



NPDES MS4 Permit Annual Report

October 1, 2022 – September 30, 2023

Permit No. NCS000245

Prepared under the direction of S. Wayne Miles, PE, Stormwater Program Manager

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**Raleigh
Stormwater**



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Certification

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

S. Wayne Miles, PE
Stormwater Program Manager
City of Raleigh



Introduction

This report describes programs and activities undertaken during the period of October 1, 2022, through September 30, 2023, as required by the City of Raleigh’s permit to discharge stormwater under National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit Number NCS000245. The annual reporting requirements are described in Part IV.A.1 of the permit. These requirements are included in Table 1 with the associated annual report sections. Annual reporting provides a summary of the activities completed, as identified in the City’s Stormwater Management Plan (SWMP), and the annual report content aligns with the content of the City SWMP.

Table 1. Annual Report Components

Annual Report Component	Report Section(s)
a. A detailed description of the status of implementation of the Stormwater Management Plan. This will include information on development and implementation of each major component of the Stormwater Management Plan for the past year and schedules and plans for the year following each report.	A.1, A.3, B.1, B.2, C.1, C.2, D.1, D.2, E.1, E.2, F.1 F.2, G.1, G.2, H.1, H.2, I.1, I.2, J.1, J.2, K.3
b. Description and justification of any proposed changes to the Stormwater Management Plan. This will include descriptions and supporting information for the proposed changes and how these changes will impact the Stormwater Management Plan (results, effectiveness, implementation schedule, etc.).	K.2
c. Any necessary changes to programs or practices for assessment of management measures implemented through the Stormwater Management Plan.	B.3, C.3, D.3, E.3, F.3, G.3, H.3, I.3, J.3, K.1
d. A summary of data accumulated as part of the Stormwater Management Plan throughout the year along with an assessment of what the data indicates.	A.3, B.2, B.3, C.2, C.3, D.2, D.3, E.2, E.3, F.2, F.3, G.2, G.3, H.2, H.3, I.2, I.3, J.2, J.3, K.2
e. An assessment of compliance with the permit, information on the establishment of appropriate legal authorities, inspections, and enforcement actions.	K.1, K.2, K.3
f. Discussion of program funding.	A.2



Section A: Program Implementation

The City of Raleigh implements, manages, and oversees all aspects of its SWMP to control to the maximum extent practical the discharge of pollutants associated with stormwater runoff from its MS4.

A.1 MS4 Program Management

The City of Raleigh is committed to maintaining compliance with its NPDES MS4 permit and protecting the City's stormwater quality through the implementation of a comprehensive stormwater management program. Stormwater Management Division staff regularly coordinate across internal work groups and City departments to effectively implement programmatic requirements and City-wide initiatives that are outlined in our Stormwater Management Plan (SWMP). During this last year, the SWMP was updated, put out for public comment, and submitted to NCDEQ. These changes included general program updates limited to FY 24-27 schedules, minor revisions to several reporting metrics to remove ambiguity, and narrative updates in respective program sections. In addition, program elements for Post-Construction Site Runoff Controls were expanded to incorporate Part II Sections F. 3-7 of the permit. The annual report template has also been updated since the last report in October 2021 to better correspond with our updated SWMP.

Currently, the total number of Full Time Employees (FTEs) associated with MS4 permit program implementation for FY2024 is 142, with 79 FTEs with the Stormwater Management Division in the Engineering Services Department and 63 FTEs with Stormwater Maintenance in the Raleigh Department of Transportation Field Services group. Implementation of each MS4 program component is outlined in Subsection 1 of Sections B through J.

A.2 Program Funding

The City's Stormwater Management Division receives capital and operating funds appropriated by the City Council that are dedicated to implementing and managing the provisions of the SWMP and complying with MS4 permit requirements. Program elements are primarily funded by the City stormwater utility fee. Additional sources of funding include plan review and permit application fees. The City general fund and revenue from the Raleigh Water utility fee also may be utilized for pollution prevention and good housekeeping activities by owning departments. Grant funding is also routinely pursued, and when awarded, is utilized to augment the annual budget. Further fiscal analysis and investigation of funding options (such as a general fund allocation or a change to the stormwater fee) are conducted annually to maintain adequate funds to meet program needs.

The allocated budget for the City Stormwater Program in FY2023 (fiscal year from July 1, 2022, through June 30, 2023) was sufficient to meet program needs and implement the requirements of the MS4 permit. The total budget for FY2023 was \$35,241,434, and Capital Improvement Program total budget for FY2023 was \$11,393,950 (see Table A-1).

The City increased the stormwater utility fee by 2.5% for FY2024 (fiscal year from July 1, 2023, through June 30, 2024) based on the determined need for additional personnel, increased operations and Capital Improvement Program needs, and project cost escalation. The total budget for the City's Stormwater Program for FY2024 is \$37,672,530. The budget funds annual operations and the Capital Improvement Program. The adopted Capital Improvement Program budget for the City's Stormwater Program for FY2024 is \$13,128,000.



Table A-1: FY2023 Stormwater Program Capital Improvement Program Budget

Stormwater Program Category	FY2023 CIP Budget
Neighborhood Drainage System Improvements	\$1,250,000
General Drainage Infrastructure	\$3,023,950
Asset and Watershed	\$2,250,000
Water Quality/GSI Projects	\$2,540,000
Stream Restoration and Water Quality	\$500,000
Flood Hazard Mitigation and Flood Early Warning	\$950,000
City SCMs and Dams Program	\$880,000
Total	\$11,393,950



A.3 Best Management Practices

Table A-2 includes a brief description of the Program Implementation best management practices required by the MS4 permit, the planned actions for the current and future fiscal years as described in the SWMP, the annual reporting metrics identified in the SWMP, and the actual metrics for actions completed in FY2022-2023.

Table A-2: Program Implementation Metrics and Results

Program Element	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section A The program will be subject to a compliance audit or a voluntary assessment process on an annual basis	Complete annual review with NCDEQ or conduct a voluntary assessment.	Complete annual review with NCDEQ or conduct a voluntary assessment.	Report type of assessment completed	Voluntary self-audit completed May 2023; see Section K
Part II Section A.1 The permittee will maintain adequate legal mechanism, such as regulations, ordinances, policies, and procedures to implement all provisions of the SWMP.	Review regulations, ordinances, policies, and procedures and update, if necessary.	Review or evaluate regulations, ordinances, policies, and procedures annually and update, as needed.	Report modifications to the regulations, ordinances, policies, and procedures	Updated Article 9.2 of the UDO to reflect changes in the readopted Neuse Nutrient Strategy Stormwater Rule (15A NCAC 02B .0711)
Part II Section A.2 The permittee will implement provisions of the SWMP and evaluate performance and effectiveness of the program components.	Evaluate program effectiveness with responsible parties, as described in each section and summarized in Section 13 of the SWMP.	Evaluate program effectiveness annually with responsible parties annually, as described in each section and summarized in Section 13 of the SWMP.	Program evaluation completed (Y/N)	Yes
			Annual reporting of program effectiveness is described in each annual report section	Sections B-3, C-3, D-3, E-3, F-3, G-3, H-3, & I-3.



Program Element	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
<p>Part II Section A.3 The permittee is required to keep the SWMP up to date with annual updates if any changes are warranted.</p>	<p>Review the SWMP at least once annually and update, as needed.</p>	<p>Review the SWMP at least once annually and update, as needed.</p>	<p>Report modifications to the SWMP and make available to NCDEQ upon request</p>	<p>The SWMP was updated on March 10, 2023 and submitted to NCDEQ on March 13, 2023.</p> <p>Updates included:</p> <ul style="list-style-type: none"> •General program updates limited to FY 24-27 schedules, minor revisions to several reporting metrics to remove ambiguity, and minor narrative updates in respective program sections. •Updated organizational chart •Updates to the receiving waters to reflect the most recent EPA-approved DEQ Final 303(d) List, replacing an older list from 2018. •Expanded Table 10. Program Elements for Post-Construction Site Runoff Controls to incorporate Part II Sections F. 3-7 of the permit.



Program Element	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section A.4 The permittee shall maintain, and make available to the Division upon request, written procedures for implementing the six minimum control measures. Written procedures shall identify specific action steps, schedules, resources, and responsibilities for implementing the six minimum measures.	Maintain written procedures as documented in Sections 4 through 12 of the SWMP.	Maintain written procedures as documented in Sections 4 through 12 of the SWMP.	Written procedures are available to NCDEQ upon request	N/A, written procedures are available to NCDEQ upon request.



Section B: Public Education and Outreach

B.1 Program Narrative

The City develops and uses media and other outreach methods to educate the public on the causes and impacts of stormwater pollution, including utility bill inserts, newsletters, webpages, articles, social media, workshop presentations, classroom education events, and TV and radio campaigns. In addition, the City participates in the Clean Water Education Partnership (CWEP), which provides videos, online resources, and printed materials to its members and produces a widespread multi-media campaign that features television public service announcements, radio public service announcements, and a stormwater informational website (www.nc-cleanwater.org).

B.2 Best Management Practices

Table B-1 includes a brief description of the Public Education and Outreach best management practices required by the MS4 permit, the planned actions for the current and future fiscal years as described in the SWMP, the annual reporting metrics identified in the SWMP, and the actual metrics for actions completed in FY2022-2023.

Table B-1: Public Education and Outreach Program Metrics and Results

Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section B.2 (a) Describe target pollutants and sources	Review annually the target pollutants and sources in the Education, Outreach, and Public Involvement Plan and update as needed.	Review annually the target pollutants and sources in the Education, Outreach, and Public Involvement Plan and update as needed.	Report target pollutants and the associated sources	See Table B-2
	Implement the public education and outreach program utilizing the Education, Outreach, and Public Involvement Plan and the Communications Plan.	Implement the public education and outreach program utilizing the Education, Outreach, and Public Involvement and the Communications Plan.	Report reason each target pollutant was selected	See Table B-2
	Evaluate the program effectiveness annually and notify the Water Quality Manager of plan and/or program modifications.	Evaluate the program effectiveness annually and notify the Water Quality Manager of plan and/or program modifications.		



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section B.2 (b) Describe target audiences	Review and update target audiences associated with each pollutant and source in the Public Education and Engagement Plan.	Review annually the target audiences associated with each pollutant and source in the Education, Outreach, and Public Involvement Plan and update as needed.	Report identified target audiences likely to have significant stormwater impacts for each target pollutant.	See Table B-2
	Implement the public education and outreach program utilizing the Public Education and Engagement Plan and the Communications Plan. Evaluate the program effectiveness annually and notify the Water Quality Manager of plan and/or program modifications.	Implement the public education and outreach program utilizing the Education, Outreach, and Public Involvement Plan and the Communications Plan. Evaluate the program effectiveness annually and notify the Water Quality Manager of plan and/or program modifications.	Report reason each target audience was selected	See Table B-2
Part II Section B.2 (c) Informational website	Maintain and update the stormwater program webpage. Evaluate program effectiveness and notify the Water Quality Manager of program modifications.	Maintain and update the stormwater program webpage. Evaluate program effectiveness annually and notify the Water Quality Manager of program modifications.	Report number of hits to Stormwater Management Division main site and SWMP webpage	414,500 page views for the Stormwater Management main site; 731 page views for the SWMP webpage



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section B.2 (d) Distribute public education materials to identified user groups	Distribute public education materials, as described in the Education, Outreach, and Public Involvement Plan. Participate in CWEP activities and events. Evaluate the program effectiveness annually and notify the Water Quality Manager of plan and/or program modifications.	Distribute public education materials, as described in the Education, Outreach, and Public Involvement Plan. Participate in CWEP activities and events. Evaluate the program effectiveness annually and notify the Water Quality Manager of plan and/or program modifications.	Report number of educational materials distributed by type Provide CWEP annual report	See Table B-3 Refer to CWEP Annual Report
Part II Section B.2 (e) Promote and maintain hotline(s) or helpline(s)	Maintain the stormwater administration helpline to receive public complaints. Evaluate the program effectiveness annually and notify the Water Quality Manager of plan and/or program modifications.	Maintain the stormwater administration helpline to share information and receive public complaints. Evaluate the program effectiveness annually and notify the Water Quality Manager of plan and/or program modifications.	Report number of calls handled by the stormwater administration helpline by type of call	Total calls: Drainage: 136 Utility fee: 99 Plan review: 262 Volunteer: 19 Illicit discharge: 91 Active construction: 118 Capital projects: 20 Utility billing: 16
Part II Section B.2 (f) Implement a public education and outreach program	Review annually the Education, Outreach, and Public Involvement Plan and update as needed.	Review annually the Education, Outreach, and Public Involvement Plan and update as needed.	Report City events and number of handouts distributed at each event	See Table B-3



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
	<p>Review annually the Communications Plan and update as needed.</p> <p>Implement the public education and outreach program utilizing the Education, Outreach, and Public Involvement Plan and the Communications Plan.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of plan and/or program modifications.</p>	<p>Review annually the Communications Plan and update as needed.</p> <p>Implement the public education and outreach program utilizing the Education, Outreach, and Public Involvement Plan and the Communications Plan.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of plan and/or program modifications</p>	<p>Report City in-school events and number of participants</p>	<p>See Table B-4</p>



Table B-2: Target pollutants, associated sources, target audiences, and justifications

Target Pollutant	Target Pollutant Justification	Pollutant Sources	Target Audiences	Target Audiences Justification
Sediment	Increases MS4 maintenance, degrades stream and lake biological abundance and diversity, reduces lake depth and storage volume, aesthetically unattractive	Illicit discharges, construction sites, streambank erosion (resulting from increasing imperviousness in the watershed)	Construction contractors, developers, municipal government, property owners/residents, general public	Audiences conduct, oversee, regulate, engage in, and/or observe activities at pollutant sources
Nutrients (nitrogen and phosphorus)	Promotes growth of algae in lakes and streams which can degrade biological abundance and diversity, toxic to aquatic species and humans, impedes recreation, aesthetically unattractive	Illicit discharges, sewage overflows and leaks, clippings and waste from landscape maintenance/lawn care, pet/animal waste, application and improper storage of fertilizers, atmospheric deposition	Landscape maintenance/lawn care companies, property owners/residents, municipal government, general public	Audiences store and apply fertilizer, own, or maintain sewer plumbing/pipes, engage in, and/or observe activities at pollutant sources
Trash	Increases MS4 maintenance, aesthetically unattractive	Illicit discharges, construction sites, litter, dumping, restaurants, food trucks	Construction contractors, municipal government, property owners/residents, restaurant and food truck owners/operators, general public	Audiences generate and store trash or engage in and/or observe activities at pollutant sources
Metals	Degrades stream and lake biological abundance and diversity	Illicit discharges; vehicle storage and maintenance; construction sites; paints and finishes, material, and chemical storage	Construction contractors, painting contractors, property owners/ residents, municipal government, vehicle repair shops	Audiences engage in activities that store/handle materials and generate wastes that contain metals and/or observe activities at pollutant sources



