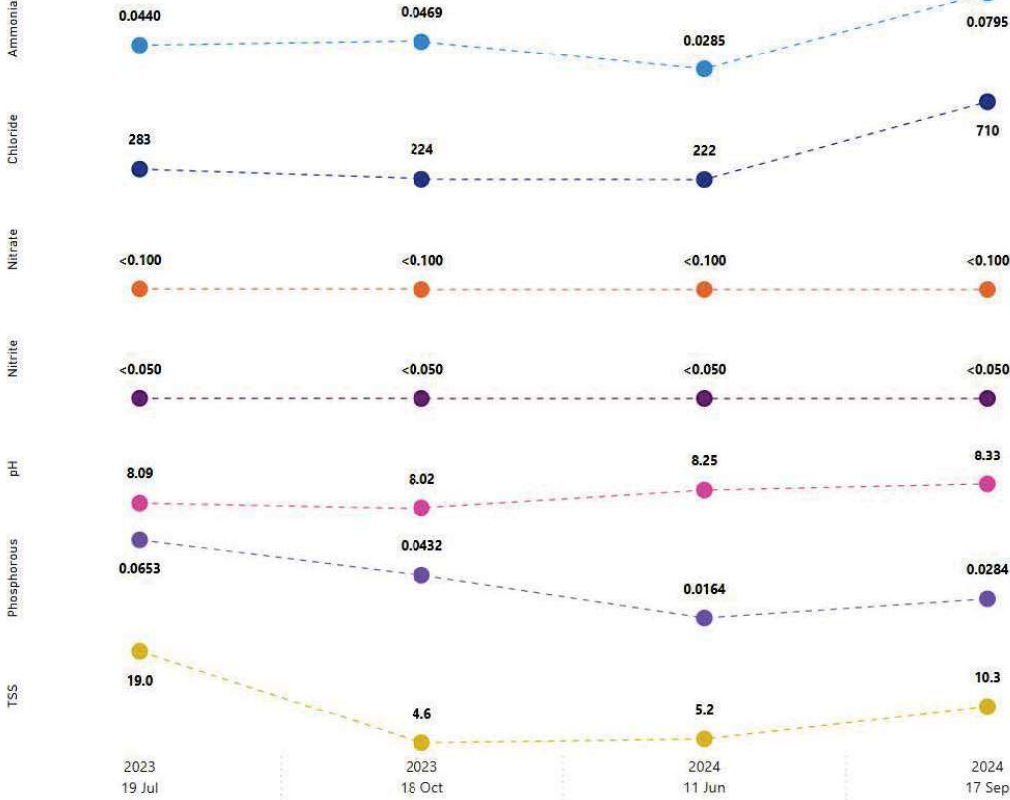
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

BR06



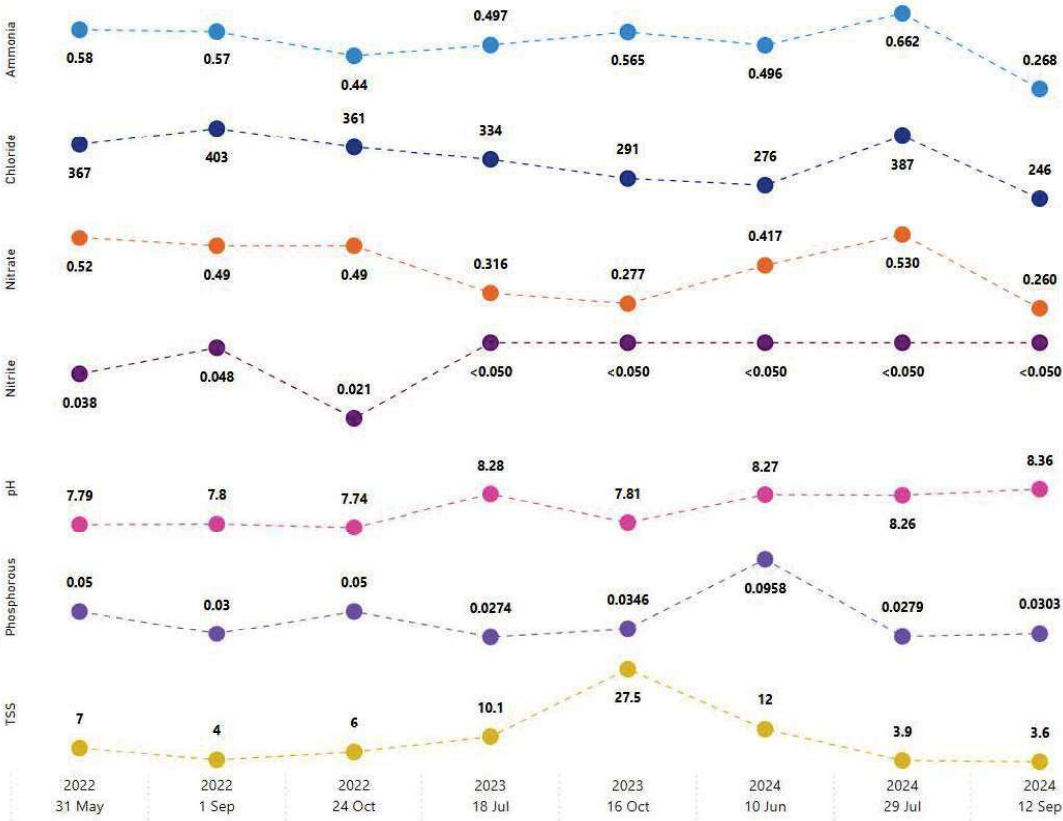
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

DY01



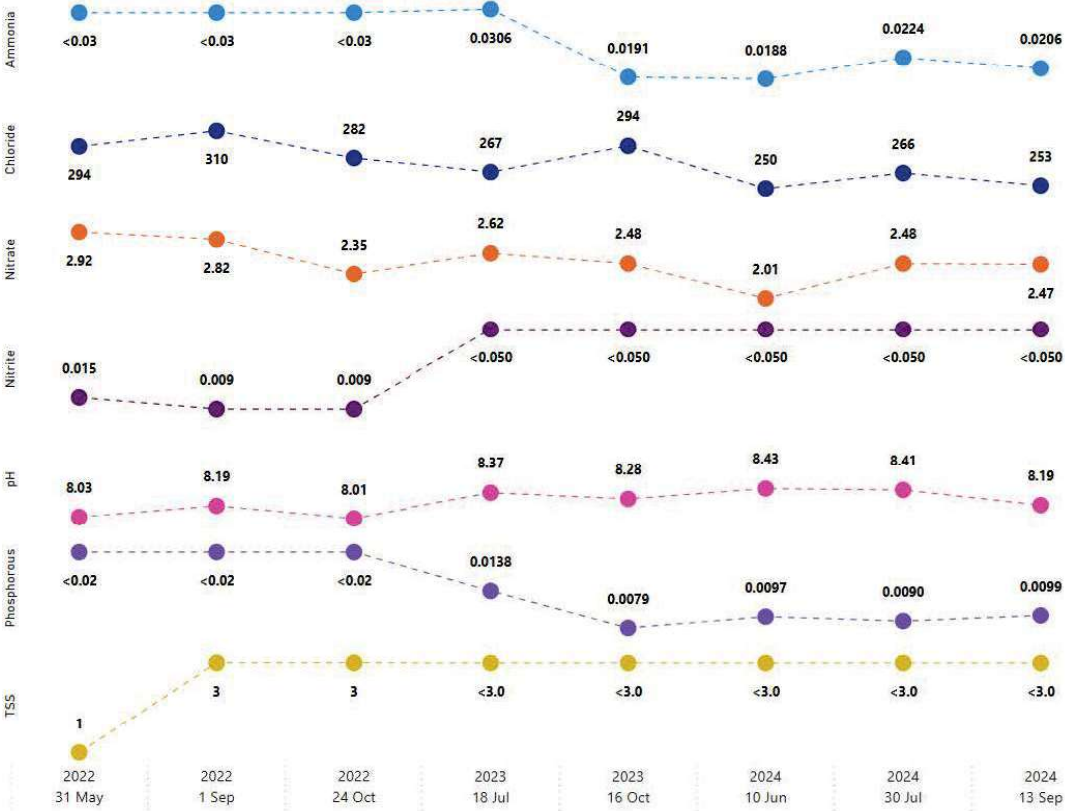
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

DY02

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented





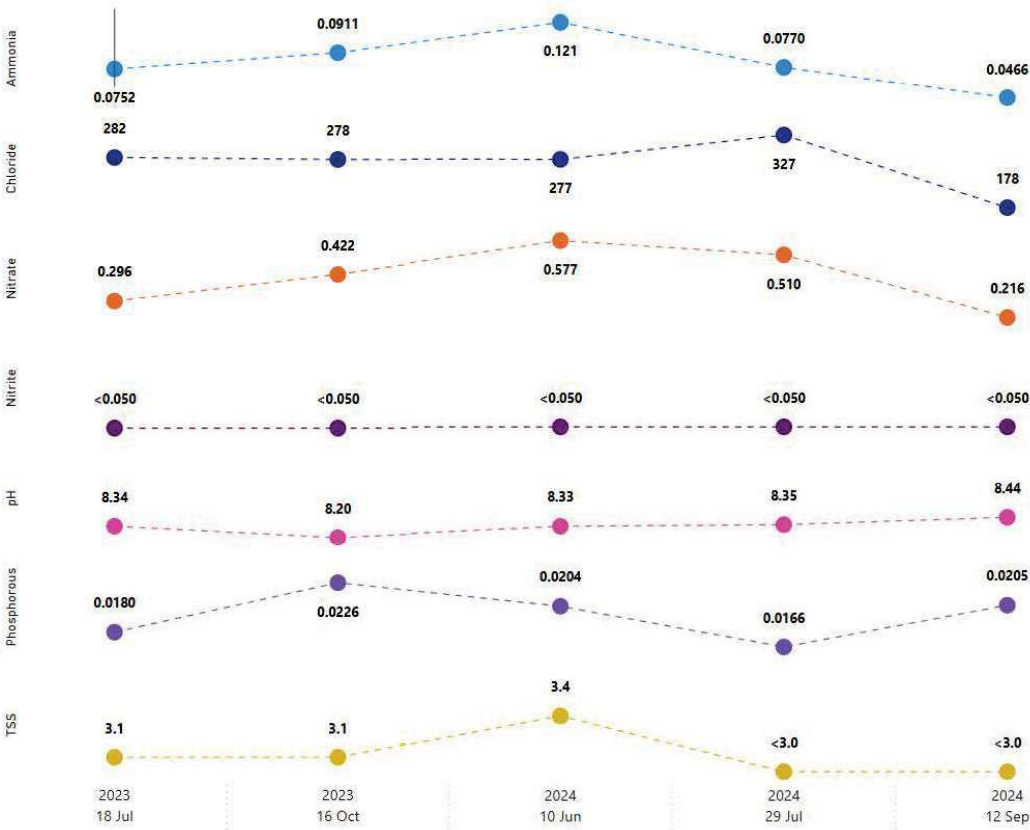
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units.  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

DY03





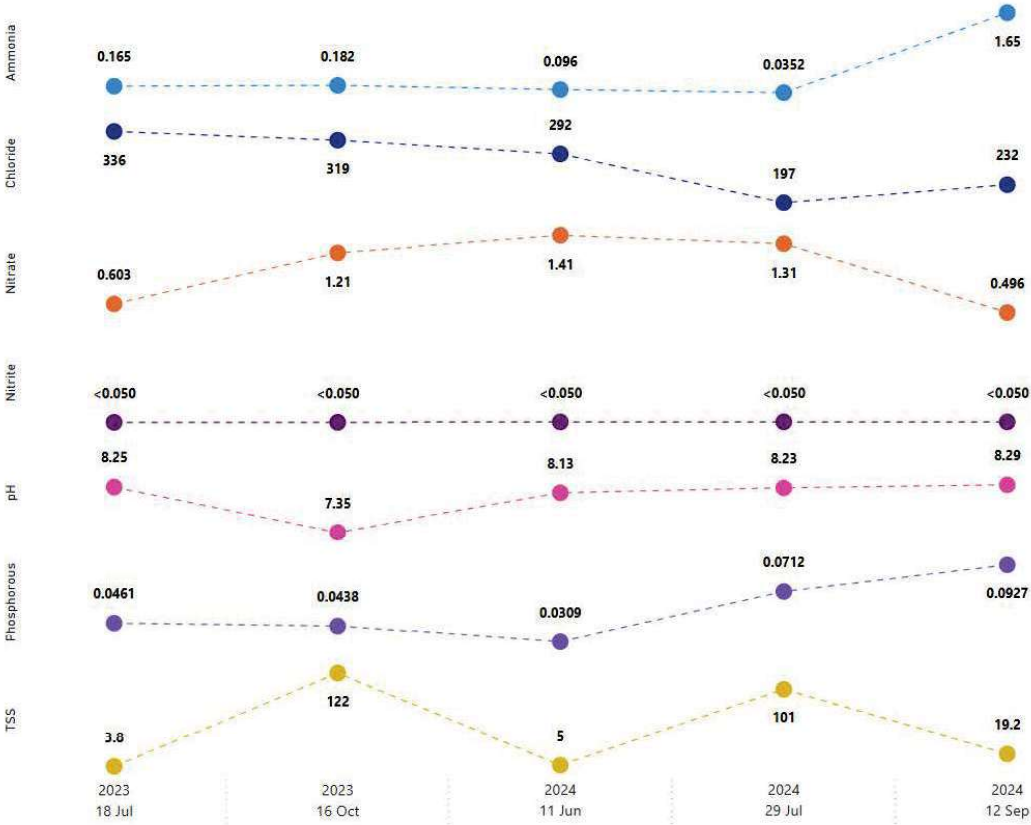
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

GR01



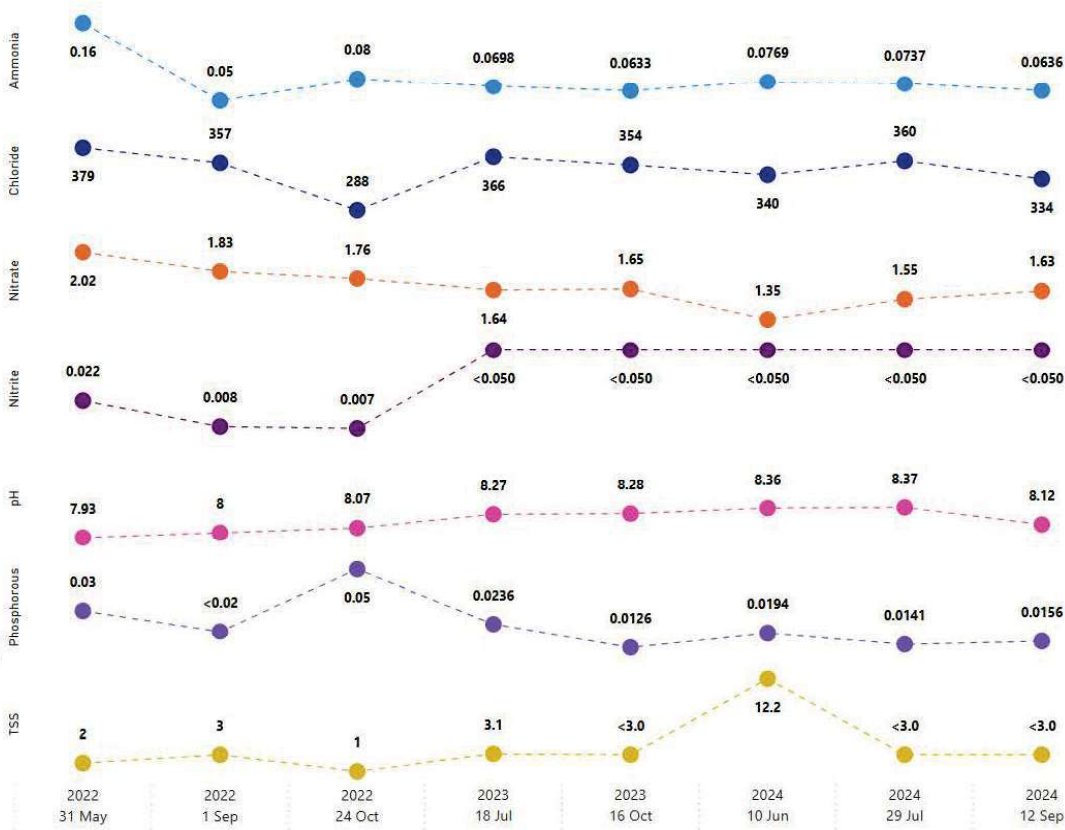
Watercourse Water Quality Key Performance Indicator Trends



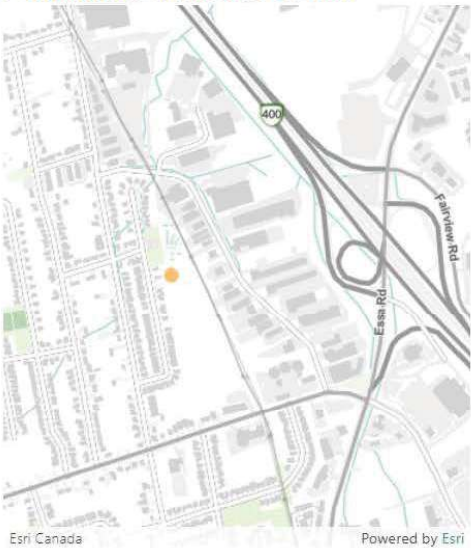
Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

HT01



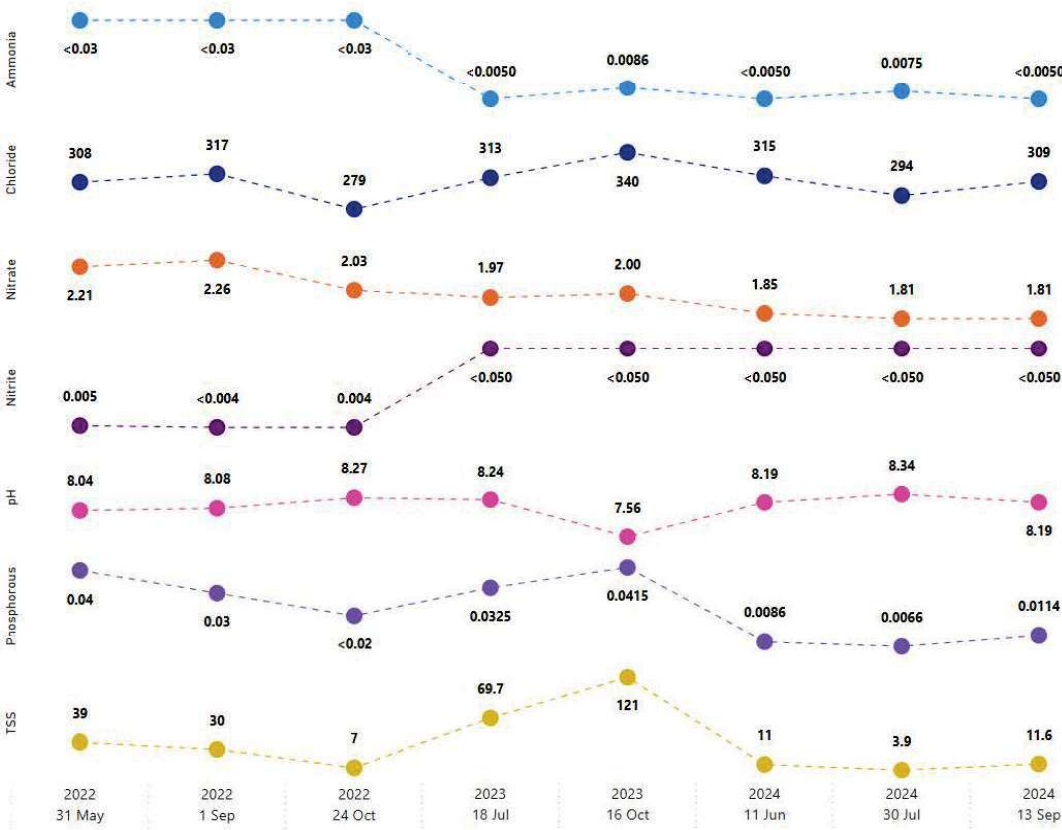
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

HT02

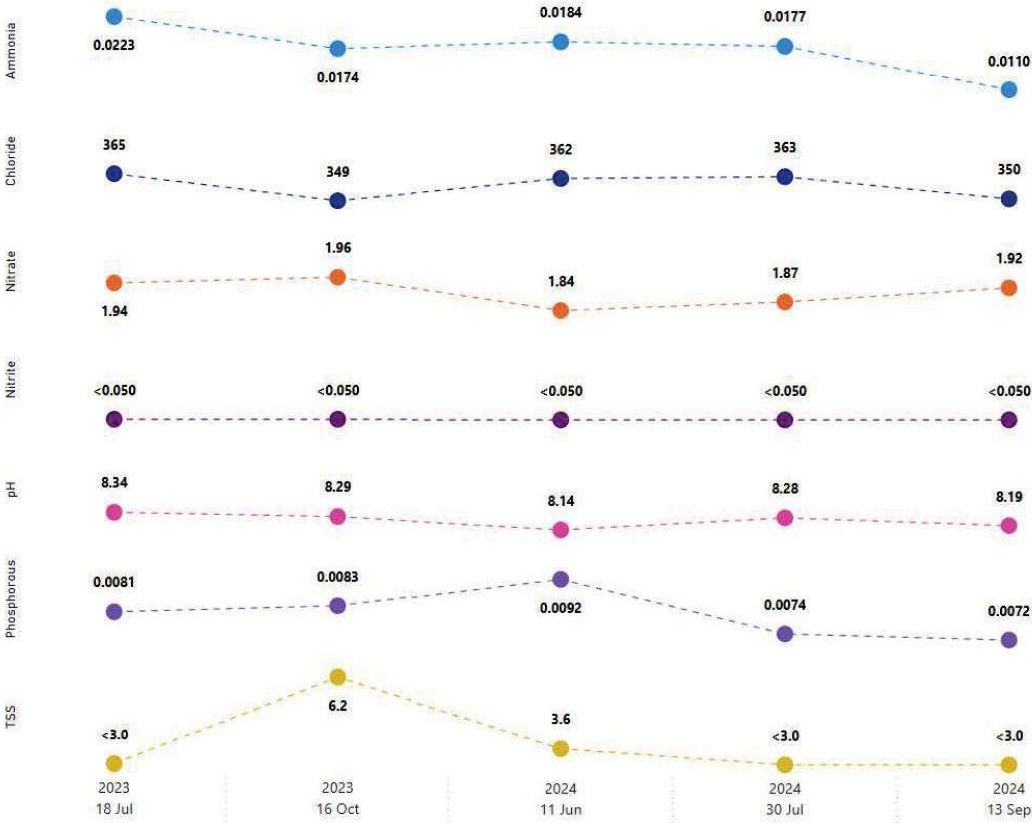


Watercourse Water Quality Key Performance Indicator Trends

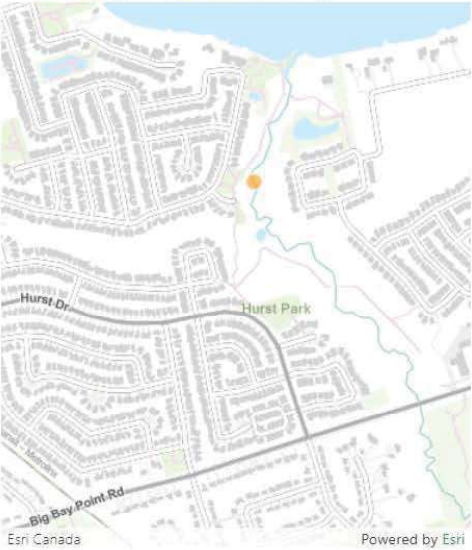


Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented



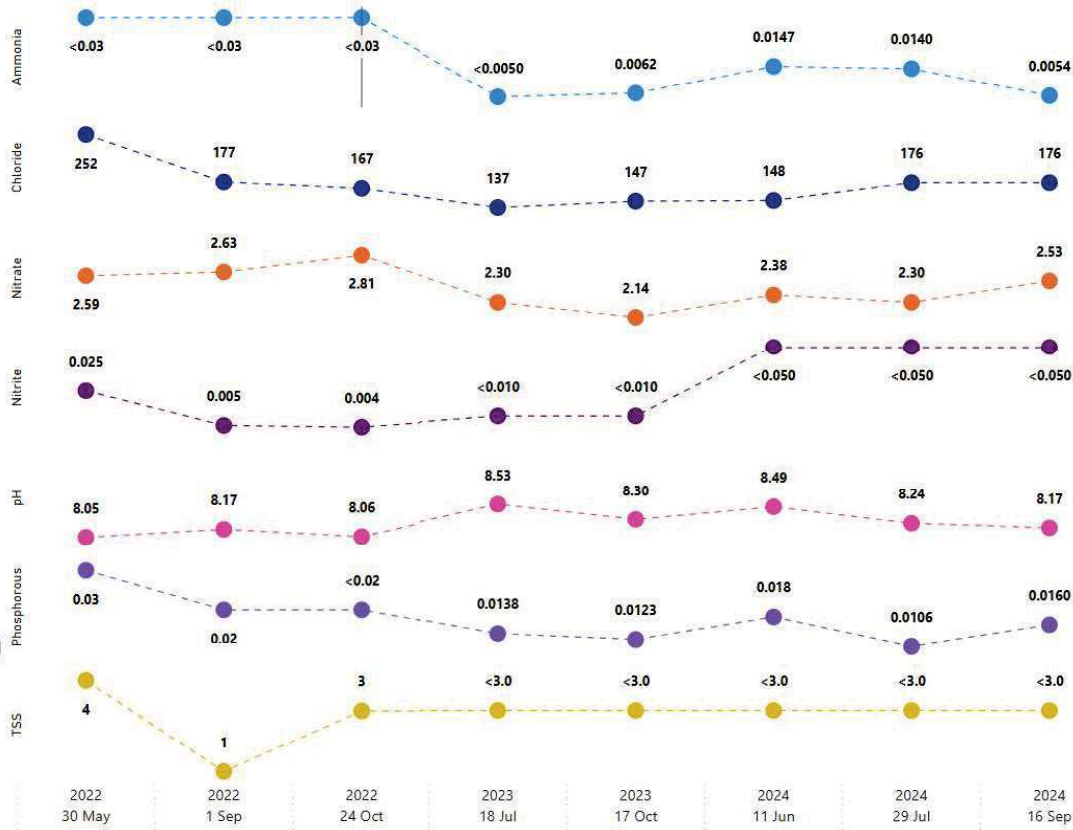
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