Target Pollutant	Target Pollutant Justification	Pollutant Sources	Target Audiences	Target Audiences Justification
Bacteria	Harms public and pet health	Illicit discharges, sewage overflows and leaks, failing septic systems; pet/animal waste; unhoused populations	Property owners/residents, municipal government, general public	Property owners/residents responsible for septic systems and private sewer plumbing and connections and/or responsible for properly disposing of pet/human waste, municipal government responsible for most sanitary sewers, general public observes activities at pollutant sources
Oil & grease	Degrades stream and lake biological abundance and diversity	Illicit discharges, vehicle storage and maintenance, restaurants, food trucks	Vehicle repair shops, restaurant and food truck owners/operators, municipal government, general public	Audiences conduct, oversee, engage in, and/or observe activities at pollutant sources

Table B-3: Public Education and Outreach Program event and material distribution log

Date	Description of Event/Activity	Attendee & Material Count (# materials equals # attendees)	Types of Educational Materials
10/06/2022	Stormwater Management Advisory Commission October Meeting	30	
10/08/2022	Fall Rain Garden & Rain Barrel Workshop	13	Rainwater Rewards, IDDE, CWEP Big Six Pollution Brochure
10/22/2022	Drop in Foster a Stream Cleanup	70	
10/30/2022	Community Garden Event at Cross Link Road	40	Raleigh Rainwater Rewards
11/01/2022	City Council Presentations on Stream Stabilization and Drainage Assistance Policies	200	



Date	Description of Event/Activity	Attendee & Material Count (# materials equals # attendees)	Types of Educational Materials
11/01/2022	FEWS Demo to US Army Corp of Engineers	5	
11/02/2022	Pigeon House Watershed Public Meeting	32	Volunteer Opportunities, Stream Monitoring, Commercial and Residential Raleigh Rainwater Rewards, Paint Disposal Practices, Sediment Pollution, General Pollution Prevention
11/03/2022	Stormwater Management Advisory Commission November Meeting	33	
11/03/2022	Western North Ridge Stormwater Improvement Project and Mitigation Bank Feasibility Study Presentation	25	
11/03/2022	GeoSpray Polymer Presentation	17	
11/04/2022	Native Plants for Stream Restorations	25	
11/05/2022	Fall Volunteer Stream Monitoring Workshop	8	
11/08/2022	NCSU AEC 40 and beyond Academia Panel Discussion	14	
11/08/2022	Glenbrook/Dacian Public Meeting	4	
11/14/2022	Five Points Community Meeting	25	
11/15/2022	IDDE Presentation	8	
11/16/2022	GIS Day	100	
12/03/2023	Biltmore Hills Stream Cleanup	9	
12/08/2023	Stormwater Management Advisory Commission December Meeting	30	



Date	Description of Event/Activity	Attendee & Material Count (# materials equals # attendees)	Types of Educational Materials
12/28/2022	Stormwater Smart Newsletter Winter Edition	4,827	
01/05/2023	Stormwater Management Advisory Commission January Meeting	40	
01/05/2023	IDDE Presentation to the Stormwater Advisory Commission and attendees	40	
01/09/2023	Five Points Community Meeting – Volunteer opportunities and R-3 Program	15	
02/02/2023	Stormwater Management Advisory Commission February Meeting	20	
02/02/2023	Your Service Connection Utility Bill Insert = Sediment Pollution and IDDE Article	196,000	
02/10/2023	Stream Stabilization Workshop	40	
02/13/2023	Stormwater Billing Notification Letters and Fee Brochures	101	Fee Brochures
02/18/2023	Rainwater in Your Yard Presentation at Biltmore Hills Community Center	20	Rainwater Rewards and Drainage Assistance Brochures
03/02/2023	Stormwater Management Advisory Commission March Meeting	33	
03/08/2023	NCSU EV 101 Spring Semester Presentation at Wooten Meadow Park	15	
03/08/2023	UNC-CH ENEC 204 Environmental Seminar at UNC Chapel Hill Murry Hall	8	
03/08/2023	NCSU 2023 Equity Research Symposium/Round Table Discussion/Walnut Creek Watershed @ NCSU Talley Student Union	15	
03/15/2023	Stormwater Smart Newsletter Spring 2023 Edition	4879	
03/16/2023	24 th Annual Raleigh Small Business Expo Workshop	450	



Date	Description of Event/Activity	Attendee & Material Count (# materials equals # attendees)	Types of Educational Materials
03/16/2023	Raleigh Stormwater University- The History of Raleigh Stormwater	20	
03/18/2023	Spring Rain Garden Rain Barrel Workshop at Walnut Creek Wetland Park (WCWP)	4	
03/21/2023	Spotswood Drive Public Meeting at Durant Nature Preserve	4	CWEP Big Six Pollution, Rain Barrel, Rainwater Rewards Residential, Stream Stabilization Brochures
03/24 & 25/2023	Raleigh Water and Transportation Field Services Job Fair	52	Volunteer Opportunities, Stormwater Pollution, Flooding Risk Stormwater Fee Brochures
03/25/2023	Creek Week Stream Clean Up at Marsh Creek Park	42	
03/25/2023	Arbor Day Event at Chavis Park	118	CWEP Big Six Pollution, Rainwater Rewards Residential, R3 Rack Card, Stream Stabilization, Volunteer Opportunities, Stormwater Pollution Card, Rain Barrel, Drainage Responsibility, Scoop the Poop Card/ Brochures
04/06/2023	Stormwater Management Advisory Commission April Meeting	29	
04/11/2023	Clean Transportation Demonstration Day	1	
04/17/2023	Earth Day Event Communication Announcement	4,528	
04/20/2023	Raleigh Developer Webinar- Submitting Nutrient Calculations to the City	100	
04/21/2023	Earth Day Event at Dix Park	225	Rainwater Rewards Brochure, English and Spanish, Flood Risk, Drainage Responsibility, Stream Stabilization, Volunteer Opportunities Spanish and English, Rain Barrel
04/21/2023	Environmental Awards Event at Dix Park	225	
04/22/2023	Our Creek –Our Community Festival	31	
04/24/2023	FEWS Virtual Presentation	50	CWEP English and Spanish Big Six Pollution Brochure, R-3 Residential, Fertilizer Pollution, Sediment Pollution, Nutrient Pollution, Stream



Date	Description of Event/Activity	Attendee & Material Count (# materials equals # attendees)	Types of Educational Materials
			Stabilization, Stormwater English and Spanish Pollution Prevention, Rain Barrel, Capture it! Contest, Brochures
04/26/2023	Upper Durant Public Meeting Wetland Conversion	26	Capture it! Contest, CWEP Big Six, Drainage Responsibility, Rain Barrel, Rainwater Rewards Residential
04/27/2023	Camp Pond Dam Public Meeting	27	Volunteer Opportunities, Drainage Responsibility, Flood Risk, Rain Barrel, Rainwater Rewards-Residential, Stream Stabilization Brochures
04/29/2023	Songbird Festival at Blue Jay Point County Park	219	CWEP Big Six Pollution, Capture it! Contest, Rain Barrel, Rainwater Rewards, Residential Brochures
04/29/2023	Spring Stream Monitoring Workshop at WCWP	7	
05/06/2023	Stormwater Management Advisory Commission May Meeting	32	
05/08/2023	Teacher Appreciation Week Communication email	4,546	
05/09/2023	ASFPM Conference and Tour Alluvial Decoders at Raleigh Convention Center	60	
05/10/2023	FEWS Presentation at ASFPM Conference at Raleigh Convention Center	80	
05/11/2023	Millbrook Exchange Park Stream Project Public Meeting	12	CWEP Big Six Pollution, Drainage Responsibility, Flood Risk, Nutrient Pollution, Stormwater Pollution Prevention, Rain Barrel, R-3 Process, Rainwater Rewards Residential, R-3 Rack Card, Sediment Pollution, Stormwater Fee, Stream Stabilization Brochures
05/15/2023	Stormwater Billing Notification Mailing and Fee Brochures	58	Fee Brochures
05/19/2023	FEWS Presentation & Tour to City Council	30	



Date	Description of Event/Activity	Attendee & Material Count (# materials equals # attendees)	Types of Educational Materials
05/31/2023	Stormwater Billing Notification Mailing and Fee Brochures	38	Fee Brochures
06/01/2023	Stormwater Management Advisory Commission June Meeting	30	
06/01/2023	FEWS Presentation to the Stormwater Management Commission	30	
06/15/2023	Stormwater Billing Notification Mailing and Fee Brochures	248	Fee Brochures
06/23/2023	Flood Awareness Mailing	96	
06/23/2023	Stormwater Smart Summer Newsletter	5,006	
06/29/2023	Engineering for the 21 st Century summer career education program at WCWP	12	
07/10/2023	Water Quality Mini Workshop for Parks and Rec Summer Staff at Dix Park	10	
07/15/2023	Homeownership Information Fair at Carolina Pines Community Center	200	Drainage Responsibility and Stream Stabilization Brochures
07/18/2023	Pigeon House Watershed Pop-up Public Meeting at Tarboro Rd. Community Center	16	
07/19/2023	Stormwater Billing Notification Mailing and Fee Brochures	8	Fee Brochures
07/19/2023	Wake Envirothon Presentation for High School Students at WCWP	7	
07/20/2023	Rocky Branch/Walnut Creek Watershed Public Meeting at WCWP	42	
07/20/2023	Raleigh Stormwater University Webinar-Green Stormwater Infrastructure	65	



Date	Description of Event/Activity	Attendee & Material Count (# materials equals # attendees)	Types of Educational Materials
07/21/2023	Concrete Power Washing Pollution Social Media Campaign	Three social media posts on social media accounts, 1587 total views	
07/31/2023	Stormwater Billing Notification Mailing and Fee Brochures	104	Fee Brochures
08/03/2023	Stormwater Management Advisory Commission August Meeting	49	
08/08/2023	Pool Draining and Chlorine Article in the Your Service Connection Mailing	196,000	
08/08/2023	District B Town Hall Meeting at Abbotts Creek Community Center	30	
08/19/2023	Mud Day Event at WCWP	70	
08/22/2023	Walnut Creek Wetland Community Partnership Meeting at Biltmore Hills Community Center	20	Rainwater Rewards, Drainage Responsibility Rain Barrel Brochures
08/24/2023	Crabtree Creek Community Connector Trail Public Meeting at Worthdale Community Center	4	Rainwater Rewards and Volunteer Opportunities Brochures
08/24/2023	Hare Snipe Watershed Public Meeting at Lake Lynn Community Center	105	Rainwater Rewards, Drainage Responsibility, Volunteer Opportunities Brochures
08/29/2023	ENV 101 for NCSU Students at Rocky Branch	20	
08/30/2023	Stormwater Billing Notification Mailing and Fee Brochures	60	Fee Brochures
09/07/2023	Oakwood Garden Club Presentation	25	
09/07/2023	Stormwater Management Advisory Commission September Meeting	44	
09/08/2023	Muslim Community Resource Fair at the North Raleigh Mosque	25	
09/08/2023	RDOT and Stormwater Job Fair Event	57	



Date	Description of Event/Activity	Attendee & Material Count (# materials equals # attendees)	Types of Educational Materials
09/11/2023	Day of Service Parks and Stormwater Cleanup Event at Walnut Creek Softball Park	30	
09/15/2023	Raleigh Neighborhood Exchange at Carolina Pines Community Center	52	CWEP Big Six Pollution, Capture it! Contest, Drainage Responsibility, Flood Risk, Rain Barrel, Rainwater Rewards Residential, R-3 Rack Card, Scoop the Poop Card, Stream Stabilization
09/13/2023	Stormwater Smart Fall Newsletter	5116	
09/18/2023	Pollution Prevention Social Media Campaign	5116	
09/18/2023	Still Leading by Example Presentation: How Raleigh Continues to Advance GSI at the APWA Conference	60	
09/20/2023	Site Development Infrastructure Design Project for Students at Wake STEM Early College High School	30	
09/23/2023	PEJ Watershed Learning Network Presentation at the WCWP	15	
09/26/2023	Radio Interview on IDDE and GSI	1000	
09/29/2023	Stormwater Billing Notification Mailing and Fee Brochures	66	Fee Brochures
09/30/2023	Stormwater Billing Notification Mailing and Fee Brochures	13	Fee Brochures
09/30/2023	Fall Rain Garden Rain Barrel Workshop at WCWP	12	Stream Stabilization, Rain Barrel, Rainwater Rewards Residential, Volunteer Opportunities



Table B-4: Public Education and Outreach school events

Date	# Students Attended	Event Location	Event Description	Virtual/In-person
10/01/2022	91	Chavis Community Center	Raleigh Police Department Youth Summit	In person
10/19/2022	45	Walnut Creek Wetland Park	Mini Stream sampling demo and storm drain table presentation	In person
11/02/2022	250	Rolesville Middle School	Career Opportunities Truck Event	In person
11/09/2022	100	Joyner Elementary School	Science Go Round Event	In person
11/10/2022	1000	Dillard Drive Middle School	Career Opportunities Truck Event	In person
11/10/2022	600	Moore Square Middle School	Career Day School Event	In person
11/29/2022	64	York Elementary School	Career Day Talk to Students	In person
12/31/2022	13	Fuller Elementary School	5 th Grade Science Club EnviroScape Demos	In person
02/03/2023	22	Soapstone Pre-School	Storytime Reading and Stream Demo	In person
02/07/2023	6	Moore Sq. Middle School	GSI Lego Demo for Future Cities Club	In person
03/06/2023	52	Wake Young Men's Leadership Academy	EnviroScape Demos	In person
03/14/2023	27	Raleigh Homeschool Network	Rain Garden in a Water Bottle Demo	In person
03/24/2023	74	Hillburn Academy Elementary School	1 st Grade Book Reading and Drainpipe Presentation	In person
04/14/2023	96	Fuller Elementary School	Science Day- EnviroScape Demos	In person



04/18/2023	44	Fletcher Academy Elementary School	EnviroScape Demos	In person
04/20/2023	100	York Elementary School	STEM Night-EnviroScape Demos	In person
04/28/2023	15	Soapstone Pre-School	Storytime Reading and Stream Demo	In person
05/08/2023	12	Wooten Meadows - Girl Scout Troup	EnviroScape Demo and Wetland Walk & Talk	In person
05/09/2023	200	Dillard Drive Middle School	Career Day Presentation	In person
09/11/2023	75	Exploris Middle School	EnviroScape Demos	In person
09/19/2023	10	Moore Square Middle School	Stormwater talk with Future Cities Students	In person
09/23/2023	603	Moore Square Middle School	Career Day Presentation/Talk	In person

B.3 Program Assessment

Stormwater Education and Outreach continues to evolve and expand to meet and exceed permit requirements. The Education Plan was revised with staff input during this reporting year. These revisions included the addition of a schedule to target one or more specific pollutants on an annual basis coinciding to specific events, seasons, and reported discharges. The Communications Plan was also updated during the reporting year. Updates included Communications support for SMAC meetings and a revised frequency as to when the Communications Plan is reviewed by staff.

The City continues to use several methods including the Stormwater helpline, raleighstormwater@raleighnc.gov, and social media to provide information and educational resources the public. Educational materials (in English and Spanish) are regularly distributed via utility bill inserts, newsletters, webpages, articles, social media, workshop presentations, classroom education events, and TV and radio campaigns. Overall engagement has increased while staffing levels remain the same; staff participated in 12 more student/school events (22) than the previous year (10). A total of 3,443 students were engaged by staff this reporting period as compared to 1,219 last period.