HW01





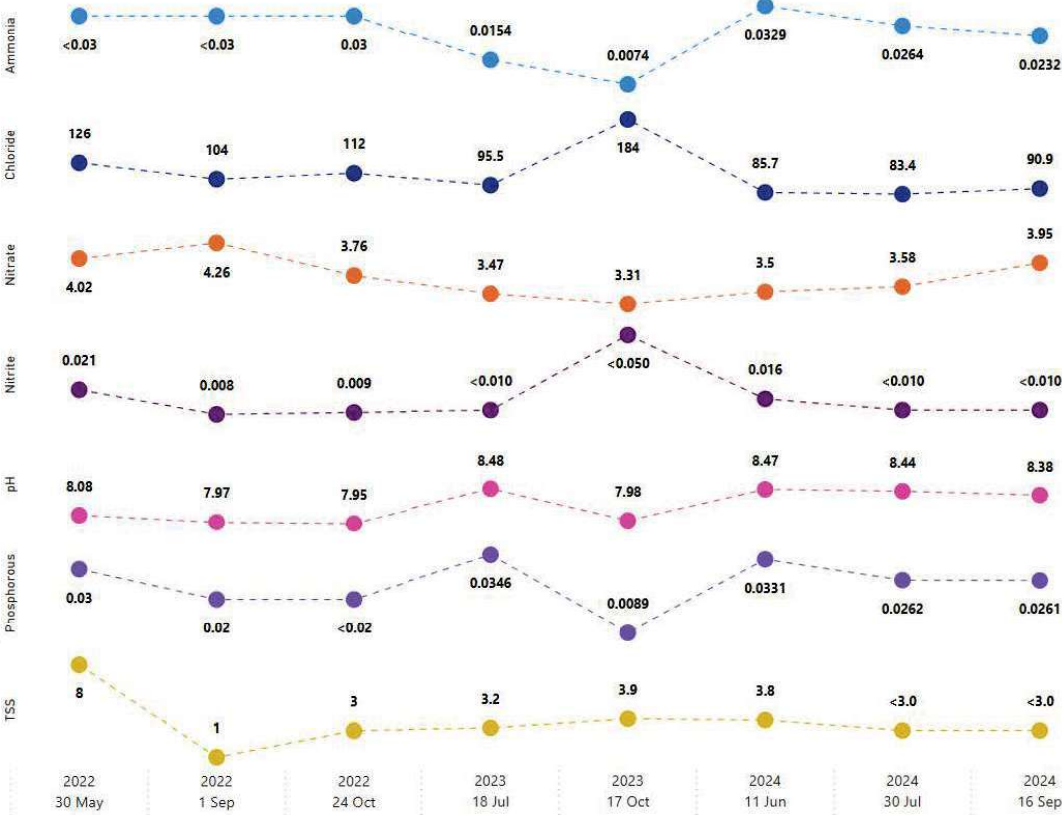
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

HW02



Watercourse Water Quality Key Performance Indicator Trends

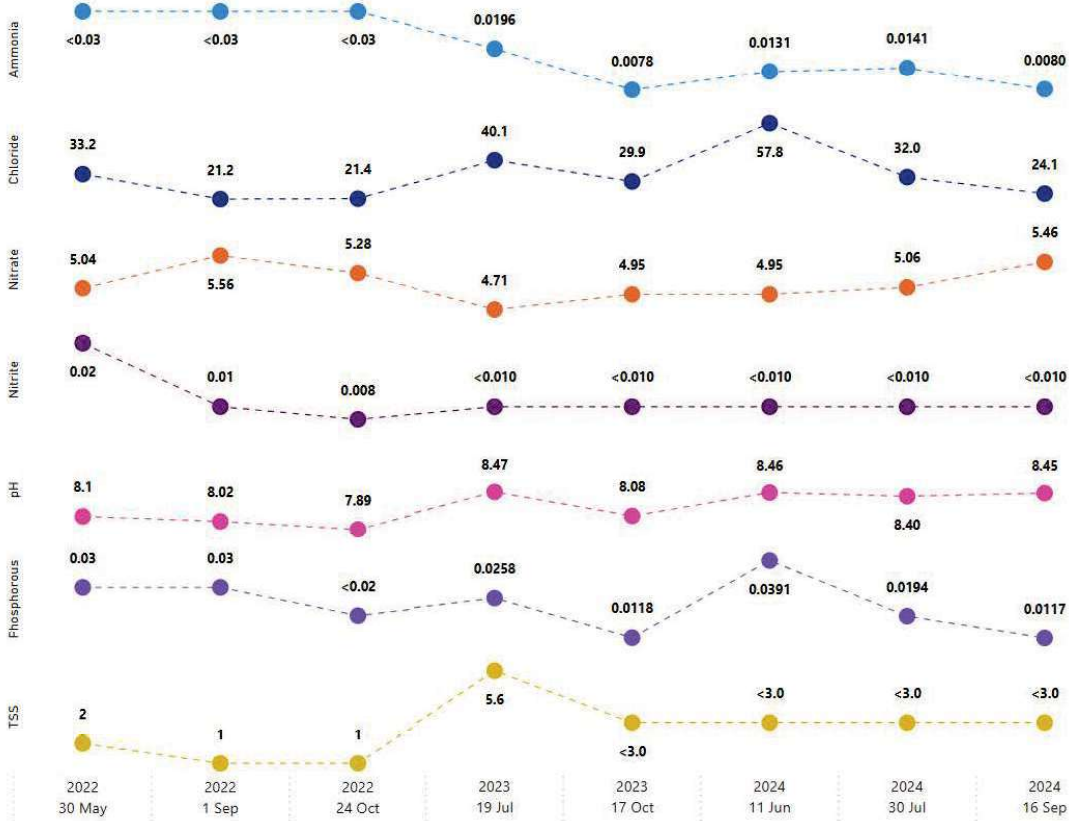


Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

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HW03



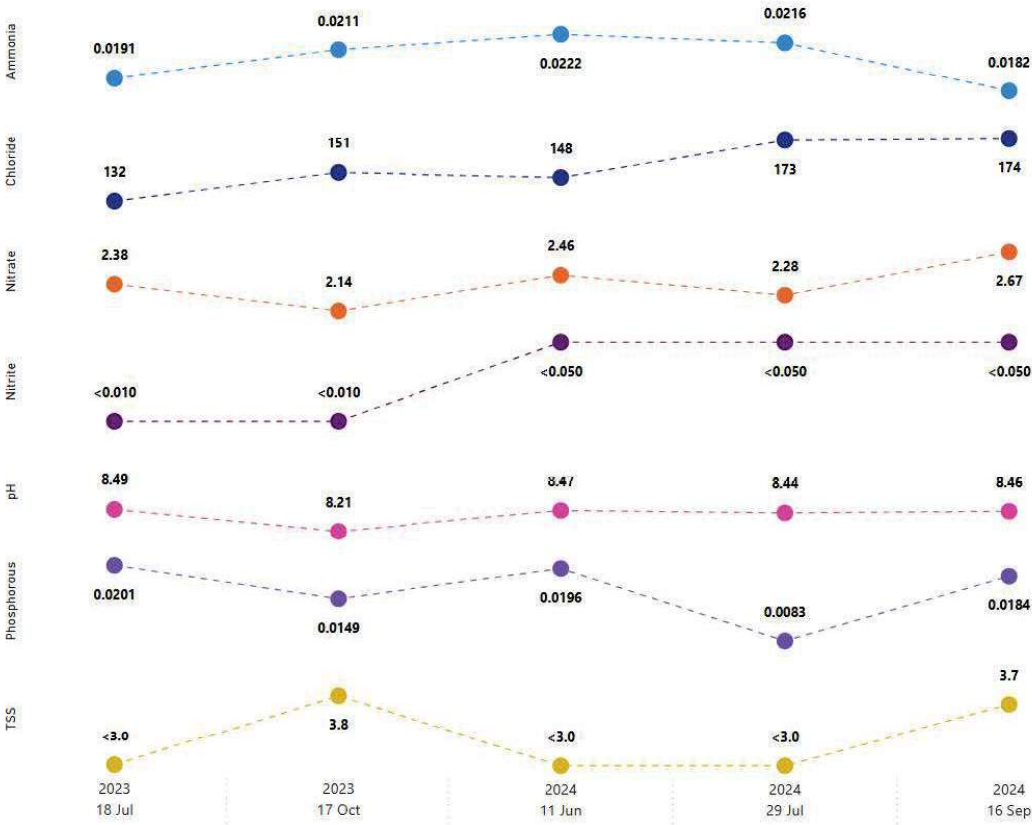
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

HW04



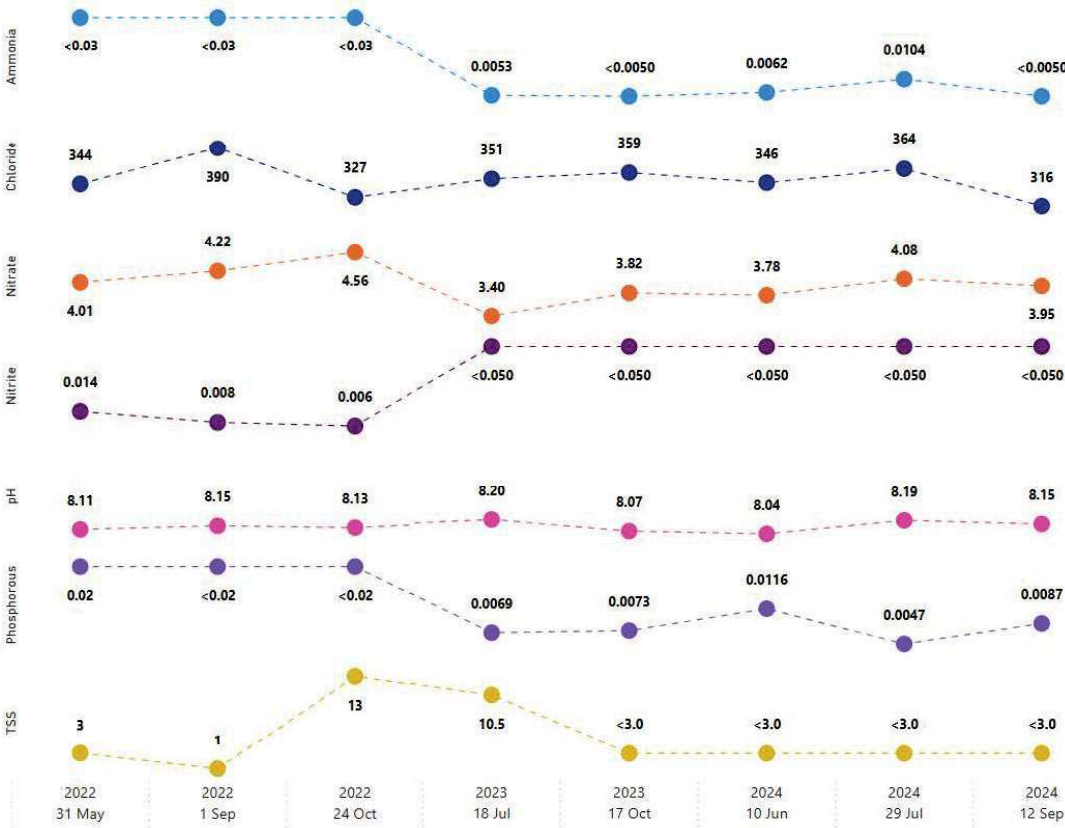
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

KD01



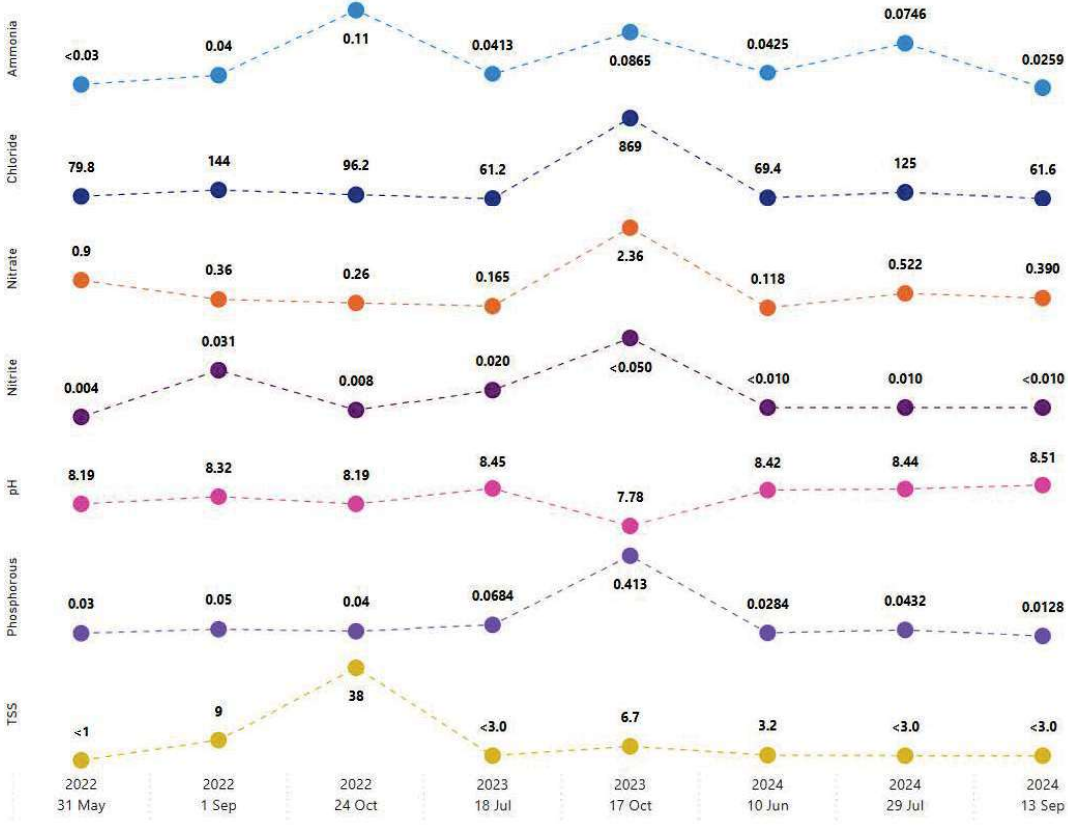
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

KD02





Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

KD03



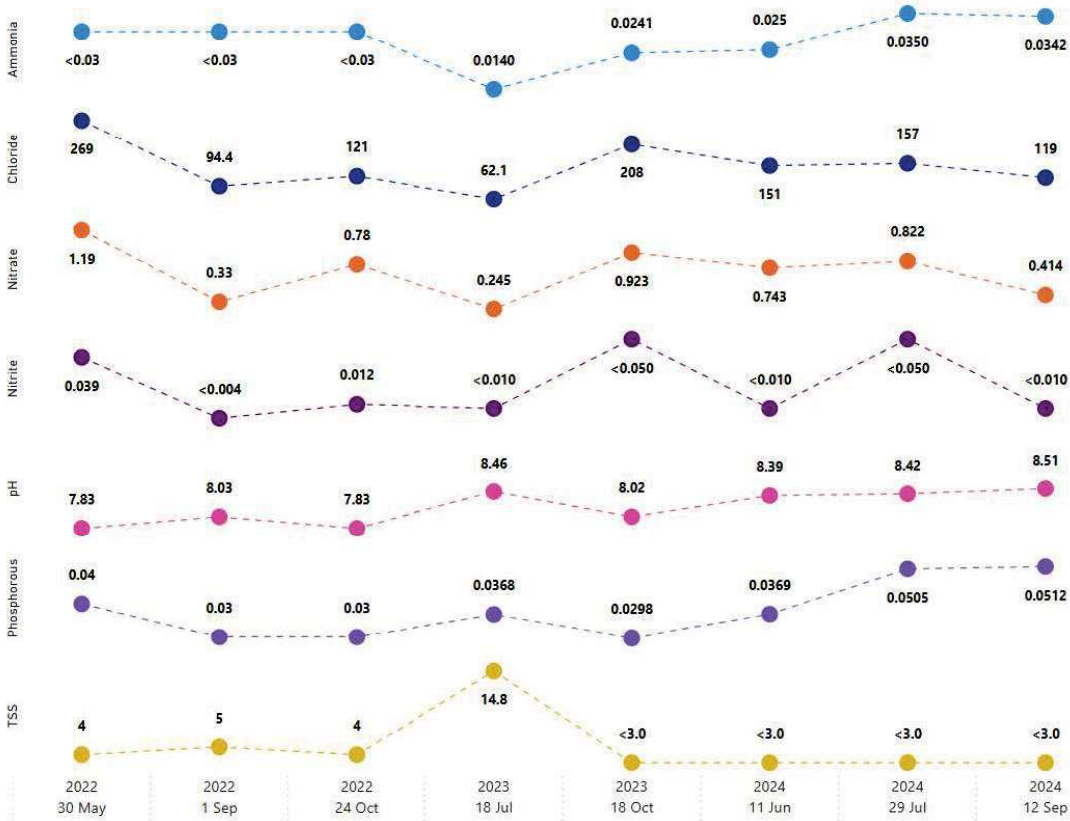
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LT01



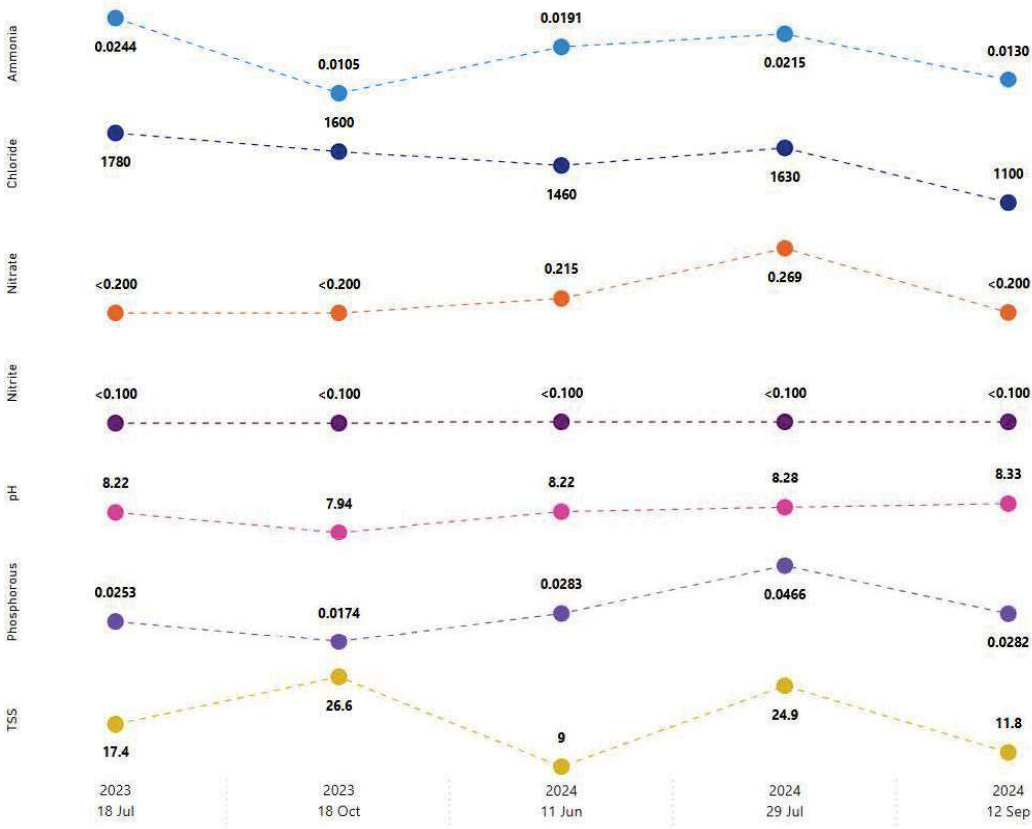
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LT02



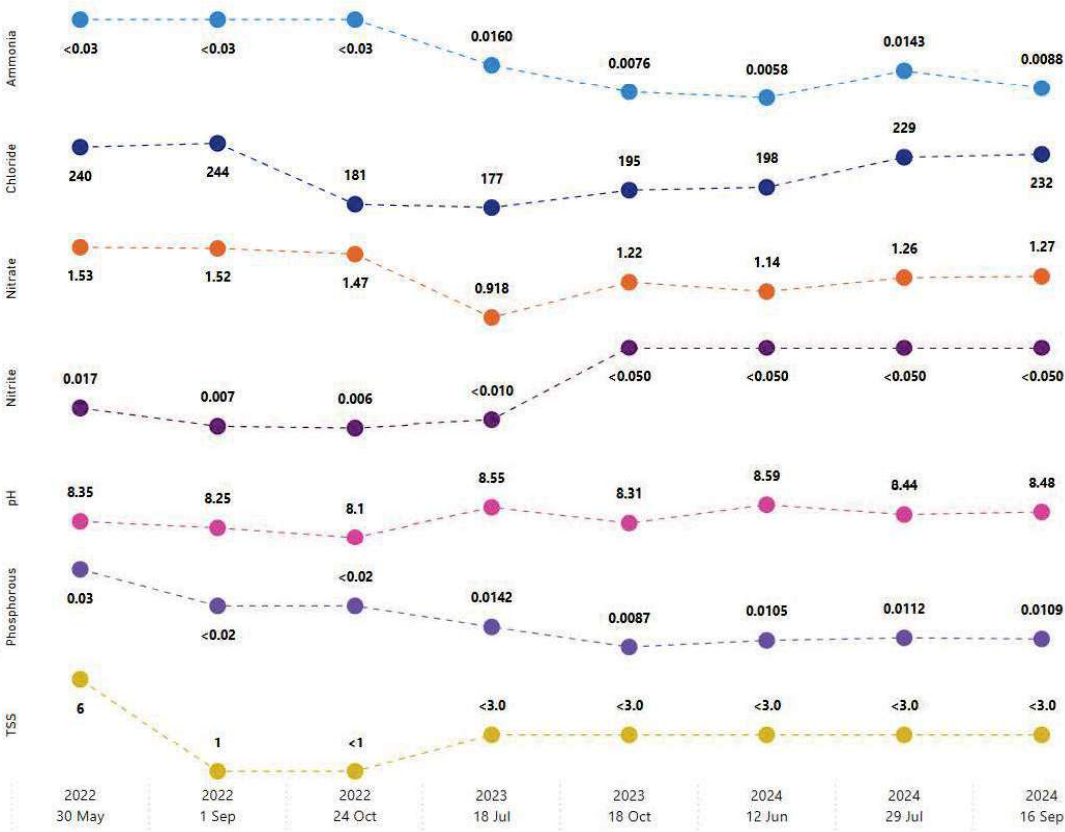
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

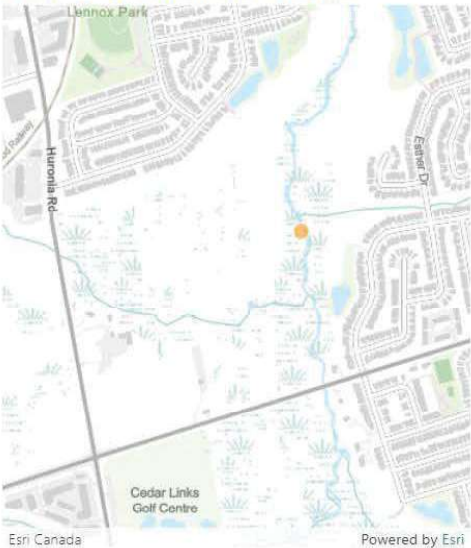
All units in mg/L, except pH in pH units  
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Each graph is scaled based on the data presented

LV01





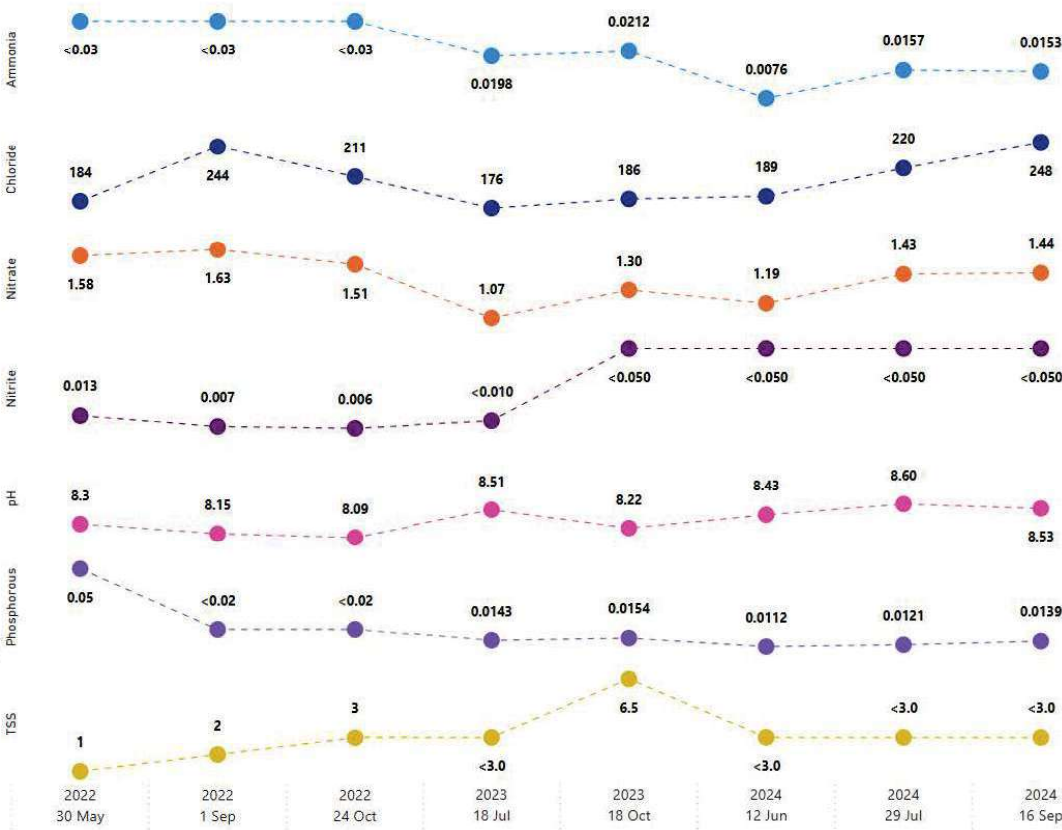
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

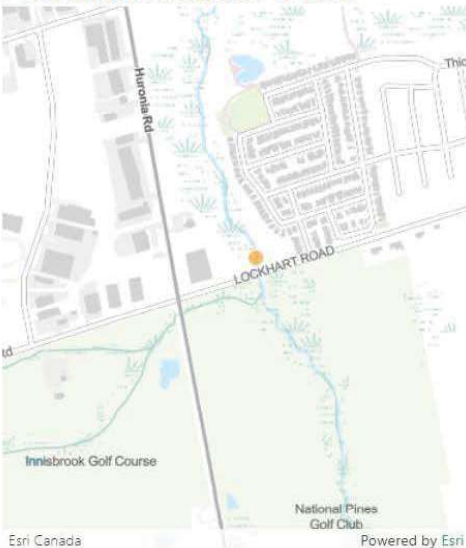
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Each graph is scaled based on the data presented