The City requires that all City staff complete training on allowable discharges and Illicit Discharge Detection and Elimination (IDDE) every three years. Pollution Prevention and Good Housekeeping (PPGH) training is required to be completed by designated staff every three years. The migration of this on-line training from the iLearn training platform to the SuccessFactors training platform was initiated during this reporting period and continues to date. Fewer staff required PPGH training this year due to the large number of staff that completed PPGH training during the last two reporting years.



Section C: Public Involvement and Participation

C.1 Program Narrative

The City provides opportunities for public involvement and participation in program development and implementation through community volunteer programs and mechanisms for public comment and reporting. The City's SWMP is noticed and presented at a public hearing for comment by the public at least once per permit cycle. As-needed changes to City stormwater regulations and the annual budget for the Stormwater Management Division are also noticed and presented at public hearings for comment by the public. City Council established the Stormwater Management Advisory Commission (SMAC) as a means of obtaining regular public input on policy and project matters. SMAC meets monthly, with few exceptions, to review stormwater management issues and provide guidance and recommendations to City Council. Comments by the public are also received during SMAC meetings.

C.2 Best Management Practices

Table C-1 includes a brief description of the Public Involvement and Participation best management practices required by the MS4 permit, the planned actions for the current and future fiscal years as described in the SWMP, the annual reporting metrics identified in the SWMP, and the actual metrics for actions completed in FY2022-2023.

Table C-1: Public Involvement and Participation Metrics and Results

Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section C.2 (a) Volunteer community involvement program	Continue to provide community volunteer opportunities. Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Continue to provide community volunteer opportunities. Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Report number of participants in each City volunteer opportunity	Adopt a Stream: 589 Storm drain marking: 26 Stream monitoring: 15 Foster a Stream: 308



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
<p>Part II Section C.2 (b) Establish a mechanism for public involvement</p>	<p>Conduct meeting(s) with the SMAC.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Conduct meeting(s) with the SMAC.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Report dates for SMAC meetings and discussion topics pertaining to MS4 compliance</p>	<p>10/6/2022 – Ordinance change to meet Neuse Sensitive Water rule requirements update 11/3/2022 – Stormwater Design Manual update 12/8/2022 – Pigeon House Branch Public Outreach Plan 1/5/2023 – Illicit Discharge Detection and Elimination Program presentation 2/2/2023 – Stormwater budget development approach and process 3/2/2023 – Stormwater Program FY24 budget update 4/6/2023 – n/a 5/4/2023 – n/a 6/1/2023 – n/a 8/3/2023 – Draft NPDES MS4 Permit NCDEQ public comment process/period 9/7/2023 – Raleigh Stormwater Design Manual update</p>
<p>Part II Section C.2 (c) Establish hotline(s) or helpline(s)</p>	<p>Maintain the stormwater administration helpline to receive public complaints.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of plan program modifications.</p>	<p>Maintain the stormwater administration helpline to receive public complaints.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>N/A, see helpline reporting metrics in Part II Section B.2 (e)</p>	<p>N/A</p>



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section C.2 (d) Public review and comment	Maintain the webpage for the most recent version of the SWMP.	Maintain the webpage for the most recent version of the SWMP.	Report webpage link for SWMP	https://raleighnc.gov/SupportPages/stormwater-management-plan
	Publicize a comment period for updates to the SWMP. Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Publicize a comment period for updates to the SWMP. Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Report mechanisms used for public review and comment on the SWMP	City webpage with the SWMP and Water Quality Supervisor's contact information posted. City Stormwater helpline phone number and email address to provide citizens a mechanism to comment on the SWMP between updates.
Part II Section C.2 (e) Public notice	Place legal public notice to advertise public review and comment opportunities when implementing a public involvement/participation program, as needed.	Place legal public notice to advertise public review and comment opportunities when implementing a public involvement/participation program, as needed.	If public notice occurred for SWMP updates, report mechanism(s) used to advertise public review and comment and public notice period.	Public comment on the SWMP updates utilizing the City's website, social media outreach, and SMAC discussion occurred 8/4/2022 – 9/1/2022.
	Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Report number of SMAC meetings that provided an opportunity for public involvement/participation	11

C.3 Program Assessment

All permit requirements for Public Involvement and Participation are being met. The total number of volunteers participating in public involvement programs increased from last year. The Adopt a Stream, Foster a Stream, and Storm Drain Marking volunteer opportunities all experienced an increase in participation over this reporting year. The Stream Monitoring volunteer program, which requires volunteers to complete a training and commit to taking monthly samples over one year, retained a similar number of dedicated volunteers. SMAC continued to support City staff in program implementation through regular input during their 11 meetings over the course of the reporting period. In response to the May 2023 self-audit, staff is considering separating the Education and Outreach Plan from the Public Involvement and Participation Plan to better define and organize the separate programs' tasks and Plan coordinators' responsibilities.



Section D: Illicit Discharge Detection and Elimination

D.1 Program Narrative

The City’s illicit discharge program began in 1995. This program is based on a [City ordinance](#) that defines what constitutes an illicit discharge and an illicit connection and provides enforcement protocols. The ordinance provides the legal authority to implement the Illicit Discharge Detection and Elimination (IDDE) program.

Illicit discharges and illicit connections are identified through reports from the public, reports from City staff across all departments, dry weather screening observations, and outfall inspections. A team of three staff implement the dry weather screening program in addition to other duties. This includes inspecting outfalls, investigating potential illicit discharges, and maintaining documentation of inspections, enforcement, and remediation actions associated with those activities. Preventive measures include educating City staff and the public through various means, including direct mailings to target audiences and businesses (such as landscapers and restaurants) that have a history of illicit discharges. Outreach efforts also include regular updates to website content, social media, utility billing and newsletter inserts, and coordination with Wake County and professional associations to widely distribute illicit discharge prevention information.

D.2 Best Management Practices

Table D-1 includes a brief description of the IDDE best management practices required by the MS4 permit, the planned actions for the current and future fiscal years as described in the SWMP, the annual reporting metrics identified in the SWMP, and the actual metrics for actions completed in FY2022-2023.

Table D-1: IDDE Metrics and Results

Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section D.2 (a) Maintain appropriate legal authorities	Maintain and enforce public ordinances. Update, if necessary, to maintain legal authority. Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Maintain and enforce public ordinances. Update, if necessary, to maintain legal authority. Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	N/A, see Part II Section A.1 for reporting of legal authority updates	N/A
Part II Section D.2 (b) Maintain a storm sewer	Maintain the storm sewer system base map in GIS and	Maintain the storm sewer system base map in GIS and	Report number of major outfalls	888



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
system base map of major MS4 outfalls	<p>update annually as new inventory is added.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>update annually as new inventory is added.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	Provide overview map of receiving streams and major outfalls	See Figure D-1 below
Part II Section D.2 (c) Inspection/detection program to detect dry weather flows at MS4 outfalls	<p>Review annually the IDDE Plan and update as needed.</p> <p>Implement the IDDE Plan.</p> <p>Report any discharge that constitutes an imminent threat to health or the environment by phone or email to the DEQ Regional Office (during business hours) or NC Division of Emergency Management State Operation Center hotline (outside of business hours) within 24 hours. Raleigh Water is responsible for reporting of sanitary sewer overflows.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of plan and/or program modifications.</p>	<p>Review annually the IDDE Plan and update as needed.</p> <p>Implement the IDDE Plan.</p> <p>Report any discharge that constitutes an imminent threat to health or the environment by phone or email to the DEQ Regional Office (during business hours) or NC Division of Emergency Management State Operation Center hotline (outside of business hours) within 24 hours. Raleigh Water is responsible for reporting of sanitary sewer overflows.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of plan and/or program modifications.</p>	<p>Report number of dry weather inspections completed and results</p> <p>Report number of discharges reported to the DEQ Regional Office or NC Division of Emergency Management due to an imminent threat to health or the environment</p>	<p>244 dry weather flow outfall inspections were completed; 75 dry weather flows were observed; 2 illicit discharges were detected and remediated</p> <p>47 illicit discharges were reported to the NCDEQ Regional Office due to an imminent threat to health or the environment</p>



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section D.2 (d) Employee training	<p>Review annually the Education, Outreach, and Public Involvement Plan, and update, as needed.</p> <p>Conduct employee training and document attendance.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of plan and/or program modifications.</p>	<p>Review annually the Education, Outreach, and Public Involvement Plan and update, as needed.</p> <p>Conduct employee training and document attendance.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of plan and/or program modifications.</p>	<p>Report types of IDDE training provided and number of staff in attendance</p>	<p>827 City staff completed the IDDE training module through the City's iLearn and Success Factors platforms.</p>
Part II Section D.2 (e) Maintain a public reporting mechanism(s)	<p>Maintain the stormwater administration helpline to receive public reports.</p> <p>Maintain the illicit discharge reporting email address (IllegalDischarge@raleighnc.gov).</p> <p>Coordinate with appropriate City staff so illicit discharge complaints received through the SeeClickFix app are routed to the Stormwater Management Division.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Maintain the stormwater administration helpline to receive public reports.</p> <p>Maintain the illicit discharge reporting email address (IllegalDischarge@raleighnc.gov).</p> <p>Coordinate with appropriate City staff so illicit discharge complaints received through the SeeClickFix app are routed to the Stormwater Management Division.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Report total number of illicit discharge complaints received</p> <p>See helpline reporting metrics in Table 5, Part II Section B.2 (e) of SWMP</p>	<p>City staff received and responded to 200 complaints of potential illicit discharges; 91 calls were received through the City's Stormwater helpline</p>



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section D.2 (f) Documentation	Maintain IDDE inspection records, notices of violations and compliance, and other program records. Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Maintain IDDE inspection records, notices of violations and compliance, and other program records. Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Report dates of investigations, any enforcement action(s), and remediation that occurred	See Table D-2 below



Figure D-1: Receiving waters and major outfalls

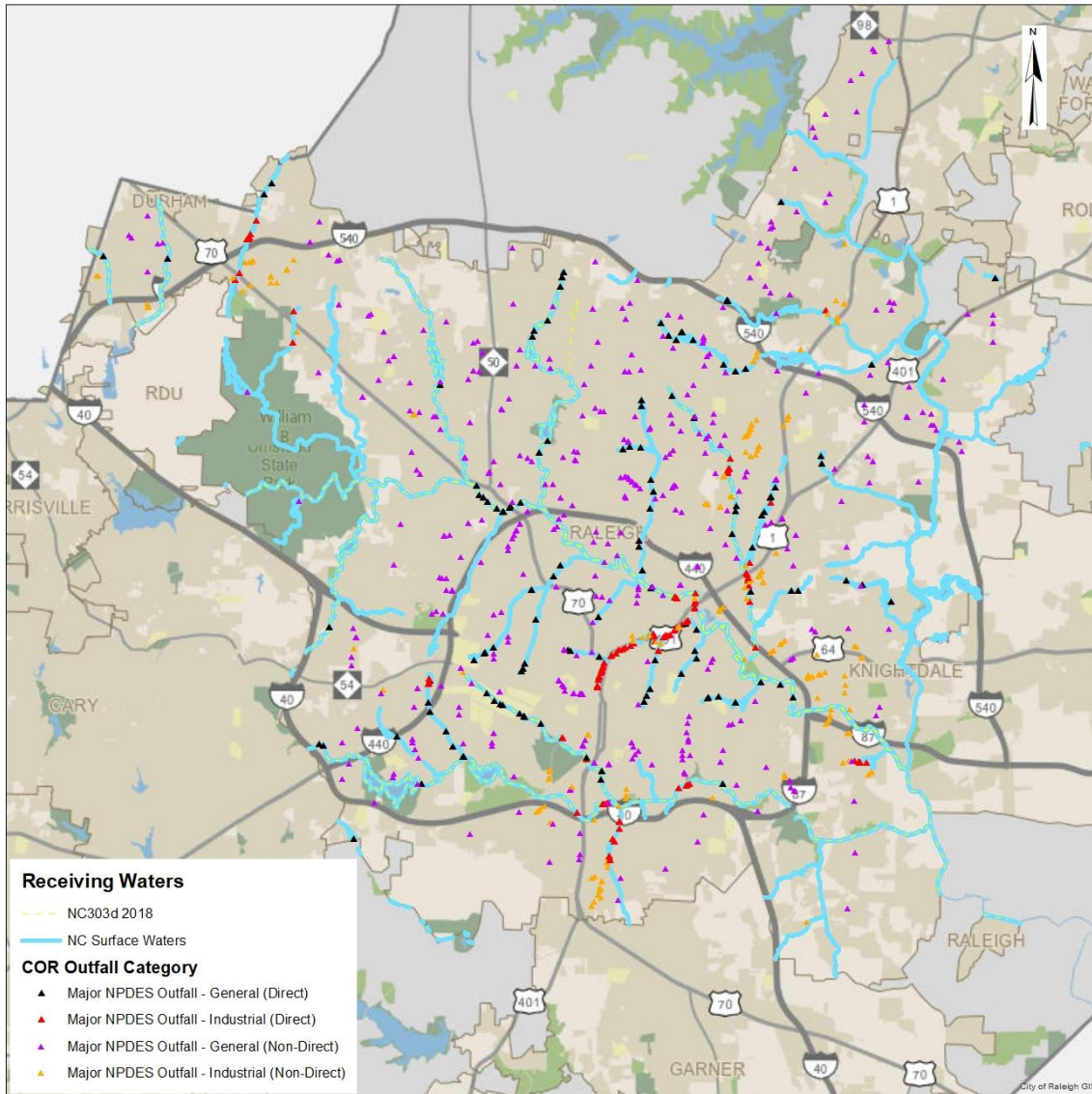




Table D-2: IDDE investigations and actions taken October 1, 2022 - September 30, 2023

Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
9200 Brier Creek Pkwy, Raleigh, NC 27617	9/28/2022	10/3/2022	Wastewater from wash bay discharged offsite and into a storm drain	Notice of Violation	Catch system installed to reroute discharge back to internal collection system
4604 Poole Rd, Raleigh, NC 27610	10/6/2022	10/6/2022	Gas leak from gas tank	Notice of Violation	Sweeping and removal
1135 N West St, Raleigh, NC 27603	10/6/2022	10/6/2022	Wastewater discharged from a broken hose/pipe	Notice of Violation	Vacuum and removal
1325 Lake Wheeler Rd, Raleigh, NC 27603	10/6/2022	10/6/2022	Possible dumping into storm drain at front of lot	Warning Letter	None required
2310 Garner Rd, Raleigh, NC, 27610	10/12/2022	10/12/2022	Sheen and discoloration at outfall	Notice of Violation	Vacuum and removal
202 Ashe Ave, Raleigh, NC 27605	10/19/2022	10/19/2022	Concrete discharged off the back side of 202 Ashe Ave and discharged along Ashe Ave into a storm drain	Notice of Violation	Vacuum and removal
4412 City of Oaks Wynd, Raleigh, NC, 27612	10/20/2022	10/20/2022	Private SSO entered into storm drain. Remediation completed prior to response.	Warning Letter	Vacuum and removal
429 S Wilmington St, Raleigh, NC, 27601	10/20/2022	10/21/2022	Possible automotive oil/fluid drained from vehicle into stormwater inlet located within the parking garage	Investigated and found not to be a water quality concern; no further action taken	None required
2951 Rowland Rd, Raleigh, NC, 27615	10/25/2022	10/26/2022	Complaint about United Rentals dumping portable toilets into the street	Investigated and found not to be a water quality concern; no further action taken	None required
1705 Tryon Park Dr, Raleigh, NC, 27610	10/25/2022	10/25/2022	City of Raleigh SSO ~2,150 gallons, with ~1,050 reaching surface waters	Referred to proper authority	Vacuum and removal



Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
431 Como Dr, Raleigh, NC, 27610	10/26/2022	10/27/2022	Possible grey water pumping outside of the house	Investigated and found not to be a water quality concern; no further action taken	None required
11200 Galleria Ave, Raleigh, NC, 27614	10/30/2022	10/31/2022	Rex Wellness Center possibly discharging pool water	Investigated and found not to be a water quality concern; no further action taken	None required
3212 Hillsborough St, Raleigh, NC, 27607	10/30/2022	10/31/2022	Sewer cleanout potentially discharging	Investigated and found not to be a water quality concern; no further action taken	None required
4219 Mantua Way, Raleigh, NC, 27604	10/31/2022	11/1/2022	Renters possible dumping trash into catch basins	Investigated and found not to be a water quality concern; no further action taken	None required
6221 Mt. Herman Road, Raleigh, NC 27617	11/1/2022	11/1/2022	Observed wastewater from wash area and degreaser entering storm drain	Notice of Violation	Vacuum and removal
1500 Nottingham Rd, Raleigh, NC, 27607	11/1/2022	11/1/2022	Creek discolored after a rainfall event	Investigated and found not to be a water quality concern; no further action taken	None required
2708 Glascock Rd, Raleigh, NC 27610	11/6/2022	11/7/2022	Possible oil in road	Investigated and found not to be a water quality concern; no further action taken	None required
1936 Amity Hill Ct, Raleigh, NC, 27612	11/16/2022	11/17/2022	Possible paint dumped into storm drain	Investigated and found not to be a water quality concern; no further action taken	None required
1427 Butler Cabin Dr, Raleigh, NC, 27610	11/21/2022	11/22/2022	Possible grease and cooking oils dumped into storm drain	Investigated and found not to be a water quality concern; no further action taken	None required
Intersection of Trinity Rd and Corporate Center Dr, Raleigh, NC 27607	11/22/2022	11/23/2022	Motor oil from a vehicle accident discharged into a storm drain	Unknown responsible party: City of Raleigh remediated	Vacuum and removal
1416 Banbury Rd, Raleigh, NC, 27607	11/23/2022	11/23/2022	City of Raleigh SSO ~4,725 gallons discharged, with ~4,000 gallons reaching surface waters	Referred to proper authority	Vacuum and removal



Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
2419 Wycliff Rd, Raleigh, NC, 27607	11/23/2022	11/23/2022	Backflow from pool house entering stream	Notice of Violation	Source removed; no additional remediation required
6421 Old Westgate Rd, Raleigh, NC, 27617	11/23/2022	11/23/2022	Car wash discharge into storm drain	Notice of Violation	Source removed; no additional remediation required
2772 Milburnie Rd, Raleigh, NC 27610	12/1/2022	12/1/2022	City of Raleigh SSO ~500 gallons discharged to surface waters	Referred to proper authority	Vacuum and removal
151 Water Works St, Raleigh, NC, 27603	12/3/2022	12/5/2022	Discolored watercourse downstream of temporary leaf storage pile	Summary Memorandum	Installed new silt fence, and removed leaf storage pile
9950 Durant Rd, Raleigh, NC, 27614	12/7/2022	12/7/2022	Transmission fluid discharged into stormwater inlet	Notice of Violation	Sweeping and removal
211 E Six Forks Rd, Raleigh, NC, 27609	12/13/2022	12/13/2022	Concrete slurry discharged near creek	Notice of Violation	Source removed; no additional remediation required
2601 Lake Dr, Raleigh, NC, 27607	12/13/2022	12/13/2022	Sewer lifts pump failure and wastewater discharging into a storm drain.	Notice of Violation	Disinfectant application
720 Pershing Rd, Raleigh, NC, 27608	12/14/2022	12/15/2022	Concrete spill in road and into a storm drain	Notice of Violation	Sweeping and removal
4120 New Bern Ave, Raleigh, NC, 27610	12/16/2022	12/28/2022	Possible leachate issues concerning leaf piles	Investigated and found not to be a water quality concern; no further action taken	None required
2151 Sunnybrook Rd, Raleigh, NC, 27610	12/16/2022	12/28/2022	Possible leachate issues concerning leaf piles	Investigated and found not to be a water quality concern; no further action taken	None required
4600 Lake Boone Trl, Raleigh, NC, 27607	12/16/2022	12/30/2022	Possible leachate issues concerning leaf piles	Investigated and found not to be a water quality concern; no further action taken	None required
6100 Thornton Rd, Raleigh, NC, 27616	12/16/2022	12/30/2022	Possible leachate issues concerning leaf piles	Investigated and found not to be a water quality concern; no further action taken	None required



Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
2570 S Wilmington St, Raleigh, NC, 27603	12/17/2022	12/19/2022	Non-PCB cooling oil discharged from a transformer after being shot twice	Notice of Violation	Vacuum and removal
720 Pershing Rd, Raleigh, NC 27608	12/20/2022	12/20/2022	Processed concrete waste water leaving site and entering storm drain	Notice of Violation	Excavation and removal
6006 Falls of Neuse Rd, Raleigh, NC, 27609	12/21/2022	12/21/2022	Observed wastewater/oil sheen at outfall during a dry weather flow inspection	Notice of Violation	Vacuum and removal
4616 Mentone Way, Raleigh, NC, 27612	12/22/2022	12/22/2022	Possible vehicle fluid leaking into street	Investigated and found not to be a water quality concern; no further action taken	None required
8700 Ice Dr, Raleigh, NC, 27617	12/30/2022	12/30/2022	Offsite run-on concerns and possible turbidity	Investigated and found not to be a water quality concern; no further action taken	None required
7523 Glenwood Ave, Raleigh, NC, 27612	12/30/2022	12/30/2022	Possible leachate issues concerning leaf piles	Investigated and found not to be a water quality concern; no further action taken	None required
2537 S Saunders St, Raleigh, NC, 27603	1/7/2023	1/9/2023	Possible dumping of cooking oil into a storm drain	Investigated and found not to be a water quality concern; no further action taken	None required
606 Glenwood Ave, Raleigh, NC, 27603	1/9/2023	1/9/2023	Confetti on street/curblines	Warning Letter	Vacuum and removal
2500 Poole Rd, Raleigh, NC, 27610	1/11/2023	1/11/2023	Crane tree service vehicle discharged > 25 gallons of hydraulic oil	Notice of Violation	Sweeping and removal
3313 Quail Hollow Dr, Raleigh, NC, 27609	1/11/2023	1/11/2023	Private SSO	Notice of Violation	Disinfectant applied, removed solids
3300 Grove Crabtree Cres, Raleigh, NC, 27613	1/12/2023	1/12/2023	City of Raleigh SSO ~10,800 gallons discharged, with 10,800 gallons being discharged to	Referred to proper authority	Vacuum and removal



Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
320 St Albans Dr, Raleigh, NC, 27609	1/12/2023	1/13/2023	Styrofoam in curblin and storm drain	Notice of Violation	Vacuum and removal
Hillsborough St, & Pogue St, Raleigh, NC, 27607	1/17/2023	1/17/2023	Grease being dumped into storm drain and sidewalk	Notice of Violation	Vacuum and removal
900 Navaho Dr, Raleigh, NC, 27609	1/17/2023	1/17/2023	Private SSO	Notice of Violation	Vacuum and removal
9402 Falls of Neuse Rd, Raleigh, NC, 27615	1/19/2023	1/19/2023	Grease and used food oil draining into storm drain	Notice of Violation	Vacuum and removal
2310 Garner Rd, Raleigh, NC, 27610	1/19/2023	1/19/2023	Complaint about mud/dirt along Garner Road	Investigated and found not to be a water quality concern; no further action taken	None required
621 Pine Ridge Pl, Raleigh, NC, 27609	1/25/2023	1/26/2023	Private SSO out of two manholes on the far north side of the property adjacent to Big Branch	Notice of Violation	Vacuum and removal
2401 Wake Forest Rd, Raleigh, NC, 27608	1/27/2023	1/27/2023	Illicit connection made by restaurant to the stormwater system	Notice of Violation	Vacuum and removal
7800 Falls of Neuse Rd, Raleigh, NC, 27615	1/31/2023	1/31/2023	Possible oil spill discharged in parking lot near a storm drain inlet	Investigated and found not to be a water quality concern; no further action taken	None required
4911 Gann Trl, Raleigh, NC, 27612	1/31/2023	1/31/2023	Lawn care vehicle leaking oil along street	Warning Letter	None required
1239 N Raleigh Blvd, Raleigh, NC, 27610	2/1/2023	2/2/2023	Trash/debris on property, and possible sewage discharging	Investigated and found not to be a water quality concern; no further action taken	None required
2310 Dixie Forest Rd, Raleigh, NC, 27615	2/1/2023	2/1/2023	Wash water was discharging into storm drain	Notice of Violation	Boom and pad placement



Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
3317 Woodmeadow Pkwy, Raleigh, NC, 27610	2/6/2023	2/6/2023	Private SSO discharging into storm drain and pooling at outfall	Notice of Violation	Vacuum and removal
4205 Quail Hollow Dr, Raleigh, NC, 27609	2/6/2023	2/6/2023	Volunteer reported possible high pH and bubbles in the stream behind their house	Investigated and found not to be a water quality concern; no further action taken	None required
701 E Lane St, Raleigh, NC, 27601	2/7/2023	2/8/2023	Possible grease trap discharge	Investigated and found not to be a water quality concern; no further action taken	None required
109 E North St, Raleigh, NC, 27601	2/10/2023	2/10/2023	Sediment and rocks leaving gravel parking lot and entering street	Investigated and found not to be a water quality concern; no further action taken	None required
3108 Starmount Dr, Raleigh, NC, 27604	2/10/2023	2/10/2023	Rock gravel leaving yard	Investigated and found not to be a water quality concern; no further action taken	None required
3821 Generosity Ct, Garner, NC, 27529	2/10/2023	2/10/2023	Sediment building up at entrance	Warning Letter	Sweeping and removal
5800 Light Brigade Ln, Raleigh, NC, 27612	2/14/2023	2/14/2023	<25 gallons of hydraulic fluid discharged onto road and did not reach a storm drain	Summary Memorandum	Sweeping and removal
2310 Garner Rd, Raleigh, NC, 27610	2/16/2023	2/27/2023	Possible sediment discharge	Warning Letter	None required
10505 Crisp Dr, Raleigh, NC, 27614	2/16/2023	2/16/2023	Possible carpet cleaning company discharging wastewater	Warning Letter	None required
7841 Alexander Promenade Pl, Raleigh, NC, 27617	2/21/2023	2/21/2023	Possible wastewater being dumped out back door and entering street	Warning Letter	None required
7201 ACC Blvd, Raleigh, NC, 27617	2/24/2023	2/24/2023	Possible wastewater discharge	Investigated and found not to be a water quality concern; no further action taken	None required



Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
4011 Capital Blvd, Raleigh, NC, 27604	2/27/2023	2/27/2023	Mix used sewage waste discharging out of multiple cleanouts	Notice of Violation	Vacuum and removal
3800 Lake Boone Trl, Raleigh, NC, 27607	2/28/2023	2/28/2023	Private SSO flowing into storm drain	Notice of Violation	Vacuum and removal
1300 Binley Pl, Raleigh, NC, 27615	3/1/2023	3/2/2023	Film noted on stream	Investigated and found not to be a water quality concern; no further action taken	None required
Norris St, & Frank St, Raleigh, NC, 27604	3/2/2023	3/2/2023	Sediment/turbid water in stream	Investigated and found not to be a water quality concern; no further action taken	None required
3517 Huntleigh Dr, Raleigh, NC, 27604	3/7/2023	3/7/2023	Possible motor oil leak	Investigated and found not to be a water quality concern; no further action taken	None required
1800 Generation Dr, Raleigh, NC, 27612	3/7/2023	3/7/2023	Staff found possible evidence of a previous private SSO in a parking lot	Warning Letter	Vacuum and removal
Jones Franklin Rd to I-440, Raleigh, NC, 27606	3/8/2023	3/8/2023	Slight discoloration and film on surface of water	Investigated and found not to be a water quality concern; no further action taken	None required
8100 Brier Creek Pkwy, Raleigh, NC, 27617	3/8/2023	3/8/2023	Possible non-PCB insulating oil leak	Investigated and found not to be a water quality concern; no further action taken	Sweeping and removal
700 Beacon Lake Dr, Raleigh, NC, 27610	3/8/2023	3/8/2023	Hydraulic oil spill from SWS truck	Summary Memorandum	Vacuum and removal
1241 Goode St, Raleigh, NC, 27603	3/9/2023	3/9/2023	Kitchen grease being dumped into a stormwater inlet	Notice of Violation	Vacuum and removal
4120 Sedgewood Dr, Raleigh, NC, 27612	3/10/2023	3/10/2023	Construction contractors dumping unknown fluid onto trees/natural area	Warning Letter	None required
6030 Stratton Pl, Raleigh, NC, 27609	3/13/2023	3/13/2023	City of Raleigh SSO ~4200 gallons discharge, with ~4200 gallons reaching surface waters	Referred to proper authority	Vacuum and removal



Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
Staghorn Ln & Buckhead Dr, Raleigh, NC, 27615	3/17/2023	3/17/2023	Commercial vehicle fire, fuel/oil/other engine fluids discharged and entered a storm drain	Notice of Violation	Vacuum and removal
2727 St Marys St, Raleigh, NC, 27609	3/18/2023	3/18/2023	Vehicle accident that toppled pole mounted transformer and spilled insulating oil	Notice of Violation	Vacuum and removal
307 N Bloodworth St, Raleigh, NC, 27601	3/23/2023	3/23/2023	Possible sewage discharging across sidewalk	Investigated and found not to be a water quality concern; no further action taken	None required
1060 Corporation Pkwy, Raleigh, NC, 27610	3/28/2023	3/28/2023	Oil and other vehicle fluids washed into storm drain.	Notice of Violation	Planting and restoration
8005 Duck Creek Dr, Raleigh, NC, 27616	3/30/2023	3/30/2023	City of Raleigh SSO ~728 gallons discharged with 528 reaching surface waters.	Referred to proper authority	Vacuum and removal
2904 Fairview Rd, Raleigh, NC, 27608	4/3/2023	4/3/2023	Possible construction debris dumping	Warning Letter	None required
1505 Capital Blvd, Raleigh, NC, 27603	4/3/2023	4/3/2023	City of Raleigh SSO approximately 675 gallons discharged, with all reaching surface waters	Referred to proper authority	Vacuum and removal
1551 Rock Quarry Rd, Raleigh, NC, 27610	4/4/2023	4/4/2023	Oil discharge from storage areas	Notice of Violation	Vacuum and removal
3950 Fairsted Dr, Raleigh, NC, 27612	4/6/2023	4/6/2023	Discolored water in creek	Investigated and found not to be a water quality concern; no further action taken	None Required
4359 Six Forks Rd, Raleigh, NC, 27609	4/7/2023	4/10/2023	Unknown chemicals being used and discharging into storm drain	Notice of Violation	Vacuum and removal
2201 S Wilmington St, Raleigh, NC, 27603	4/7/2023	4/7/2023	Diesel spill throughout parking lot	Notice of Violation	Vacuum and removal



Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
1629 Battery Dr, Raleigh, NC 27610	4/13/2023	4/14/2023	Suspected illicit discharge into Rocky Branch	Investigated and found not to be a water quality concern; no further action taken	None required
409 Harvard St, Raleigh, NC, 27609	4/13/2023	4/14/2023	Possible pool discharge	Investigated and found not to be a water quality concern; no further action taken	None required
2537 S Saunders St, Raleigh, NC, 27603	4/13/2023	4/13/2023	Trash compactor leaking into parking lot and storm drain	Notice of Violation	Vacuum and removal
1406 Duplin Rd, Raleigh, NC, 27607	4/14/2023	4/14/2023	Possible dumping of paint in the gutter that flows directly into the creek	Investigated and found not to be a water quality concern; no further action taken	None required
1431 Gavin St, Raleigh, NC, 27608	4/18/2023	4/18/2023	City of Raleigh SSO approximately 3,500 gallons discharged, with about 3,000 reaching surface waters	Referred to proper authority	Vacuum and removal
513 E Lane St, Raleigh, NC, 27601	4/19/2023	4/19/2023	Smell coming from stormwater discharge into sink hole after rain events	Investigated and found not to be a water quality concern; no further action taken	None required
9299 Glenwood Ave, Raleigh, NC, 27617	4/19/2023	4/19/2023	City of Raleigh SSO approximately 1000 gallons were discharged, with all reaching surface waters	Referred to proper authority	Vacuum and removal
Lake Boone Trail & I-440, Raleigh, NC, 27607	4/21/2023	4/24/2023	Slight fuel spill on ground	Warning Letter	Vacuum and removal
111 Bertie Dr, Raleigh, NC, 27610	4/21/2023	4/21/2023	Possible illicit discharge during dry weather flow	Investigated and found not to be a water quality concern; no further action taken	None required
8401 Glenwood Ave, Raleigh, NC, 27612	4/21/2023	4/21/2023	City of Raleigh SSO approximately 129,000 gallons were discharged, with about 7,000 gallons reaching surface waters.	Referred to proper authority	Vacuum and removal
913 S Blount St, Raleigh, NC, 27601	4/22/2023	4/25/2023	Possible offsite sediment	Investigated and found not to be a water quality concern; no further action taken	None required



Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
950 Peterson St, Raleigh, NC, 27610	4/25/2023	4/25/2023	The Rocky Branch and Central Walnut Creek stream team identified a strong chemical smell and oil in Walnut Creek at this location: 35.757685°N 78.624734°W	Investigated and found not to be a water quality concern; no further action taken	None required
514 Ashe Ave, Raleigh, NC, 27606	4/26/2023	4/27/2023	Rocky Branch stream team found a dry weather flow	Investigated and found not to be a water quality concern; no further action taken	None required
4012 The Oaks Dr, Raleigh, NC, 27606	4/28/2023	5/1/2023	Private SSO – under her deck and in grassed areas	Warning Letter	Vacuum and removal
200 W Davie St, Raleigh, NC, 27601	5/2/2023	5/2/2023	Styrofoam on patio and curb/storm drains	Warning Letter	Vacuum and removal
1853 Western Blvd, Raleigh, NC, 27606	5/3/2023	5/3/2023	Unknown brown liquid floating on surface of stream	Investigated and found not to be a water quality concern; no further action taken	None required
8551 Glenwood Ave, Raleigh, NC, 27612	5/3/2023	5/3/2023	Private SSO entering storm drain	Notice of Violation	Vacuum and removal
7300 Parott Dr, Raleigh, NC, 27616	5/4/2023	5/5/2023	The area of complaint where they get an off and on flow of what looks and smells to be sewage at different times of the day.	Notice of Violation	Vacuum and removal
1209 Chaney Rd, Raleigh, NC, 27606	5/5/2023	5/8/2023	Owner stated a small transmission fluid leak	Warning Letter	Sweeping and removal
4417 Antique Ln, Raleigh, NC, 27616	5/5/2023	5/5/2023	City of Raleigh SSO approximately 1,850 gallons discharged, with all of the discharge reaching surface waters	Referred to proper authority	Vacuum and removal
6829 W Lake Anne Dr, Raleigh, NC, 27612	5/9/2023	5/10/2023	Turbid water after rain event	Investigated and found not to be a water quality concern; no further action taken	None required



Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
Glascok St & Wake Forest Rd, Raleigh, NC, 27604	5/10/2023	5/11/2023	observed a potential private SSO	Investigated and found not to be a water quality concern; no further action taken	None required
712 Brooks Ave, Raleigh, NC, 27607	5/11/2023	5/12/2023	Milky white color in Beaverdam-SW creek	Notice of Violation	Vacuum and removal
2801 Lineberry Dr, Raleigh, NC, 27603	5/11/2023	5/11/2023	Turned over street sweeper discharged fuel and hydraulic fluid	Summary Memorandum	Sweeping and removal
6907 Coventry Ridge Rd, Raleigh, NC, 27616	5/11/2023	5/12/2023	Possible Sewage leak coming from 6907 Coventry Ridge Road	Investigated and found not to be a water quality concern; no further action taken	None required
7700 Fiesta Way, Raleigh, NC, 27615	5/12/2023	5/13/2023	Petroleum product spilled to road	Warning Letter	Sweeping and removal
414 S Person St, Raleigh, NC, 27601	5/12/2023	5/13/2023	Styrofoam from construction in curblin and storm drain	Notice of Violation	Vacuum and removal
8300 Meadow Ridge Ct, Raleigh, NC, 27615	5/12/2023	5/12/2023	Possible pool discharge	Investigated and found not to be a water quality concern; no further action taken	None required
118 S Blount St, Raleigh, NC, 27601	5/13/2023	5/14/2023	Vehicle accident that toppled pole mounted transformer and overhead transformer and spilled insulating oil ~18 gallons	Notice of Violation	Sweeping and removal
4010 Springfield Creek Dr, Raleigh, NC, 27616	5/15/2023	5/17/2023	Potentially trash in storm drain	Investigated and found not to be a water quality concern; no further action taken	None required
615 Royal St, Raleigh, NC, 27607	5/15/2023	5/16/2023	Possible purple algae or purple pollution	Investigated and found not to be a water quality concern; no further action taken	None required
2805 Wilcox Pl, Raleigh, NC, 27607	5/15/2023	5/16/2023	Possible sewage leak	Investigated and found not to be a water quality concern; no further action taken	None required



Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
3813 Beryl Rd, Raleigh, NC, 27607	5/15/2023	5/16/2023	Heavy flow out of outfall	Investigated and found not to be a water quality concern; no further action taken	None required
307 Elm St, Raleigh, NC, 27601	5/16/2023	5/17/2023	Possible sewer odor at outfall	Investigated and found not to be a water quality concern; no further action taken	None required
349 Tryon Rd, Raleigh, NC, 27603	5/17/2023	5/17/2023	Observed plumber making repairs to grease interceptor, no active flow into the storm drain	Warning Letter	Vacuum and removal
3402 Hampton Rd, Raleigh, NC, 27607	5/17/2023	5/17/2023	PVC pipe discharged sanitary waste directly into creek	Notice of Violation	Source removed; no additional remediation required
4500 Gates St, Raleigh, NC, 27609	5/18/2023	5/18/2023	Dirt, sediment, and leaf debris dumped into storm drain by contractors for the property owner	Warning Letter	Vacuum and removal
5501 Capital Blvd, Raleigh, NC, 27616	5/19/2023	5/19/2023	Grease dumped into storm drain	Notice of Violation	Vacuum and removal
8004 Knebworth Ct, Raleigh, NC, 27613	5/23/2023	5/24/2023	Pressure wash water running off into street	Warning Letter	None required
5444 Meryton Park Way, Raleigh, NC, 27616	5/25/2023	5/25/2023	Possible leaking vehicle	Investigated and found not to be a water quality concern; no further action taken	None required
3505 Canter Ln, Raleigh, NC, 27604	5/31/2023	5/31/2023	Power washing wastewater entering street	Warning Letter	None required
5801 Heatherbrook Cir, Raleigh, NC, 27612	6/2/2023	6/5/2023	Construction debris washed into storm drain	Notice of Violation	Vacuum and removal
613 W Morgan St, Raleigh, NC, 27603	6/5/2023	6/6/2023	Potentially hazardous waste at rear of abandoned building	Investigated and found not to be a water quality concern; no further action taken	None required



Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
Intersection of Millbrook & Hargrove Road	6/6/2023	6/6/2023	City of Raleigh SSO approximately 700 gallons discharged with about 600 gallons reaching surface waters	Referred to proper authority	Vacuum and removal
Interstate 440 East Bound ending at Poole Road	6/7/2023	6/8/2023	Motor vehicle accident at Poole Rd and I-440	Referred to proper authority	None required
400 Redwood Cir., Raleigh, NC, 27609	6/7/2023	6/7/2023	Potential concrete spill on road and into the storm drain.	Warning Letter	None required
4740 Archean Way, Raleigh, NC, 27616	6/13/2023	6/13/2023	City of Raleigh SSO ~6,624 gallons with ~3,000 gallons entering surface waters	Referred to proper authority	Vacuum and removal
5 E Edenton St, Raleigh, NC, 27601	6/16/2023	6/16/2023	Cleaning of food waste containers over storm drains	Warning Letter	None required
7700 Burwell St, Raleigh, NC, 27615	6/16/2023	6/16/2023	Wash water from center vehicle wash bay is entering into a stormwater catch basin, and discharges directly to surface waters	Summary Memorandum	Temporarily blocked storm drain until structural repair can be completed
7550 Creedmoor Rd, Raleigh, NC, 27613	6/16/2023	6/16/2023	Obstructed storm drain inlet	Unknown responsible party; City of Raleigh remediated	Vacuum and removal
6500 Litchford Rd, Raleigh, NC, 27615	6/20/2023	6/22/2023	Complaint for public Nuisance issues and possible sewer leak	Warning Letter	None required
2104 Saturn St, Raleigh, NC, 27603	6/23/2023	6/23/2023	Vehicle fluid in curb line	Notice of Violation	Sweeping and removal
7608 Birchmoor Way, Raleigh, NC 27616	6/23/2023	6/23/2023	Vehicle fluid discharged from vehicle into parking lot	Notice of Violation	Sweeping and removal
7608 Birchmoor Way, Raleigh, NC, 27616	6/23/2023	6/23/2023	Gasoline leak from vehicle and into catchment	Notice of Violation	Absorbent applied and removed



Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
6305 Belle Crest Dr, Raleigh, NC, 27612	6/25/2023	6/26/2023	Potential Styrofoam packing material enter the drainage system.	Investigated and found not to be a water quality concern; no further action taken	None required
12308 Dunard St, Raleigh, NC, 27614	6/26/2023	6/26/2023	Paint dumped into storm drain	Unknown responsible party; City of Raleigh remediated	Power washing with containment
714 Pershing Rd, Raleigh, NC, 27608	6/27/2023	6/27/2023	Sediment leaving property and entering curb line	Investigated and found not to be a water quality concern; no further action taken	Sweeping and removal
902 Shellbrook Ct, Raleigh, NC, 27609	6/28/2023	6/28/2023	City of Raleigh SSO ~ 288 gallons discharged, with ~100 gallons reaching surface waters.	Referred to proper authority	Vacuum and removal
3800 Greywood Dr, Raleigh, NC, 27604	6/30/2023	6/30/2023	City of Raleigh SSO ~57 gallons discharged with 57 gallons entering surface waters.	Referred to proper authority	Vacuum and removal
1600 Curthay Ct, Raleigh, NC, 27610	6/30/2023	7/3/2023	SWS vehicle discharge ~20 gallons of hydraulic fluid, with ~2 gallons reaching stormwater drain.	Summary Memorandum	Vacuum and removal
4821 River Stream Way, NC, 27616	7/2/2023	7/3/2023	Carpet cleaning services potentially dumped wastewater into storm drain	Warning Letter	None required
2526 Hillsborough St, Raleigh, NC, 27607	7/3/2023	7/5/2023	Possible grease discharge along sidewalk	Investigated and found not to be a water quality concern; no further action taken	Vacuum and removal
200 W Davie St, Raleigh, NC, 27601	7/4/2023	7/5/2023	Potential construction debris	Investigated and found not to be a water quality concern; no further action taken	Vacuum and removal
10 Montgomery St, Raleigh, NC, 27607	7/10/2023	7/11/2023	Potential erosion and offsite sediment	Investigated and found not to be a water quality concern; no further action taken	None required
5400 Trinity Rd, Raleigh, NC, 27607	7/10/2023	7/11/2023	Offsite sediment due to construction	Referred to proper authority	None required



Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
2331 Grant Ave, Raleigh, NC, 27608	7/11/2023	7/11/2023	Potential paint dumped in curb line along Grant Avenue	Warning Letter	Vacuum and removal
301 Shepherd St, Raleigh, NC, 27607	7/12/2023	7/12/2023	Concrete and sediment runoff from construction site	Notice of Violation	Sweeping and removal
5655 New Bern Avenue, Raleigh, NC 27610	7/17/2023	7/17/2023	Potential white discharge in ponds near New Bern Bridge and Neuse River	Investigated and found not to be a water quality concern; no further action taken	None required
6615 Falls of Neuse Rd, Raleigh, NC, 27615	7/17/2023	7/18/2023	Car wash wastewater entering storm system on property	Notice of Violation	Berm construction
7512 South Tanglewild Dr, Raleigh, NC, 27613	7/21/2023	7/21/2023	Sewer lateral service is broken, discharging into surface waters.	Notice of Violation	Sewer lateral service repaired
5700 Oak Forest Dr, Raleigh, 27616	7/24/2023	7/24/2023	Fuel spill of belly tank from dump truck	Notice of Violation	Vacuum and removal
1653 Extine Ln, Raleigh, NC, 27610	7/25/2023	7/25/2023	Potential motor oil discharging to storm drain	Warning Letter	None required
904 Ravenwood Dr, Raleigh, NC, 27606	7/26/2023	7/27/2023	Creek water has turned orange	Investigated and found not to be a water quality concern; no further action taken	None required
6712 Millbridge Ct, Raleigh, NC, 27615	7/27/2023	7/27/2023	Potential SSO constantly occurring	Investigated and found not to be a water quality concern; no further action taken	None required
5429 Kissimmee Ln, Raleigh, NC, 27616	7/27/2023	7/27/2023	Vehicle has motor oil constantly leaked onto surface	Warning Letter	Absorbent application
7900 Twin Oak Ct, Raleigh, NC, 27615	7/31/2023	7/31/2023	SSO ~940 gallons discharged, with 940 gallons reaching surface waters.	Referred to proper authority	Vacuum and removal
7840 Alexander Promenade Pl,	8/5/2023	8/8/2023	Pop-up car wash, not collecting wastewater and discharge has potential to enter storm drain	Warning Letter	None required



Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
Raleigh, NC, 27617					
Wild Wood Forest Dr & Perry Creek Rd, Raleigh, NC, 27616	8/7/2023	8/7/2023	Bucket of oil spilled at intersection of Perry Creek Road and Wildwood Forest Drive	Unknown responsible party; City of Raleigh remediated	Sweeping and removal
7105 River Birch Dr, Raleigh, NC, 27613	8/8/2023	8/8/2023	Concrete slurry going into storm drain	Notice of Violation	Sweeping and removal
3423 Streams of Fields Dr, Raleigh, NC, 27604	8/8/2023	8/8/2023	Possible SSO from adjacent property	Investigated and found not to be a water quality concern; no further action taken	None required
12208 Breton Ln, Raleigh, NC, 27613	8/8/2023	8/9/2023	Noticed consecutive instances of dog waste being thrown into storm system	Warning Letter	Dog waste bag removed
1825 Wilshire Ave, Raleigh, NC, 27608	8/8/2023	8/8/2023	Reported that paint had been dumped into storm drain	Investigated and found not to be a water quality concern; no further action taken	None required
3428 Althorp Dr, Raleigh, NC, 27616	8/11/2023	8/14/2023	Potential chemicals, pollutants and contaminants spilled on public street that may make their way to storm water system.	Investigated and found not to be a water quality concern; no further action taken	None required
500 Creekside Dr, Raleigh, NC, 27609	8/11/2023	8/14/2023	Soap suds observed at an outfall along Crabtree Creek greenway	Warning Letter	None required
W Cabarrus St & Rosengarten Aly, Raleigh, NC, 27603	8/15/2023	8/15/2023	Potential white substance in creek	Investigated and found not to be a water quality concern; no further action taken	None required
1115 Temple St, Raleigh, NC, 27609	8/16/2023	8/16/2023	City of Raleigh SSO ~ 3600 gallons discharged with all reaching surface waters.	Referred to proper authority	Vacuum and removal
E Cabarrus St & S East St, Raleigh, NC, 27601	8/21/2023	8/21/2023	Drilling mud entered storm drain	Notice of Violation	Vacuum and removal



Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
112 Cox Ave, Raleigh, NC, 27605	8/22/2023	8/22/2023	Possible condensate creating dry weather flow	Investigated and found not to be a water quality concern; no further action taken	None required
2609 Spring Forest Rd, Raleigh, NC, 27616	8/22/2023	8/22/2023	City of Raleigh SSO ~1750 gallons discharged, with all going to surface waters.	Referred to proper authority	Vacuum and removal
301 Glenwood Ave, Raleigh, NC, 27603	8/23/2023	8/23/2023	Potential grease overflow	Warning Letter	Vacuum and removal
701 Van Buren Rd, Raleigh, NC, 27604	8/24/2023	8/24/2023	Terrible smell coming from creek due to possible City of Raleigh SSO	Referred to proper authority	Vacuum and removal
5617 Deblyn Ave, Raleigh, NC, 27612	8/24/2023	8/25/2023	Oak tree damaged power poles resulting in one damaged pole mounted transformer.	Notice of Violation	Vacuum and removal
701 Van Buren Rd, Raleigh, NC, 27604	8/24/2023	8/24/2023	City of Raleigh SSO ~1500 gallons discharged with all being discharged to surface waters	Referred to proper authority	Vacuum and removal
4225 Glenwood Ave, Raleigh, NC, 27612	8/26/2023	8/28/2023	Hoses running parallel to I-440 East near Crabtree Creek and potentially discharging water	Investigated and found not to be a water quality concern; no further action taken	None required
5042 Tryon Rd, Raleigh, NC, 27606	8/27/2023	8/27/2023	City of Raleigh SSO ~1900 gallons discharged, with 1900 gallons reaching surface waters	Referred to proper authority	Vacuum and removal
1550 N Raleigh Blvd, Raleigh, NC, 27610	8/28/2023	8/28/2023	Sanitary sewer spill from cleanout – blockage removal performed by Raleigh Water	Notice of Violation	Vacuum and removal
1603 Hillsborough St, Raleigh, NC, 27605	8/30/2023	8/30/2023	Possible chlorinated pool discharge	Investigated and found not to be a water quality concern; no further action taken	None required
2611 Churchill Rd, Raleigh, NC, 27608	8/30/2023	8/31/2023	Possible pool dewatering	Investigated and found not to be a water quality concern; no further action taken	None required



Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
4225 Woodlawn Dr, Raleigh, NC, 27616	8/30/2023	8/31/2023	Trash can potentially washed out every Wednesday into storm system.	Investigated and found not to be a water quality concern; no further action taken	None required
810 Suffolk Blvd, Raleigh, NC, 27603	8/30/2023	8/31/2023	16" Corrugated Pipe sticking out of ground with discharge that has foul odor	Notice of Violation	Vacuum and removal
5429 Kissimmee Ln, Raleigh, NC, 27616	9/5/2023	9/6/2023	Potential oil spill in road	Investigated and found not to be a water quality concern; no further action taken	None required
S King Charles Rd & Kennedy St, Raleigh, NC, 27610	9/6/2023	9/6/2023	~100 gallons of fuel discharged to street; no storm drains currently affected	Notice of Violation	Vacuum and removal
6221 Litchford Forest Ln, NC, 27615	9/11/2023	9/11/2023	Paint thinner discharged into drain	Notice of Violation	Excavation and removal
Pine Barren Ln, Raleigh, NC, 27610	9/13/2023	9/13/2023	Possible motor oil being discharged into road	Investigated and found not to be a water quality concern; no further action taken	None required
4309 Auburn Hills Dr, Raleigh, NC, 27616	9/16/2023	9/18/2023	Tenant dumped landscaping material into storm drain.	Warning Letter	Sweeping and removal
7505 Wilderness Rd, Raleigh, NC, 27613	9/19/2023	9/19/2023	Vehicle fluid(s) potentially leaking and possibly going into storm drain	Investigated and found not to be a water quality concern; no further action taken	Sweeping and removal of remaining oil spot on road.
3926 Marcom St, Raleigh, NC, 27606	9/19/2023	9/20/2023	Paint potentially dumped onto ground/inside a corrugated pipe	Warning Letter	None required
2709 Dahlgreen Rd, Raleigh, NC, 27615	9/20/2023	9/21/2023	Neighbor, who owns a power washing company, is potentially discharging wastewater to the curb and it is entering the nearby storm drain	Warning Letter	None required
6685 Falls of Neuse Rd, Raleigh, NC, 27615	9/25/2023	9/25/2023	Potentially washing dumpsters out with chemicals and the wash water is entering storm drain	Investigated and found not to be a water quality concern; no further action taken	None required



Address	Date Received	Date Responded	Description	Enforcement	Remediation Actions
4008 Laurel Hills Rd, Raleigh, NC, 27612	9/28/2023	9/28/2023	Potential hydraulic oil spill	Investigated and found not to be a water quality concern; no further action taken	None required
5438 Allen Dr, Raleigh, NC, 27610	9/29/2023	9/29/2023	Oily film reported in creek	Investigated and found not to be a water quality concern; no further action taken	None required

SWS = Solid Waste Services
SSO = Sanitary Sewer Overflow

D.3 Program Assessment

Staff continue to meet all IDDE permit requirements. Staff completed 200 site investigations during the reporting period- an approximate 10% increase from the previous year. These investigations revealed a decrease of approximately 15% and 60% in City of Raleigh SSOs and private SSOs respectively, along with a 50% decrease in fats, oils, and grease (FOG) discharge sources. The increase in investigations and decrease in SSOs and FOG discharge sources may be a result of increased staff and public awareness due to the effectiveness of the City's Education and Outreach program. Conversely, staff noted an approximate 60% increase in oil/automotive source pollutants which tend to be associated with vehicle accidents and maintenance activities. Staff is considering focused outreach in the coming year to address these sources and target audiences. Staff review of the previous reporting year's activities and processes on January 6, 2023 did not warrant any immediate changes to the program. Staff reviewed and updated all program plans and SOPs in April 2023 and completed the self-audit in May 2023. The self-audit did not identify any gaps in compliance. A new position approved in the Fiscal Year 2024 budget and hired during the next reporting period will split responsibilities between this program and the Water Quality Monitoring program. This will add staff capacity to further assist with response, investigation, and outfall inspections for IDDE, as well as increase staff support for monitoring. In anticipation of the City's new permit, staff continue efforts to update the Major Outfall Inventory to remove outfalls located outside the City limits and located within other MS4s (i.e. NCSU and NCDOT).



Section E: Construction Site Runoff Controls

E.1 Program Narrative

The City has implemented construction site runoff controls (erosion and sediment control) since the 1970s. This program is delegated to the City with oversight by NCDEQ. The City erosion and sediment control ordinance provides legal authority for the program in the City corporate limits and extraterritorial jurisdiction (ETJ) area and is updated when necessary to meet NCDEQ's minimum requirements. Ordinance changes are noticed and subject to public hearing prior to adoption, as described in Section C.

The program includes plan review, permitting, inspection, education, and enforcement activities to control construction site runoff. For all projects that disturb greater than one acre, an NPDES construction permit is required; that application should be made to NCDEQ for permit coverage. In addition, all publicly funded projects that disturb more than one acre are required to obtain Erosion and Sediment Control plan approval through NCDEQ. The City also regularly receives and responds to calls and concerns from citizens related to runoff from construction sites.

E.2 Best Management Practices

Table E-1 includes a brief description of the Construction Site Runoff Controls best management practices required by the MS4 permit, the planned actions for the current and future fiscal years as described in the SWMP, the annual reporting metrics identified in the SWMP, and the actual metrics for actions completed in FY2022-2023.



Table E-1: Construction Site Runoff Controls Metrics and Results

Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
<p>Part II Section E.2 (a) The permittee has a delegated or authorized Sediment and Erosion Control Program. As such, to the extent authorized by law, the permittee is responsible for compliance with the Sediment Pollution Control Act of 1973 and Chapter 4 of Title 15A of the North Carolina Administrative Code. The delegated or authorized Sediment and Erosion Control Program effectively meets the MEP standard for Construction Site Runoff Controls by permitting and controlling development activities disturbing one or more acres of land surface and those activities less than one acre that are part of a larger common plan of development as authorized under the Sediment Pollution Control Act of 1973 and Chapter 4 of Title 15A of the North Carolina Administrative Code.</p>	<p>Implement standard construction site inspection procedures.</p> <p>Perform erosion and sediment control plan reviews.</p> <p>Perform enforcement activities, if necessary.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Implement standard construction site inspection procedures.</p> <p>Perform erosion and sediment control plan reviews.</p> <p>Perform enforcement activities, if necessary.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Report number of inspections and enforcement activities conducted</p>	<p>Inspections: 13,673 NOVs: 27 Civil Penalties: 1</p>



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
<p>Part II Section E.2 (b) The NCG010000 permit establishes requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality.</p> <p>Part II Section E.2 (c) The permittee shall provide and promote a means for the public to notify the appropriate authorities of observed erosion and sedimentation problems. The permittee may implement a plan promoting the existence of the NCDEQ “Stop Mud” hotline (1-866- STOPMUD) to meet the requirements of this paragraph.</p>	<p>Perform construction site inspections for the erosion and sediment control program and appropriate enforcement activities that meet requirements of Part II Section E.2 (a), if necessary.</p> <p>Perform illicit discharge investigations when reported by City staff or residents.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Perform construction site inspections for the erosion and sediment control program and appropriate enforcement activities that meet requirements of Part II Section E.2 (a), if necessary.</p> <p>Perform illicit discharge investigations when reported by City staff or residents.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>N/A, see reporting metrics in SWMP Table 7 and Part II Section E.2 (a) and Part II Section D.2 (f) of the permit</p>	<p>N/A</p>



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
<p>Part II Section E.2 (c) The permittee shall provide and promote a means for the public to notify the appropriate authorities of observed erosion and sedimentation problems. The permittee may implement a plan promoting the existence of the NCDEQ “Stop Mud” hotline (1-866- STOPMUD) to meet the requirements of this paragraph.</p>	<p>Maintain the stormwater administration helpline to receive public reports.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Maintain the stormwater administration helpline to receive public reports.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>N/A, see reporting metrics in SWMP Table 5 and Part II Section B.2 (c) and (e) of the permit</p>	<p>N/A</p>
<p>Part II Section E.2 (d) For new development and redevelopment projects to be built within the permittee’s planning jurisdiction by entities with eminent domain authority, the permittee shall, to the maximum extent practicable, coordinate the approval of the construction site runoff control with the DEMLR.</p>	<p>Coordinate with NCDEQ for development and redevelopment projects by entities with eminent domain authority, if necessary. This includes land-disturbing activities conducted by local, state, or United States governments or entities with the power of eminent domain (e.g., public utilities), which remain under jurisdiction of the Division of Energy, Mineral, and Land Resources (DEMLR).</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Coordinate with NCDEQ for development and redevelopment projects by entities with eminent domain authority, if necessary. This includes land-disturbing activities conducted by local, state, or United States governments or entities with the power of eminent domain (e.g., public utilities), which remain under jurisdiction of the Division of Energy, Mineral, and Land Resources (DEMLR).</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Report number of plans that required NCDEQ coordination for entities with eminent domain authority</p>	<p>18</p>



E.3 Program Assessment

The Construction Site Runoff Control Program continued to meet all permit requirements this reporting period despite conducting fewer routine inspections than in previous reporting periods. The decrease in routine inspections could be due to program staff turn-over earlier in the reporting period; the program has since become fully staffed and it is expected that routine inspections and site compliance throughout the City will subsequently increase. The program has created three separate inspection groups with dedicated experienced managers supervising each group to improve enforcement efficiency as development throughout Raleigh continues to increase. Staff continue to issue Notice of Violations and civil penalties; non-traditional enforcement tools such as withholding Certificate of Occupancy, preventing building permit issuance, and halting trade inspections are also being utilized to achieve site compliance. Staff continue to document inspection and enforcement procedures and make changes to the UDO to improve overall program effectiveness and compliance.



Section F: Post-Construction Site Runoff Controls

F.1 Program Narrative

The City's post-construction site runoff controls remain in compliance with the City's MS4 permit through the Neuse Nutrient Sensitive Waters Management Strategy and Water Supply Watershed programs.

The City implements the Neuse Nutrient Sensitive Waters Management Strategy (15A NCAC 2B .0235) throughout the corporate limits and ETJ area of Raleigh. Water Supply Watershed IV (WS-IV) Programs (15A NCAC 2H .0216) are implemented in the Falls Lake and Richland Creek watersheds. A Water Supply Watershed III (WS-III) Program (15A NCAC 2B .0215) is implemented in the Swift Creek watershed.

The City's post-construction site runoff controls are deemed compliant with the implementation of the above-mentioned program measures. The controls are enforced through the City Unified Development Ordinance (UDO) and Stormwater Design Manual, which are at least as stringent as state requirements.

The City provides mechanisms to record deed restrictions and protective covenants to ensure ongoing maintenance of post-construction stormwater control measures (SCMs). The City has also set up a private maintenance policy for owners of private properties with post-construction SCMs. Every year, the private property owner must have a licensed professional engineer, landscape architect, or licensed surveyor certify that the SCM is functioning properly and must send that certification to the City. If these inspections and certifications are not made, then notification and enforcement actions (including issuance of civil penalties) are taken. The maintenance activities required for each SCM are outlined in an operation and maintenance plan, which is approved during the design review process.