LV02





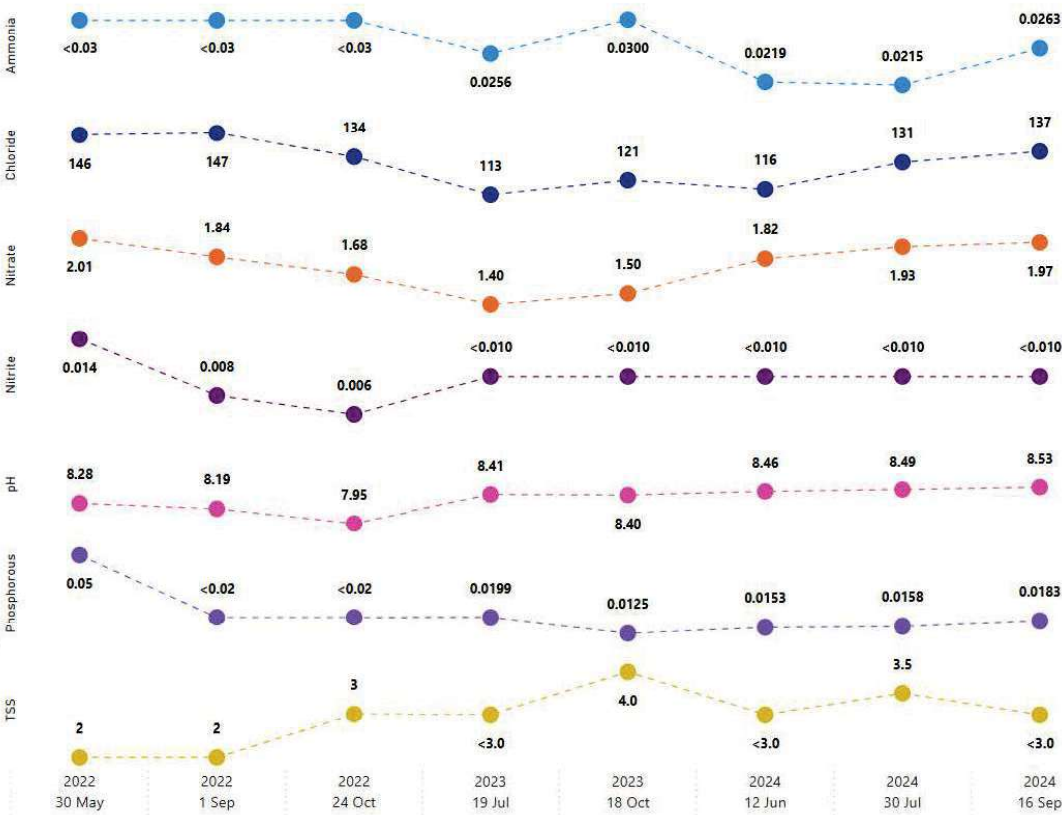
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
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All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LV03



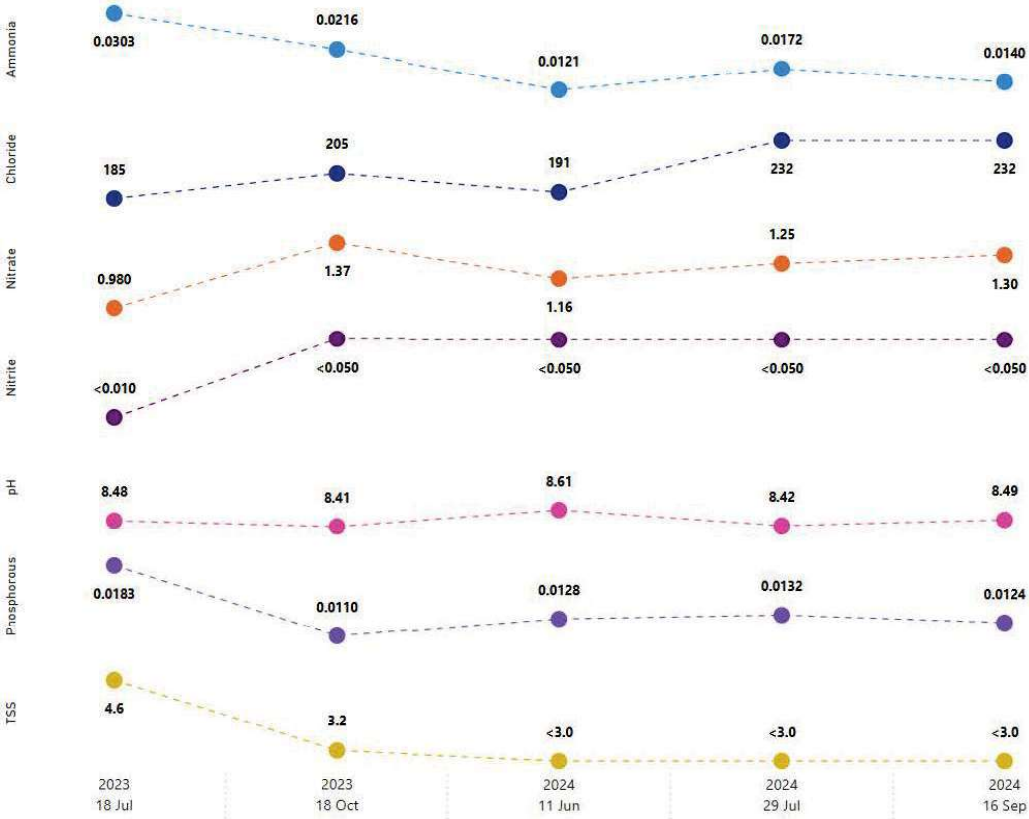
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LV04



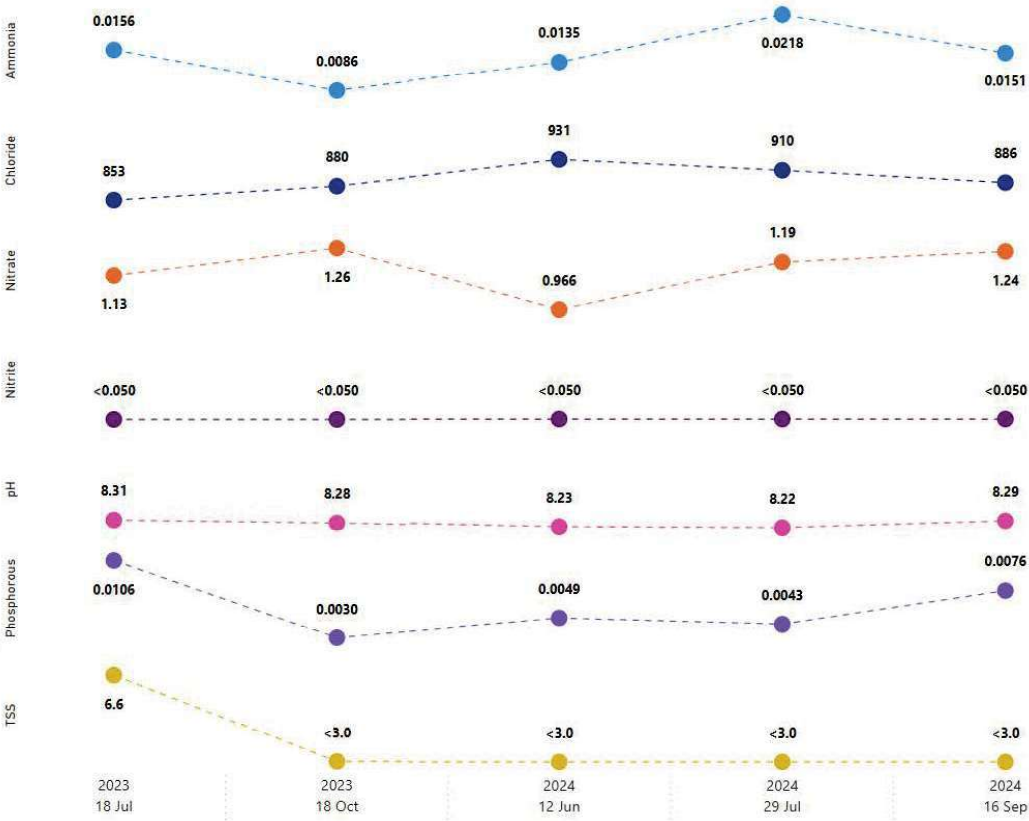
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented

LV05

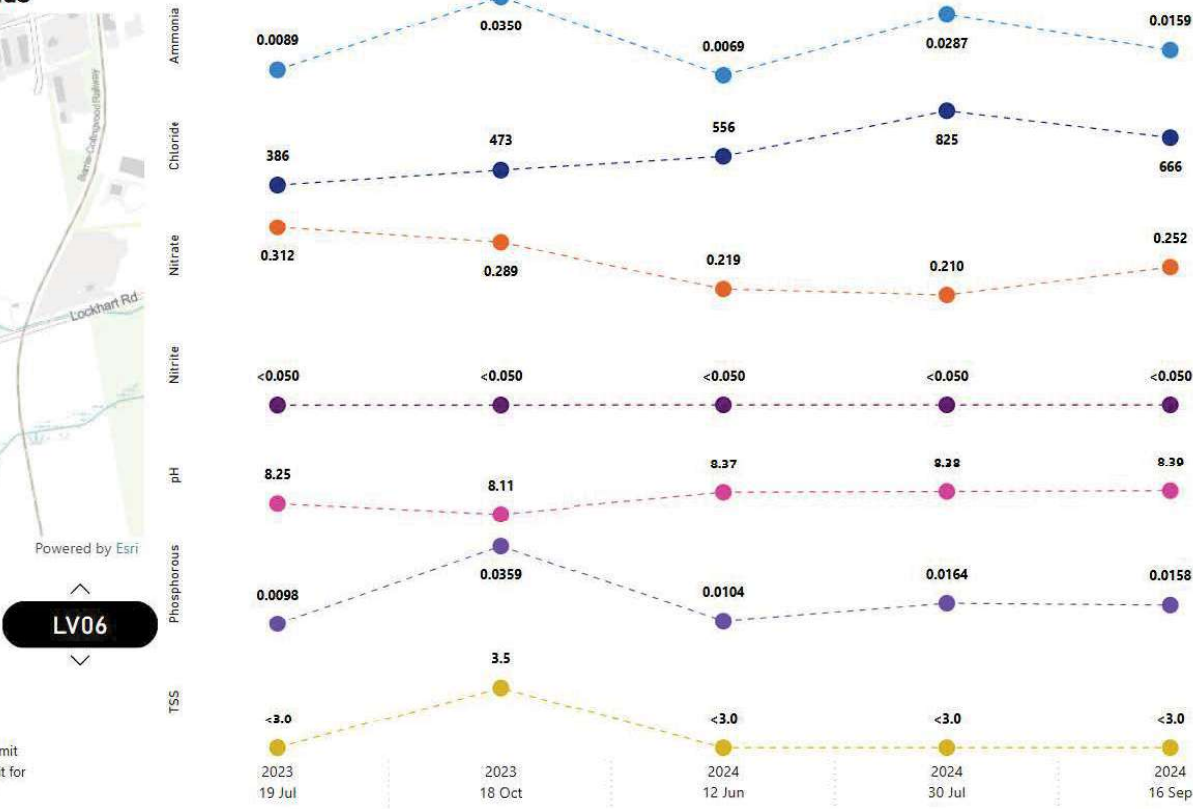


Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units.  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
Each graph is scaled based on the data presented



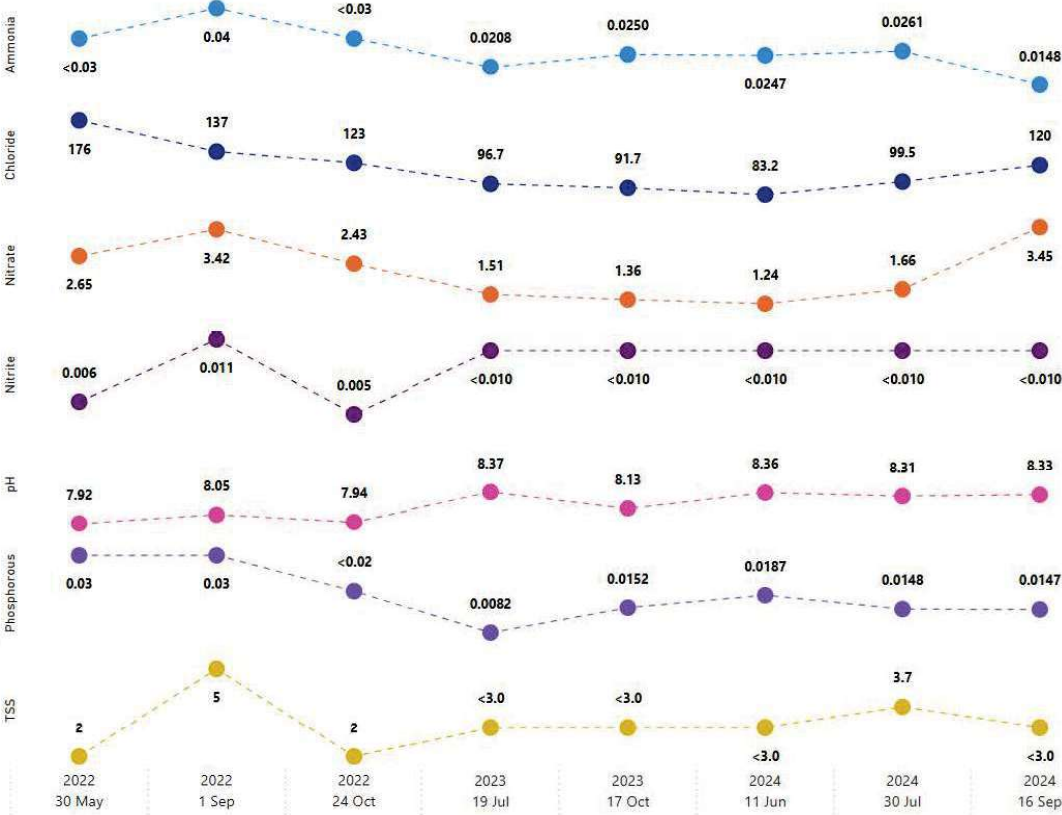
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