The City also provides educational materials and training for developers on requirements for new development, redevelopment, and SCM construction and maintenance.

F.2 Best Management Practices

Table F-1 includes a brief description of the Post-Construction Site Runoff Controls best management practices required by the MS4 permit, the planned actions for the current and future fiscal years as described in the SWMP, the annual reporting metrics identified in the SWMP, and the actual metrics for actions completed in FY2022-2023.



Table F-1: Post-Construction Site Runoff Controls Metrics and Results

Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section F.2 (a) Post-construction stormwater management program	<p>Review the UDO and Stormwater Design Manual annually and make documents available to developers and construction site operators.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Review UDO and Stormwater Design Manual annually and make documents available for developers and construction site operators.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	N/A, see reporting metrics in SWMP Table 4 and Part II Section A of the permit	N/A
Part II Section F.2 (b) Strategies which include SCMs appropriate for the MS4	<p>Maintain the UDO and Stormwater Design Manual so that the City requirements are at least as stringent as the minimum requirements in 15A NCAC 02H .1000 and make documents available to developers and construction site operators.</p> <p>Review annually the SCM Inspections Program Plan and update, if necessary.</p> <p>Implement the SCM inspection and maintenance program.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Maintain the UDO and Stormwater Design Manual so that the City requirements are at least as stringent as the minimum requirements in 15A NCAC 02H .1000 and make documents available to developers and construction site operators.</p> <p>Review annually the SCM Inspections Program Plan and update, if necessary.</p> <p>Implement SCM inspection and maintenance program.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	Report number of sites with SCMs	1,259
			Report number of sites where SCM inspections have been received	1,130
			Report SCM enforcement activities	18 NOVs issued; \$37,500 in civil penalties



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section F.2 (c) Deed restriction and protective covenants	<p>Develop covenant template for single-owner SCMs.</p> <p>Maintain recording mechanisms for deed restrictions and protective covenants.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Continue to develop covenant template for single-owner SCMs.</p> <p>Maintain recording mechanisms for deed restrictions and protective covenants.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Verify that mechanisms such as recorded deed restrictions, plats, and/or protective covenants are provided so that development activities maintain the project consistent with approved plans</p>	<p>Plat maps and maintenance easements are mechanisms utilized to ensure SCMs are maintained and consistent with the approved plans</p>
Part II Section F.2 (d) Operation and maintenance plan	<p>Require submittal of operation and maintenance plan(s) prior to Certificate of Occupancy issuance and maintain records of each plan.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Require submittal of operation and maintenance plan(s) prior to certificate of occupancy issuance and maintain records of each plan.</p> <p>Evaluate the program effectiveness and notify the Water Quality Manager of program modifications.</p>	<p>Report number of sites with newly approved operation and maintenance plans at time of plan review</p>	<p>112</p>
Part II Section F.2 (e) Educational materials and training for developers	<p>Review annually developer training and outreach materials and update, as needed.</p> <p>Conduct training for developers.</p> <p>Evaluate the program effectiveness annually and</p>	<p>Review annually developer training and outreach materials and update, as needed.</p> <p>Conduct training for developers.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Report types of fact sheets, educational brochures, and other materials made available to developers</p>	<p>Web-based; Web-based materials: Annual Inspection requirements, As-Built requirements, Outreach centered around Stormwater Design Manual Update and Neuse Rules Change</p>



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
	notify the Water Quality Manager of program modifications. Notify the Water Quality Manager of program modifications.		Report training events held for developers and number of participants	On 4/20/2023, Stormwater held a webinar for the design community focused on the updated Neuse Rules with over 100 individuals attending, representing 50 companies and/or organizations. Quarterly development stakeholder meetings were also held (avg. 12 participants per meeting).



F.3 Program Elements

Table F-2 includes a brief description of additional Post-Construction Site Runoff Controls program elements required by the MS4 permit, the planned actions for the current and future fiscal years as described in the SWMP, the annual reporting metrics identified in the SWMP, and the actual metrics for actions completed in FY2022-2023.

Table F-2: Post-Construction Site Runoff Controls Program Element Metrics and Results

Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section F.3 Design post-construction practices that meet or exceed state rules	Review annually the DEQ model ordinance and regulations for changes affecting the City's post-construction practices. Incorporate and submit revisions to DEQ for approval, as needed. Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Review annually the DEQ model ordinance and regulations for changes affecting the City's post-construction practices. Incorporate and submit revisions to DEQ for approval, as needed. Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Report whether UDO was updated (Y/N)	Y; see Part II Section A.1



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section F.4 Implement additional requirements for sensitive receiving waters	<p>Maintain SWMP Table 1, which identifies City receiving waters, including NSW and Water Supply Watershed designations.</p> <p>Implement the Neuse River Basin Nutrient Sensitive Waters Management Strategy throughout the City's corporate limits and ETJ area. Implement Water Supply Watershed rules in designated watersheds.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Maintain SWMP Table 1, which identifies City receiving waters, including NSW and Water Supply Watershed designations.</p> <p>Implement the Neuse River Basin Nutrient Sensitive Waters Management Strategy throughout the City's corporate limits and ETJ area. Implement Water Supply Watershed rules in designated watersheds.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	N/A, see SWMP Table 2 and 4, and Part II Section A.1. of the permit	N/A
Part II Section F.5 Meet post-construction requirements for projects performed by permittee	<p>Maintain UDO and Stormwater Design Manual and make documents available all City Departments.</p> <p>Review annually the Asset Management SCM Operation</p>	<p>Maintain UDO and Stormwater Design Manual and make documents available all City Departments.</p> <p>Review annually the Asset Management SCM</p>	N/A, see reporting metrics in Table 9 and 11 of the SWMP and Part II Section F.2 (b) and Part II Section G.2 (g) of the permit	N/A



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
	<p>& Maintenance Plan and update, if necessary.</p> <p>Implement SCMs and dams asset management program.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Operation & Maintenance Plan and update, if necessary.</p> <p>Implement SCMs and dams asset management program.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	Number of City projects approved for post-construction compliance	16
<p>Part II Section F.6 SCM water quality design volume will account for runoff at build out</p>	<p>Maintain UDO and Stormwater Design Manual and make documents available for developers and construction site operators.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Maintain UDO and Stormwater Design Manual and make documents available for developers and construction site operators.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	N/A, see reporting metrics in SWMP Table 4 and 9 and Part II Section F.2 (b) and Part II Section A.1 of the permit	N/A
<p>Part II Section F.7 Non-NCDOT linear transportation projects meet post-construction requirements</p>	<p>Document design requirements for linear projects that will be conveyed to NCDOT demonstrating consistency with current City practices. Implement guidance for NCDOT projects.</p> <p>Evaluate the program effectiveness and notify the Water Quality Manager of program modifications.</p>	<p>Document design requirements for linear projects that will be conveyed to NCDOT demonstrating consistency with current City practices. Implement guidance for NCDOT projects.</p> <p>Evaluate the program effectiveness and notify the Water Quality Manager of program modifications.</p>	Report the number of linear projects with an approved design that will be conveyed to NCDOT	2



F.4 Program Assessment

During FY2022-2023 the Stormwater Plan Review group maintained a full staff and continued to meet all permit requirements. The updates to the Neuse Rules were incorporated into the UDO and became effective on 5/1/2023. Work on the updated Stormwater Design Manual resumed and a public draft was released in September 2023. Staff continued to make improvements to existing internal checklists and SOPs while approving more plans than the previous reporting year.

The SCM Inspections program has improved staff capacity this reporting period by filling vacant positions. While the number of sites with SCMs and inspections increased during the reporting period, staff were able to maintain the same compliance rate across all SCM sites. Staff will continue to regularly review the program plan, and further develop SOPs to expand program effectiveness and operation with the extra support from the newly filled full-time staff positions. Staff aims to continue effectively administering the program, as well as improving enforcement efforts to increase overall compliance with the program.



Section G: Pollution Prevention and Good Housekeeping for Municipal Operations

G.1 Program Narrative

The Stormwater Management Division has developed and implemented a facility inventory, inspection program, Site Pollution Prevention Plans (SPPPs) and Stormwater Pollution Prevention Plans (SWPPPs), spill response guidance, and staff training to prevent or mitigate pollution from municipal facilities and operations.

The City also inspects and maintains municipally-owned SCMs and the storm sewer system to assess and maintain its condition.

G.2 Best Management Practices

Table G-1 includes a brief description of the Pollution Prevention and Good Housekeeping best management practices required by the MS4 permit, the planned actions for the current and future fiscal years as described in the SWMP, the annual reporting metrics identified in the SWMP, and the actual metrics for actions completed in FY2022-2023.

Table G-1: Pollution Prevention and Good Housekeeping for Municipal Operations Metrics and Results

Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section G.2 (a) Inventory of municipal facilities and operations	Review the inventory annually and update, as needed, based on changes in municipal facilities and operations.	Review the inventory annually and update, as needed, based on changes in municipal facilities and operations.	Report inventory of facilities determined to have significant potential for generating polluted stormwater runoff	30 facilities; see Table G-2 below
	Maintain and update inventory of municipally-owned SCMs. Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Maintain and update inventory of municipally-owned SCMs. Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Report number of municipal SCMs by type (requiring annual inspection)	Total: Wet Pond: 4 Underground Detention: 3 Swale: 1 Sand Filter: 1 Cistern: 0 Permeable Pavement: 0 Level Spreader w/ Filter Strip: 3 Green Roof: 0 Filterra: 13 Dry Pond: 8 Wetland: 7 Bioretention: 19



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section G.2 (b) Inspection and maintenance program for municipal facilities and operations	Review annually the Asset Management SCM Operations and Maintenance Plan and Industrial Facility Inspection Program Plan guidance and update, as needed.	Review annually the Asset Management SCM Operations and Maintenance Plan and Industrial Facility Inspection Program Plan guidance and update, as needed.	Report number of facilities inspected	117 facilities were inspected
	Inspect and document municipal facility inspections, including any corrective actions. Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Inspect and document municipal facility inspections, including any corrective actions. Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Report corrective actions taken at municipal facilities or operations	One summary memorandum was sent to facility contacts; SPPP was updated, training completed, and inspections resumed
Part II Section G.2 (c) SPPPs for municipal facilities	Review annually facility SPPPs/SWPPPs with facility owning departments and update, as needed. Develop SPPPs/SWPPPs for newly identified facilities, if necessary. Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Review annually facility SPPPs/SWPPPs with facility owning departments and update, as needed. Develop SPPPs/SWPPPs for newly identified facilities, if necessary. Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Report number of facilities within the City corporate limits with SPPPs/SWPPPs	30 facilities have SWPPPs/SPPPs in either complete or draft form



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section G.2 (d) Spill response procedures for municipal facilities and operations	Review facility, operation, and Citywide spill response procedures and update, if necessary.	Review facility, operation, and Citywide spill response procedures annually and update, as needed.	Report number of spill response procedures developed/updated	A city-wide spill response document was reviewed and updated in August 2023
	Notify the Water Quality Manager of program modifications.	Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.		
Part II Section G.2 (e) Prevent or minimize contamination of stormwater runoff from all areas used for vehicle and equipment cleaning	Review procedures for vehicle and equipment cleaning operations annually and update, as needed.	Review procedures for vehicle and equipment cleaning operations annually and update, as needed.	Report number of high priority facilities performing vehicle and equipment cleaning operations	8
	Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Report actions taken to prevent or minimize stormwater runoff from vehicle and equipment cleaning	Stormwater staff have inspected all facilities where vehicle and equipment cleaning occur. Several facilities have and maintain oil/water separators, and SPPPs or SWPPPs have been completed or are in final draft form for these facilities.



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
			Report number of facilities with three or fewer fire trucks undergoing renovations that will include structural measures to prevent wash water from entering the storm sewer system to the extent feasible	Stormwater staff have inspected all fire stations with three or fewer fire trucks and ambulances during this reporting year. The City's Stormwater Design Manual is currently being updated and includes draft language to include structural measures to prevent wash water at all new facilities with three or fewer fire trucks and ambulances. No facilities are undergoing renovation. One new fire station is currently being designed and will be reviewed by Stormwater staff prior to approval.
<p>Part II Section G.2 (f) Streets, roads, and public parking lots maintenance</p>	<p>Document street, road, and public parking lot BMPs in the MS4 Operation and Maintenance Plan.</p> <p>Implement BMPs to reduce polluted stormwater runoff from municipally-owned streets, roads, and public parking lots.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Document street, road, and public parking lot BMPs in the MS4 Operation and Maintenance Plan.</p> <p>Implement BMPs to reduce polluted stormwater runoff from municipally-owned streets, roads, and public parking lots.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	Report maintenance activities completed in the previous fiscal year	7,975 miles swept



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
<p>Part II Section G.2 (g) Inspection and Maintenance (I&M) for municipally-owned or maintained stormwater control measures (SCMs) and the storm sewer system.</p>	<p>Review annually the MS4 Operation and Maintenance Plan and Asset Management SCM Operation and Maintenance Plan, and revise, as needed.</p>	<p>Review annually the MS4 Operation and Maintenance Plan and Asset Management SCM Operation and Maintenance Plan, and revise, as needed.</p>	<p>Report number of municipal SCMs inspected</p>	<p>59; all City-owned regulatory compliance SCMs installed prior to this reporting period have been inspected and certified reports are pending submittal</p>
	<p>Review annually the Asset Management SCM Operation and Maintenance Plan, and revise, as needed.</p> <p>Establish service level agreements (SLAs) with facility owning departments address shared ownership and maintenance responsibilities and outstanding maintenance needs for SCMs located at municipal facilities.</p>	<p>Implement inspection and maintenance programs documented in the MS4 Operation and Maintenance Plan and Asset Management SCM Operation and Maintenance Plan.</p> <p>Review existing SLAs and coordinate with facility owning departments, if necessary.</p> <p>Evaluate the program effectiveness annually</p>	<p>Report number of storm sewer conveyance system components inspected</p>	<p>Number of bridges inspected: 6</p> <p>Number of crossline conveyances (culverts) inspected: 2,289</p> <p>Linear footage of drainage system that has had CCTV inspection: 76,559</p> <p>Linear footage of drainage system that has had pole camera inspection: 461,790</p> <p>Number of catch basins inspected: 742</p> <p>Number of junctions inspected: 13</p>



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
	<p>Review existing SLAs and coordinate with facility owning departments, if necessary.</p> <p>Implement inspection and maintenance programs documented in the MS4 Operation and Maintenance Plan and Asset Management SCM Operation and Maintenance Plan.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>and notify the Water Quality Manager of program modifications.</p>	<p>Report maintenance and repair actions</p>	<p>Number of storm assets flushed and/or vacuumed: 868 Linear feet of stormwater pipe flushed and/or vacuumed: 26,222</p> <p>Number of crossline conveyances (culverts) maintained: 2,772</p> <p>Number of inlet/junction tops reset: 517</p> <p>Number of inlets/junctions maintained: 1,106</p> <p>Number of pipes repaired/replaced:56 Linear feet or channels redefined:1,240 Number of bridges repaired:12 Number of culverts repaired:2 Number of catch basins repaired: 86 Number of junctions repaired:12</p>