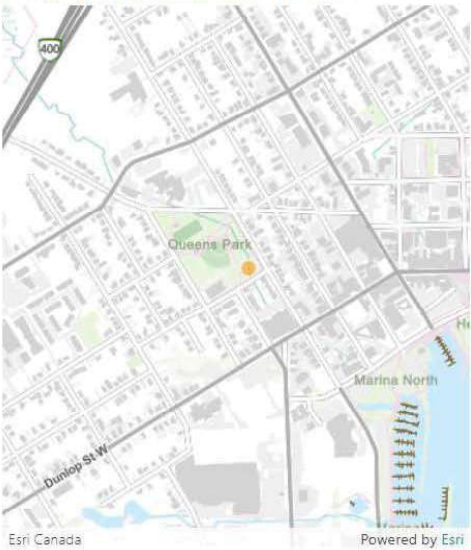
All units in mg/L, except pH in pH units  
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SC01





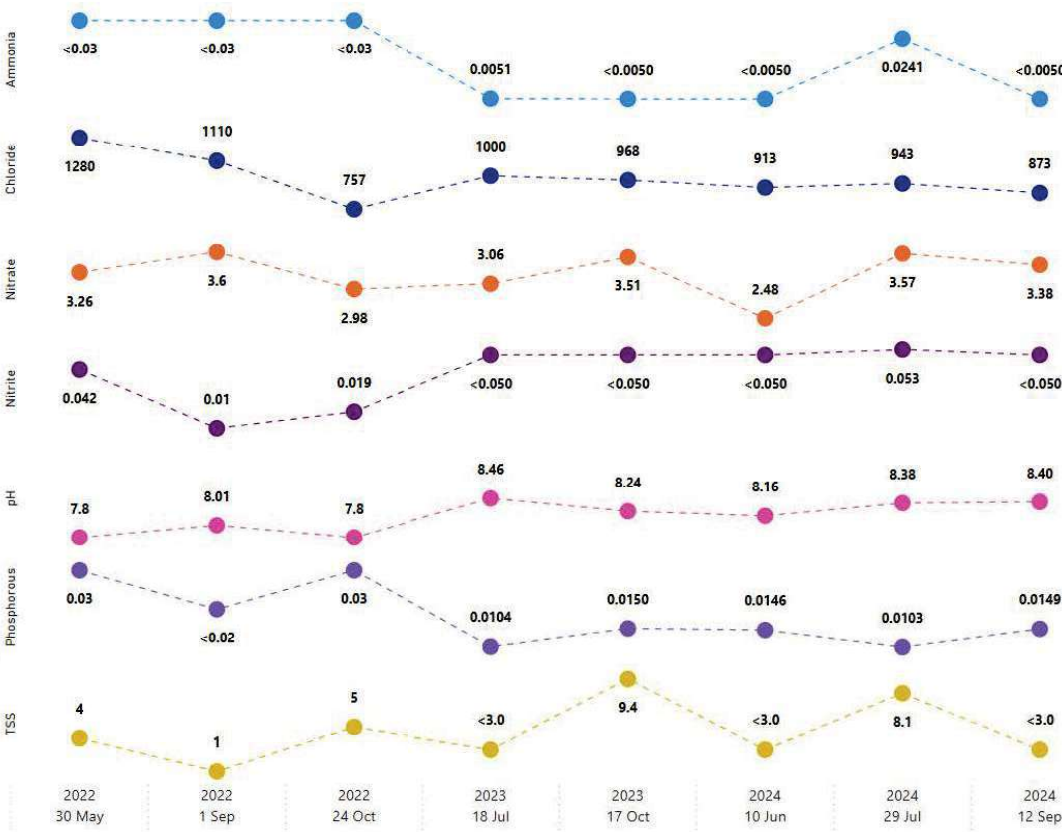
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
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SP01



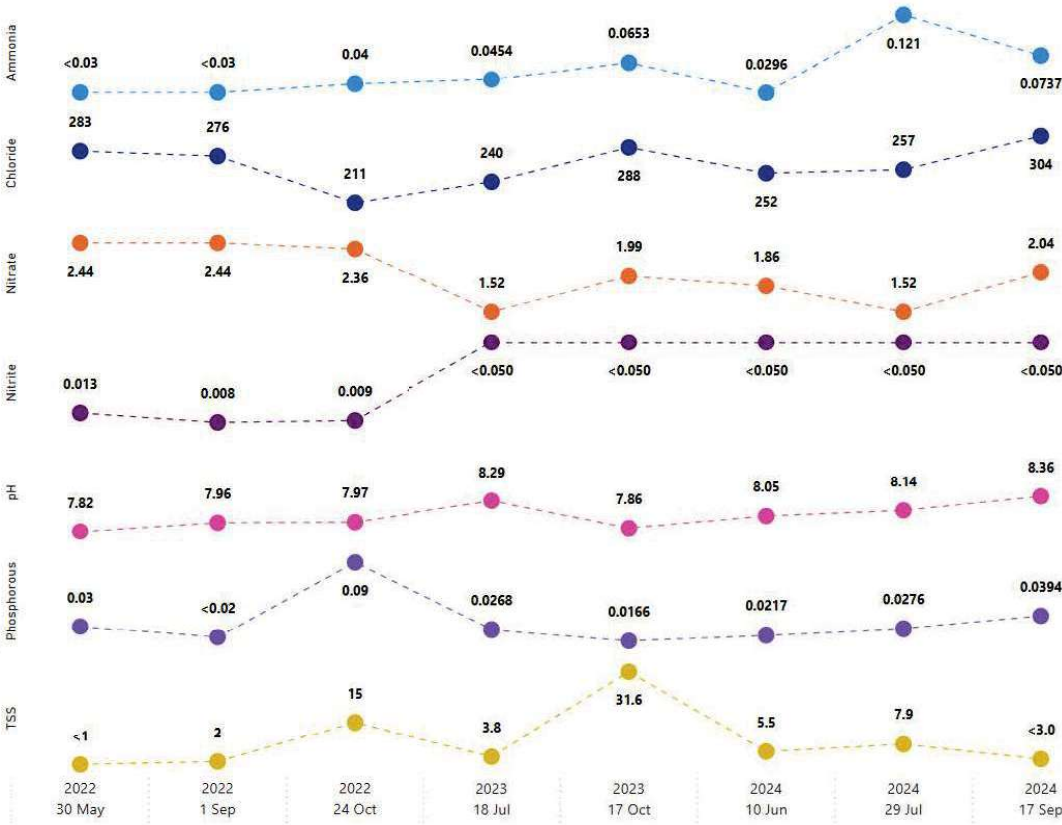
Watercourse Water Quality Key Performance Indicator Trends



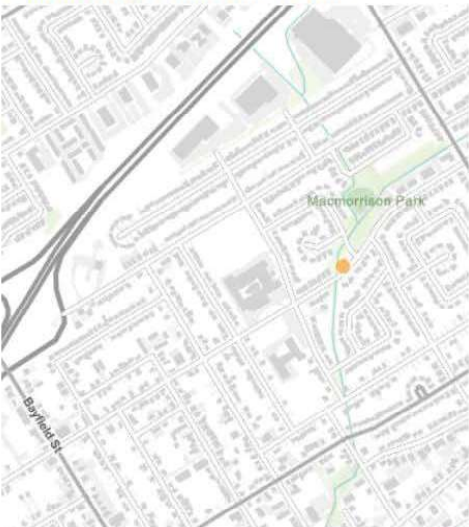
Notes:  
Ammonia = Total Ammonia as N  
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Nitrite = Nitrite as N  
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TSS = Total Suspended Solids

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SP02



Watercourse Water Quality Key Performance Indicator Trends

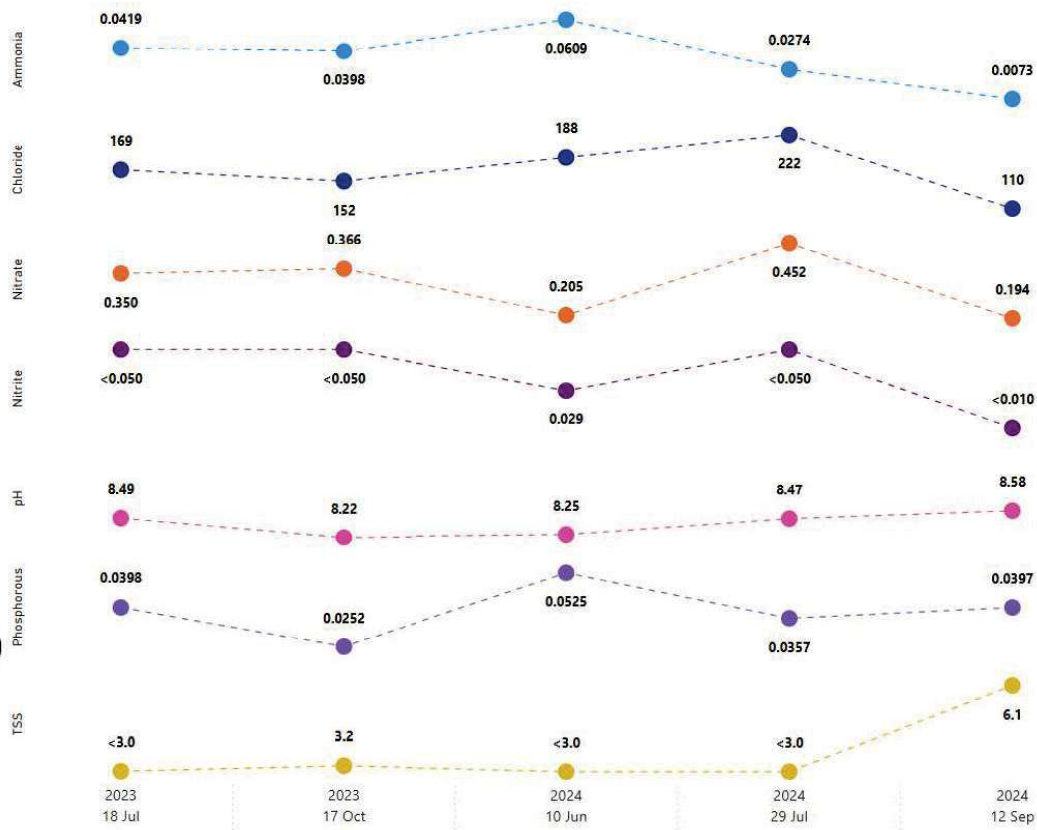


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SP03

Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

All units in mg/L, except pH in pH units  
Analytical Results less than (<) the Method Detection Limit (DL) are represented on the graphs at the detection limit for illustration purposes.  
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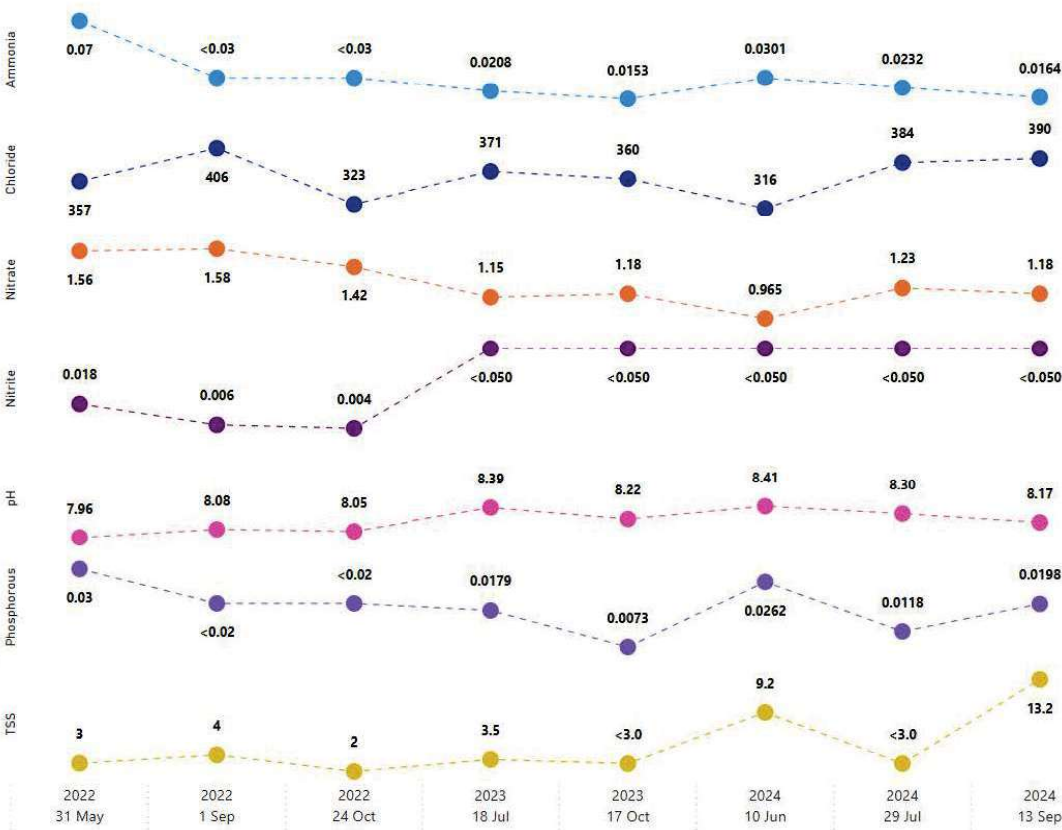
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
TSS = Total Suspended Solids

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WK01





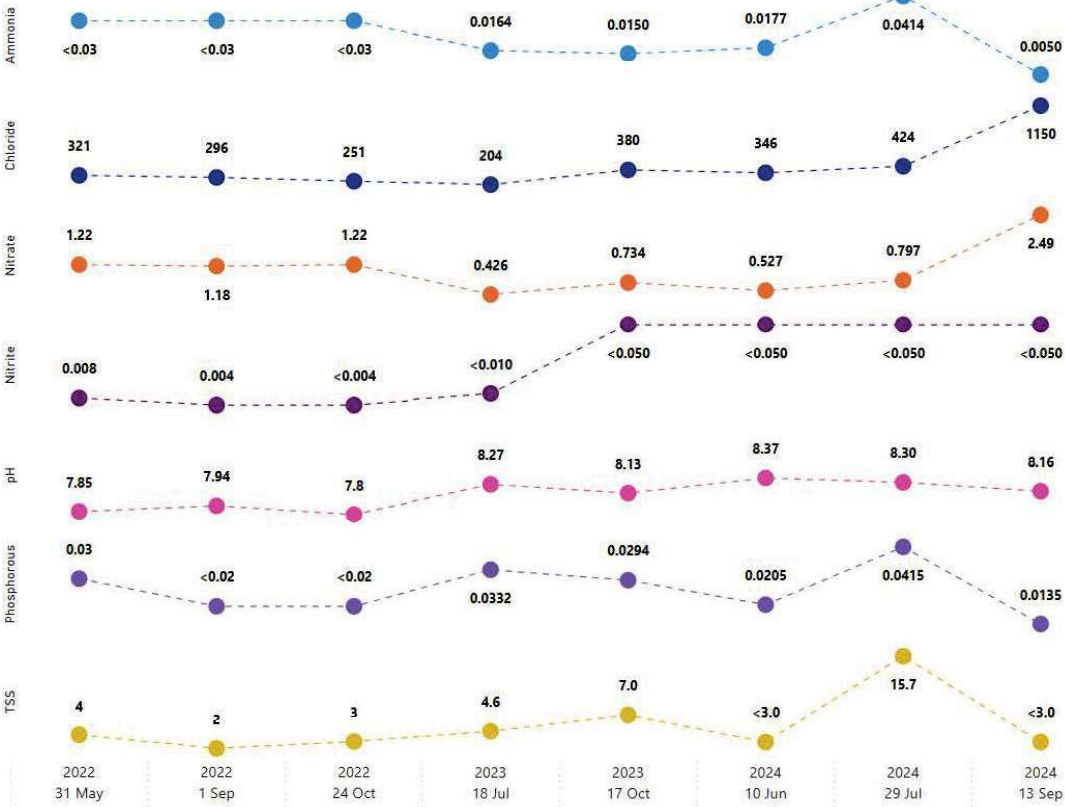
Watercourse Water Quality Key Performance Indicator Trends



Notes:  
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Nitrate = Nitrate as N  
Nitrite = Nitrite as N  
Phosphorous = Total Phosphorous  
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WK02



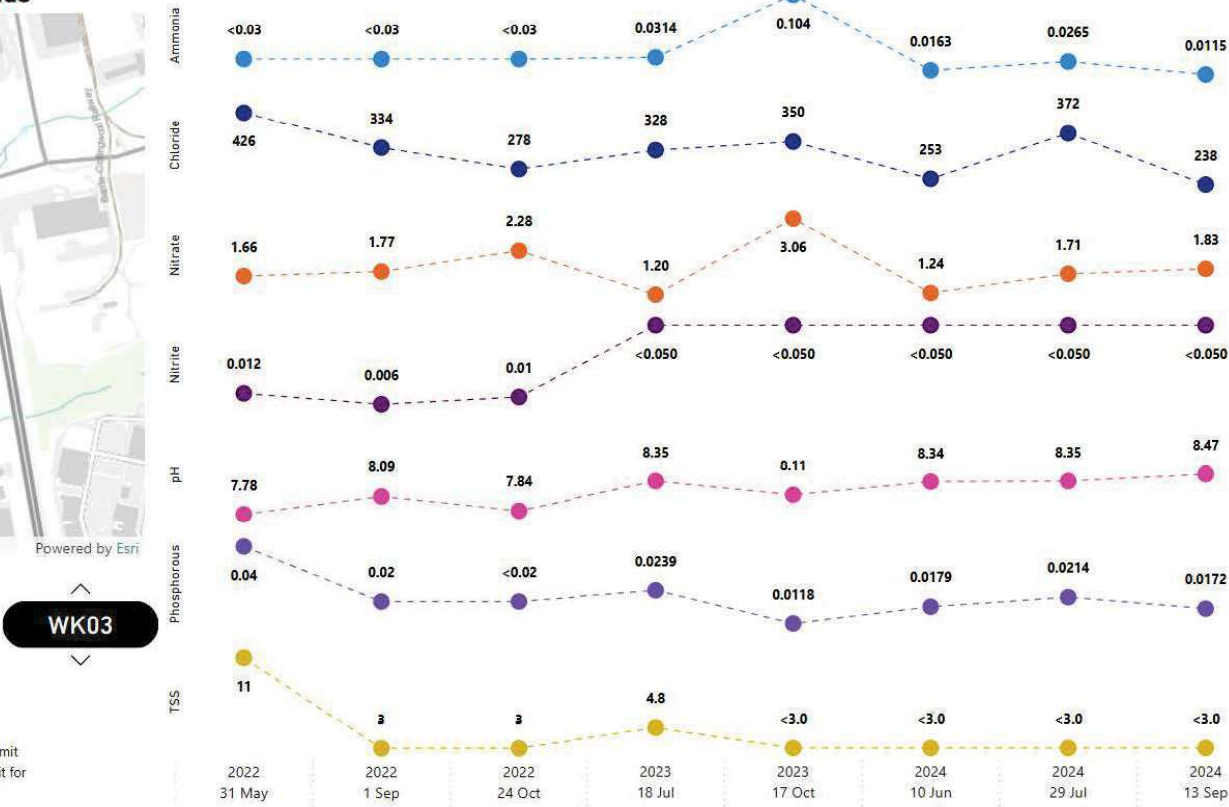


Watercourse Water Quality Key Performance Indicator Trends



Notes:  
Ammonia = Total Ammonia as N  
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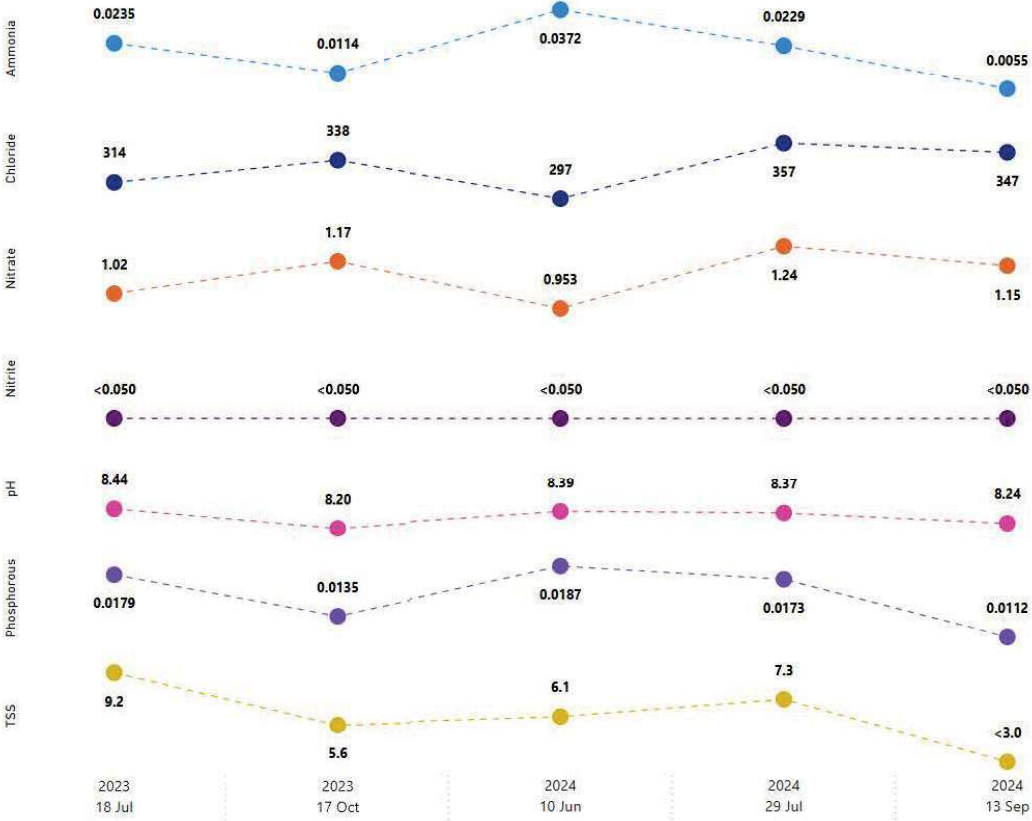
Watercourse Water Quality Key Performance Indicator Trends



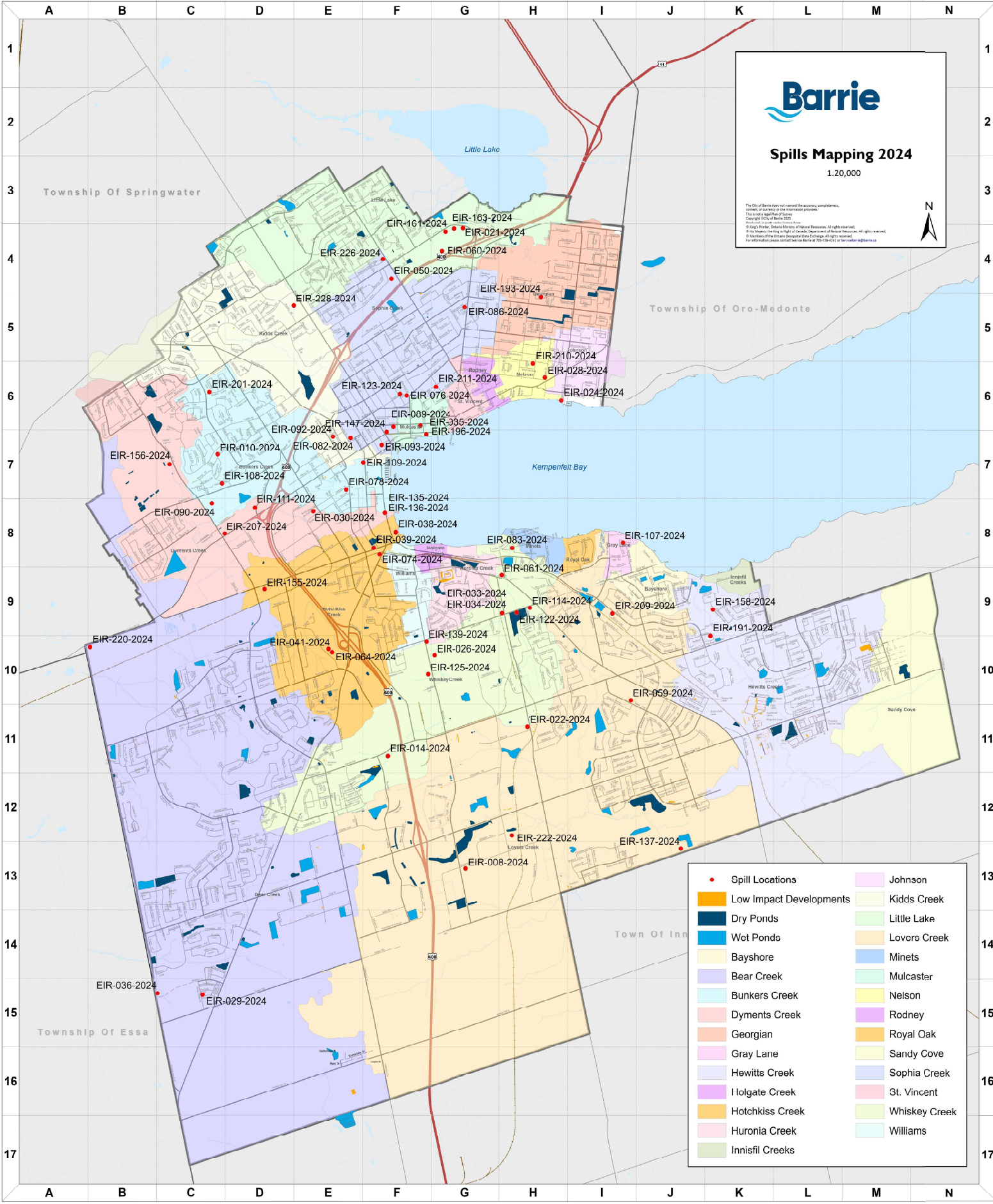
Notes:  
Ammonia = Total Ammonia as N  
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WK04



Appendix H – Spills and Discharge Events



**Spills Mapping 2024**

1:20,000

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- |                         |               |
|-------------------------|---------------|
| • Spill Locations       | Johnson       |
| Low Impact Developments | Kidds Creek   |
| Dry Ponds               | Little Lake   |
| Wet Ponds               | Lovers Creek  |
| Bayshore                | Minets        |
| Bear Creek              | Mulcaster     |
| Bunkers Creek           | Nelson        |
| Dyments Creek           | Rodney        |
| Georgian                | Royal Oak     |
| Gray Lane               | Sandy Cove    |
| Hewitts Creek           | Sophia Creek  |
| Iolgate Creek           | St. Vincent   |
| Hotchkiss Creek         | Whiskey Creek |
| Huronia Creek           | Williams      |
| Innisfil Creeks         |               |

Summary of Spills and Abnormal Discharges

Record ID	Description of Incident	Cause of Spill	Specific Location	Occurrence Date	Reported Date
EIR-008-2024	Accident at intersection between tranposrt truck and SUV. Spill of diesel to ditch -- Car drove off of the roadway and crashed into the electrical box on the boulevard in front of 100 Fox Run Mineral oil leaked onto the roadway and into the storm catch basin in front of 95 Fox Run	--	On Saunders Road in front of 161 Saunders Road	2024-01-26	2024-01-26
EIR-010-2024	Due to the melt and steep slopes on the construction site sediment is entering into the watercourse Whiskey Creek	Mineral oil leaking from damaged electrical box.	On the boulevard in front of 100 Fox Run.	2024-02-05	2024-02-05
EIR-014-2024		Silt laden runoff from construction site.	Bryne Drive Extension work at Harvie Road.	2024-02-09	2024-02-09
EIR-021-2024	Vehicular collision	--	Cundles Rd E, between intersection of JC Massie Way and the on-ramp to Hwy 400 southbound	2024-02-27	2024-02-27
EIR-022-2024	Sediment spill to creek	--	430 Huronia Rd	2024-02-28	2024-02-28
EIR-024-2024	Spill of light hydrocarbon into Lake Simcoe at Johnsons Beach Originated from the Storm system	Unknown	Along Johnson Beach	2024-03-08	2024-03-08
EIR-026-2024	Potential spill reported to SAC on March 8 2024 Dog walker in Lackie's Bush strong odour of Sulphur gas and murky milky water The weather was clean and not raining at the time Dog went into the water and is now itchy There is a lot of construction in area SAC Reference number 14ZLVGS	Silt impacted water.	Lackie's bush. No specific area was provided.	2024-03-14	2024-03-08
EIR-028-2024	Sewage spilling out of a Sanitary Sewer	Blockage in sanitary sewage infrastructure	In the intersection of Puget St and Codrington St	2024-03-21	2024-03-22
EIR-029-2024	Report of dumping paint down the catchbasin at the intersection of Koda Street and Brown Bear Street	--	Northeast CB	2024-04-01	2024-04-02
EIR-030-2024	Encampment fire next to Dymment's Pond	--	Adjacent to Dymment's Pond	2024-04-04	2024-04-04
EIR-033-2024	Water entering the roadside ditch system as a result of a watermain leak in front of 160 Huronia Rd Dechlorination pucks placed down	Watermain leak into roadside ditching system.	In front of 160 Huronia Rd.	2024-04-10	2024-04-10
EIR-034-2024	Water entering the roadside ditch system as a result of a watermain leak in front of 160 Huronia Rd Dechlorination pucks placed down	Watermain leak into roadside ditching system.	In front of 160 Huronia Rd.	2024-04-10	2024-04-10
EIR-035-2024	Vac truck operators pumping a silty black liquid into a catch basin from the vac truck Operators explained that they were contracted by the City to clean out the catchbasins and were disposing of catchbasin water back into the storm drainage system The liquid had no odour and the truck was full according to the operators	--	Catchbasin outside 111 Collier st	2024-04-08	2024-04-08
EIR-036-2024	Failing erosion and sediment control measures resulting in a silt spill	Sediment discharging from active construction site.	Country Wide Homes Development at 5067 County Road 27.	2024-04-10	2024-04-10
EIR-038-2024	Pictures of light brown water at the lake near the Tiffin boat launch were submitted to the City The concern was that the Wastewater Treatment Facility was discharging into the lake	Sediment filled water entering the lake.	Hotchkiss and Dymment Creek outfalls.	2024-12-04	2024-12-04
EIR-039-2024	Water service leak across the road from 58 Tiffin St Dechlorination pucks were placed and the water discharging is clear	Water service leak.	Across the roadway from 58 Tiffin St.	2024-04-15	2024-04-15
EIR-041-2024	Spill of gasoline in Hotchkiss Creek at the HWY 400/Essa Road exchange southbound	Car accident	Off highway 400 southbound, in Hotchkiss creek after the off ramp and before the bridge	2024-04-17	2024-04-17
EIR-050-2024	Water main break	--	165 Ferris Lane	2024-03-04	2024-03-04
EIR-059-2024	Resident called in concerned about Styrofoam all over the roadway from the development at 70 Dean Ave	Styrofoam work being conducted on development at 70 Dean Ave without any tarps to capture the Styrofoam.	70 Dean Ave development.	2024-05-10	2024-05-10
EIR-060-2024	Report of oil slick on storm pond at JC Massie Way	Waste oil bin was knocked over and emptied into the storm drain and made it's way to the storm pond	507 Cundles Rd E and the SWMP at J.C. Massie Way	2024-05-15	2024-05-15



Summary of Spills and Abnormal Discharges

Record ID	Description of Incident	Cause of Spill	Specific Location	Occurrence Date	Reported Date
EIR-061-2024	Vehicle fire in parking lot of plaza	Fire foam used impacted catchbasin	Parking lot of 190 Minet's Point Rd roughly in front of the UPS and M&M stores	2024-05-16	2024-05-16
EIR-064-2024	Reported ESC breach behind 35 Morrow Road	--	Along the ditch area behind morrow rd along the hwy	2024-05-23	2024-05-23
EIR-074-2024	Bus spill of coolant along Essa Road No catch basins have been impacted	Bus leaking coolant	In front of 41 Essa Road, across from 34 Essa Road	2024-06-04	2024-06-04
EIR-076-2024	Water main break at 118 Mulcaster Street Water discharge is slow Pucks are being put out Nearest catch basin is approximately 1km from break	Water main break	In front of 118 Mulcaster Street within the roadway. Within the intersection of Vespra St and Innisfil St. on the west side. within Vespra Street across from 50 Innisfil Street.	2024-06-05	2024-06-05
EIR-078-2024	Water main break at the intersection of Vespra St and Innisfil St	Water main leak		2024-06-05	2024-06-05
EIR-082-2024	Water service break at 37 Parkside Dr Water is slow and discharging along Park St Dechlorinate pucks have been put around the impacted catch basins	Water service break	Along Park Street in front of 37 Parkside Drive.	2024-06-05	2024-06-05
EIR-083-2024	Reported concerns with water quality within Whiskey Creek which runs along the back of his property The water has risen up 8 or so inches and is very muddy and dirty looking	Water operations flushing upstream.	Whiskey Creek behind 211 The Boulevard property.	2024-06-05	2024-06-05
EIR-086-2024	Pool Company Dumping Sludge into City owned CB	--	Intersection of Highview and Duckworth	2024-06-10	2024-06-10
EIR-089-2024	Small amount of liquid called saniclean was spilled into the sotrm sewer	Altercation	33 Colliers St - in the back alley behind the Collier st parking garage	2024-06-12	2024-06-12
EIR-090-2024	Water line hit and damaged at Ops Centre	Construction	165 Ferndale Drive	2024-06-12	2024-06-13
EIR-092-2024	Water to catch basin	Watermain break	114 Sophia St W	2024-05-18	2024-05-18
EIR-093-2024	Antifreeze to catch basin	Leak from City bus	COB bus terminal, platform 3	2024-06-07	2024-06-07
EIR-107-2024	Concrete wash water and sediment spill to roadway	--	On roadway in front of 45 Gray Lane	2024-06-28	2024-06-28
EIR-108-2024	Sediment to catch basin	Water main break	Watermain at boulevard at corner of 20 Fox Run and Broadfoot	2024-07-04	2024-07-04
EIR-109-2024	Possible impact to watercourse	Encampment fire	Vacant property at the corners of Braford, Dunlop W and High Streets	2024-07-03	2024-07-03
EIR-111-2024	Tractor trailer fire on Dunlop St W Fire foam suppressant was used	--	Fire occurred on Dunlop St. W. approximately 200-400ft west of Cedar Pointe Dr.	2024-07-09	2024-07-09
EIR-114-2024	Silt Spill and ECA noncompliance	--	410 Yonge/343 Little development.	2024-07-12	2024-07-12
EIR-122-2024	Reported concern of suds in the creek flowing through a City Park off Little Ave	--	South west corner of intersection at Little Ave and Huronia Road	2024-07-17	2024-07-18
EIR-123-2024	Encampment Fire in green space at 25 Peel Street Fire water said to be running into creek Sophia	--	East side of Peel Street in greenspace	2024-07-21	2023-07-21
EIR-125-2024	Contractor working on an infrastructure project on Bayview south of Little Ave hit a sanitary sewer main with excavator causing sewage to spill to Whiskey Creek	--			
EIR-135-2024	--	--	In front of 230 Bayview Drive	2024-07-22	2024-07-22
EIR-136-2024	Service leak	--	Service line between Ellen St and Lakeshore Dr	2024-07-23	2024-07-23
EIR-137-2024	Service leak	--	Service line between Ellen St and Lakeshore Dr	2024-07-23	2024-07-23
EIR-139-2024	Alteration to watercourse	--	Property at 560 lockhart Dr	2024-07-23	2024-07-23
EIR-147-2024	Motor oil to catch basin	Resident washing driveway to roadway	Roughly unit 28, 177 Bayview Dr	2024-07-26	2024-07-26
EIR-155-2024	Service leak	--	Sidewalk outside of 3 Clapperton ST	2024-07-04	2024-07-04
EIR-156-2024	Fire occurring at 369 Tiffin Street which has cause fire water to enter into the municipal storm infrastructure	Fire at All Ontario Recycling.	369 Tiffin Street	2024-08-19	2024-08-19
	An articulated truck experienced a catastrophic fuel leak onto the road	--	Ferndale Dr N, uphill of the landfill.	2024-09-10	2024-09-10

Summary of Spills and Abnormal Discharges

Record ID	Description of Incident	Cause of Spill	Specific Location	Occurrence Date	Reported Date
EIR-158-2024	Report of a minor water man leak at the aforementioned address water is reaching catch basin pucks deployed to remove chlorine	--	Outside 51 Princess Margaret Gate	2024-09-12	2024-09-12
EIR-161-2024	An overland sewage spill occured outside of Montanas Restaurant	--	Parking lot of Montanas	2024-09-13	2024-09-13
EIR-163-2024	Overland Sewage spill on private property Draining to Private storm sewer	Sanitary sewer blockage in North Barrie Crossing plaza.	At exit of shell station car wash.	2024-09-22	2024-09-22
EIR-191-2024	Report of a leaking car parked on the road outside a residential address	--	55 Edwards Dr	2024-10-15	2024-10-15
EIR-193-2024	Hose discharging directly into catch basin Hose is coming from back yard	Pool water drainage	In front of 48 Hickling Trail	2024-10-09	2024-10-09
EIR-196-2024	Report of workers on a boat chipping paint and throwing it into Kempenfelt Bay	--	Offshore at 185 Dunlop St W	2024-10-21	2024-10-21
EIR-201-2024	Sidewalk Plow lost hydraulic fluid	--	On sidewalk in front of 58 Austen Lane - some discharge on Leacock before turning onto Austen.	2024-10-29	2024-10-29
EIR-207-2024	A concrete truck's saddle tank has fallen off truck Leaking into storm sewer Tank was a water tank but caused hydraulic leak	Hydraulic line blown off of concrete truck (Sarjeant)	Dunlop St W and Ferndale Dr N intersection. On North bound lane on Ferndale Dr N.	2024-11-07	2024-11-07
EIR-209-2024	Minor water main break Some water reaching catch basin wet weather but dechlorination pucks deployed	--	Water main at 4 Bruce Crescent. Leak possibly on private property.	2024-11-19	2024-11-19
EIR-210-2024	A vacuum truck suffered a hydraulic leak on the roadway whilst work was being undertaken to repair a water main 60L hydraulic il spill about 05 L into catch basin	--	Outside 102 Napier St.	2024-11-20	2024-11-20
EIR-211-2024	Report of excessive amounts of sediment on the road at Codrington St	--	Codrington Street at intersection with Dundonald	2024-11-21	2024-11-21
EIR-220-2024	MVC at intersection of County Rd 90 and Town Line Oil spilled to roadway and impacted ditch	MVC	SE corner of County Road 90 (Dunlop) and Town Line.	2024-12-01	2024-12-01
EIR-222-2024	Overland sewage spill	--	Rear of 647 Welham Road - MAH at the far north east corner of the parking lot.	2024-12-06	2024-12-06
EIR-226-2024	City sidewalk plough blew hydraulic line attachment side and impacted sidewalk all along Robin Court Second machine is heading on route to apply sand to impacted sidewalk	Blown hydraulic line from City of Barrie sidewalk plough	All of Robin Court sidewalk	2024-12-19	2024-12-19
EIR-228-2024	Impacts to catch basins	Vehicle fire - fire foam	Bayfield and Cundles corner parking lot of Kozlov Mall	2024-12-28	2024-12-28