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
<p>Part II Section G.2 (h) Staff training</p>	<p>Review annually and implement the Education, Outreach, and Public Involvement Plan, in conjunction with Part II Section D.2 (d) in Table 7, which documents the employee training program, including who should receive training, types of training, and frequency.</p> <p>Conduct employee training and document attendance.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Review annually and implement the Education, Outreach, and Public Involvement Plan, in conjunction with Part II Section D.2 (d) in Table 7, which documents the employee training program, including who should receive training, types of training, and frequency.</p> <p>Conduct employee training and document attendance.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Report types of training provided and number of staff who completed PPGH training</p>	<p>229 City staff completed the PPGH training module via the City's iLearn and SuccessFactors portals.</p>



Table G-2: PPGH inventory of facilities that have significant potential to generate polluted stormwater runoff

Facility Name	Facility Owning Department
Lake Woodard (PUD)	Raleigh Water
Northeast Remote Operations (Burwell St)	Vehicle Field Services/Parks
COR Paratransit Operations Facility	Transportation
Downtown Remote Operations	Engineering Services/Transportation
Raleigh Transit Operations Facility	Go Raleigh
New Bern Avenue Maintenance Facility	Raleigh Fire Department/Engineering Services
Solid Waste-Wilders Grove Service Center	Solid Waste Services
Yard Waste Facility	Solid Waste, Yard Waste Facility
Buffaloe Road Athletic Park	Parks, Recreation and Cultural Resources
Walnut Creek Park North	Parks, Recreation and Cultural Resources
Ridge Road Pool	Parks, Recreation and Cultural Resources
Raleigh Fire Department Facility #1	Raleigh Fire Department
Mt. Herman Rd Operation Facility	Transportation
Biltmore Hills Park	Parks, Recreation and Cultural Resources
Millbrook-Exchange Park	Parks, Recreation and Cultural Resources
Pullen Park	Parks, Recreation and Cultural Resources
Optimist Park	Parks, Recreation and Cultural Resources
Longview Pool	Parks, Recreation and Cultural Resources
Neuse River Resource Recovery Facility	Raleigh Water
E. M. Johnson Water Treatment Plant	Raleigh Water
Raleigh Union Station	Transportation
Bain Odor Control Station	Raleigh Water
Lake Johnson	Parks, Recreation and Cultural Resources
Dorothea Dix Park	Parks, Recreation and Cultural Resources
Keeter Training Center	Raleigh Fire Department
Marsh Creek Facility	Parks, Recreation and Cultural Resources
Walnut Creek Odor Control and Pump Station	Raleigh Water
Crabtree Creek Odor Control & Pump Station	Raleigh Water



Facility Name	Facility Owning Department
Marsh Creek Odor Control Station	Raleigh Water
Buffaloe Road Odor Control Station	Raleigh Water

G.3 Program Assessment

Staff continue to meet PPGH permit requirements. Throughout the past year, staff have completed more than 77 site investigations, which is approximately a 14% increase from the previous year. All 30 City-wide high priority facilities were inspected at least once; additional inspections include return inspections and/or follow-up on high priority sites and low-priority facilities (defined by low potential to generate stormwater pollution). One summary memorandum was distributed that resulted in the fulfillment of Site Pollution Prevention Plan requirement deficiencies. All City-owned regulatory compliance SCMs installed prior to this reporting period have been inspected with certified reports pending submittal. An earlier inspection schedule may be implemented to ensure inspections correspond with reporting annual timeframes. Lastly, the SCM O&M Plan was reviewed during this reporting year and minor updates were completed.

Section H: Program to Monitor and Evaluate Stormwater Discharges to Municipal Systems

H.1 Program Narrative

The City maintains an inventory of permitted hazardous waste treatment, disposal, and recovery facilities; industrial facilities that are subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA); and industrial facilities identified with an industrial activity permitted to discharge stormwater to the City MS4. The City’s program prioritizes and inspects City-owned facilities with NPDES Industrial Stormwater Permits annually and privately-owned facilities with NPDES Industrial Stormwater Permits at least once every three years. Non-exposure sites permitted through NCDEQ are inspected once every permit cycle.

If significant non-compliance is found at a permitted facility or if compliance with the permit does not result in adequate control of pollutants to the MS4, City staff will contact NCDEQ to report the issue. If an illicit discharge is discovered during the inspection of a permitted facility, the City will take enforcement action to resolve the problems leading to non-compliance.

H.2 Best Management Practices

Table H-1 includes a brief description of the Program to Monitor and Control Pollutants in Storm Water Discharges to Municipal Systems best management practices required by the MS4 permit, the planned actions for the current and future fiscal years as described in the SWMP, the annual reporting metrics identified in the SWMP, and the actual metrics for actions completed in FY2022-203.



Table H-1: Program to Monitor and Control Pollutants in Storm Water Discharges to Municipal Systems Metrics and Results

Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section H.2 (a) Maintain an inventory of industrial facilities	Review at least once per permit cycle the industrial facility inventory and update, as needed.	Review at least once per permit cycle the industrial facility inventory and update, as needed.	Report number of industrial facilities identified within the City's corporate limits	71
	Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.		
Part II Section H.2 (b) Inspection program	Review annually the Industrial Facility Inspection Program Plan and update inspection guidance and checklists, if necessary.	Review annually the Industrial Facility Inspection Program Plan and update inspection guidance and checklists, if necessary.	Report number of facility inspections conducted	71
	Review inspections results and identify program priorities, as needed.	Review inspections results and identify program priorities, if necessary.	Identify program priorities	City-owned facilities - inspected annually; Privately owned facilities at least once every three years (and more typically on an annual basis as staff capacity allows); Non-exposure sites inspected once every permit cycle
	Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.		
Part II Section H.2 (c) Evaluate industrial facilities discharging stormwater to the City's MS4	Conduct inspection activities based on established procedures documented in City guidance and checklists.	Conduct inspection activities based on established procedures documented in City guidance and checklists.	Report number of deficiencies identified and forwarded to DEQ	9
	Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Report number of illicit discharges identified at industrial facilities	1

H.3 Program Assessment

Staff continued to meet all permit requirements to monitor and control pollutants in stormwater discharges to municipal systems. Within the reporting period all industrial sites located within the City's jurisdiction were visited and evaluated by staff, as documented with inspection



reports and photos. As in previous years, staff met and reviewed the previous reporting year's activities and processes on January 6, 2023, and did not recommend any immediate changes. The self-audit completed in May 2023 did not identify any gaps in compliance. In June 2023, staff reviewed and updated all program plans and SOPs. A shared calendar has been implemented for tracking potential compliance concerns referred to NCDEQ. No substantial changes to program implementation will be made per the reviews and assessment.

Section I: Water Quality Assessment and Monitoring

I.1 Program Narrative

The City has developed and implemented a Water Quality Assessment and Monitoring Plan that identifies monitoring locations, a monitoring schedule, monitoring parameters, sample data analysis, and data evaluation and assessment.

I.2 Best Management Practices

Table I-1 includes a brief description of the Water Quality Assessment and Monitoring best management practices required by the MS4 permit, the planned actions for the current and future fiscal years as described in the SWMP, the annual reporting metrics identified in the SWMP, and the actual metrics for actions completed in FY2022-2023.

Table I-1: Water Quality Assessment and Monitoring Metrics and Results

Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023
Part II Section I.2 (a) Water Quality Assessment and Monitoring Plan	Review annually the Water Quality Assessment and Monitoring Plan and update, as needed. Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Review annually the Water Quality Assessment and Monitoring Plan and update as needed. Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Report updates and revisions to the Water Quality Assessment and Monitoring Plan and the date submitted to NCDEQ, if applicable	Updated file storage location and record keeping information. Submitted Plan to NCDEQ on 5/9/2023.
Part II Section I.2 (b) Water quality monitoring	Conduct water quality monitoring and data evaluation as documented in the Water	Conduct water quality monitoring and data evaluation, as documented in the Water	Report number of stream sites monitored	18



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023
	Quality Assessment and Monitoring Plan.	Quality Assessment and Monitoring Plan.	Report number of samples collected	1200
	Provide the current Water Quality Assessment and Monitoring Plan to NCDEQ, if revised.	Provide the current Water Quality Assessment and Monitoring Plan to NCDEQ, if revised.	Report parameters analyzed	Total suspended solids, ammonia, total Kjeldahl nitrogen, nitrate/nitrite, total nitrogen (sum of TKN and NO ₃ /NO ₂ , not collected in the field), calcium, copper, magnesium, total phosphorus, zinc, total hardness, turbidity, E. coli
	Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.	Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.		

I.3: Program Assessment

The Water Quality Assessment and Monitoring program continues to fulfill permit requirements. The Assessment and Monitoring Plan was reviewed and updated on January 12, 2023. Changes were made to reflect the updated file storage location of monitoring data. The Plan was submitted to NCDEQ on May 9, 2023.

Staff sampled the same 18 long-term watershed monitoring locations during this reporting period. 1,200 samples were collected, an increase from last reporting period due to the timing of an additional quarterly sampling event falling within this reporting period. Data analysis revealed high geometric mean concentrations of total nitrogen at two sites (Pigeon House Branch and Rocky Branch). Both watersheds are highly urbanized and elevated TN concentrations could be due to pet waste or fertilizer runoff. Ammonia as Nitrogen (NH₃) analysis resulted in 90% of samples reporting as non-detects with a practical quantification limit (PQL) of 0.1 mg/L. Of the 10% of samples not reported as non-detect, Richland Creek's median value was highest of all sites (0.12 mg/L). Total phosphorus (TP) analysis resulted in a majority of samples (~80%) reported as non-detects with a PQL of 0.05 mg/L. Little Brier Creek and Crabtree Creek had the highest TP concentrations across the reporting period. Similarly, elevated TSS and turbidity concentrations were reported for both sites. Little Brier Creek had the highest median value of TSS and turbidity of all 18 sites; this watershed is a rapidly developing area and data point to sediment being a concern in this watershed. During this reporting period, a total copper analysis was performed to evaluate historical data and investigate potential correlation between TSS, turbidity and total copper to better understand potential sources in Pigeon House Branch. No strong linear correlation was observed when a regression analysis was performed between constituents. Correlation coefficients for total copper and turbidity, and total copper and TSS were ~0.6 and ~0.5 respectively, indicating further evaluation would be warranted to fully understand copper sources.



Results of the self-audit, completed in May 2023, suggest staff should prepare to update the monitoring program, its Assessment and Monitoring Plan, and internal SOPs to comply with revised requirements of the new permit. A new position will be hired next reporting period and split responsibilities between this program and the IDDE program. This will add staff capacity to enhance water quality monitoring efforts, improve the City's ability to further investigate and evaluate atypical data, and employ new methods and/or equipment to help identify potential pollutant sources.



Section J: Total Maximum Daily Loads

J.1 Program Narrative

The following TMDLs within Raleigh's MS4 service area (corporate limits of the City of Raleigh) are noted in Section 2.5 and Table 2 of the SWMP:

- Falls Lake
- Neuse River Estuary
- Pigeon House Branch
- Perry Creek

The Falls Lake and Neuse River Estuary TMDLs are regional TMDLs. The City is addressing the Falls Lake TMDL through its participation in the ongoing 4B Nutrient Management Strategy in collaboration with other municipalities through the Upper Neuse River Basin Association. The City is addressing the Neuse River Estuary TMDL through its implementation of the Nutrient Sensitive Waters Management Strategy and City ordinances adopted as required by State of North Carolina Neuse Nutrient Strategy Rules.

Pigeon House Branch and Perry Creek watersheds have local TMDLs for fecal bacteria and copper, and benthos, respectively. The entirety of Pigeon House Branch watershed and a portion of Perry Creek watershed are within the City's MS4. Waste Load Allocations (WLAs) have not been assigned to the City's MS4 for these TMDLs. The City has a consulting firm under contract to evaluate strategies and tailor or expand BMPs within the scope of the six MCMs to enhance water quality recovery strategies that acknowledge the TMDLs and reduce pollutants of concern. The City, in coordination with NCDEQ, is utilizing an acceptable alternative approach to develop draft Watershed Action Plan (WAP) documents and databases for the TMDL watersheds to guide future implementation and address pollutants of concern in accordance with Part II.J.4 of the City's MS4 permit.

J.2 Best Management Practices

Table J-1 includes a brief description of the TMDLs best management practices required by the MS4 permit, the planned actions for the current and future fiscal years as described in the SWMP, the annual reporting metrics identified in the SWMP, and the actual metrics for actions completed in FY2022-2023.



Table J-1: TMDL Metrics and Results

Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section J.3 (a) Identify, describe, and map watershed, outfalls, and streams	Continue to monitor TMDL development. If a TMDL is developed that assigns an individual numeric WLA to the City, evaluate strategies and tailor SWMP BMPs to address the pollutants of concern and associated TMDLs and develop a TMDL Plan.	Continue to monitor TMDL development. If a TMDL is developed that assigns an individual numeric WLA to the City MS4, evaluate strategies and tailor SWMP BMPs to address the pollutants of concern and associated TMDLs and develop a TMDL Plan.	Report TMDLs with WLAs within the MS4	N/A
			Report changes in outfall inventory that may be contributing to impairment of identified streams	N/A
Part II Section J.3 (b) Evaluate existing measures	Continue to monitor TMDL development. If a TMDL is developed that assigns an individual numeric WLA to the City, establish measures for identifying and reducing pollutants of concern to the MEP.	Continue to monitor TMDL development. If a TMDL is developed that assigns an individual numeric WLA to the City MS4, establish measures for identifying and reducing pollutants of concern to the MEP.	N/A, Report pollutants of concern and measures taken for reduction	N/A
Part II Section J.3 (c) Assessment of available monitoring data	Continue to monitor TMDL development. If a TMDL is developed that assigns an individual numeric WLA to the City, review and assess monitoring data.	Continue to monitor TMDL development. If a TMDL is developed that assigns an individual numeric WLA to the City MS4, review and assess monitoring data.	N/A, Report monitoring data summary and data trends	N/A



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section J.3 (d) Monitoring Plan	Continue to monitor TMDL development. If a TMDL is developed that assigns an individual numeric WLA to the City, develop TMDL monitoring plan for applicable assigned NPDES regulated WLA.	Continue to monitor TMDL development. If a TMDL is developed that assigns an individual numeric WLA to the City MS4, develop TMDL monitoring plan for applicable assigned NPDES regulated WLA.	N/A, Report updates to monitoring plan	N/A
Part II Section J.3 (e) Additional Measures	Continue to monitor TMDL development. If a TMDL is developed that assigns an individual numeric WLA to the City, establish programs and measures to be implemented within the City's MS4 permit program that are designed to achieve the assigned MS4 NPDES regulated WLA and to reduce the TMDL pollutant of concern to the MEP within the watershed to which the TMDL applies.	Continue to monitor TMDL development. If a TMDL is developed that assigns an individual numeric WLA to the City MS4, establish programs and measures to be implemented within the City's MS4 permit program that are designed to achieve the assigned MS4 NPDES regulated WLA and to reduce the TMDL pollutant of concern to the MEP within the watershed to which the TMDL applies.	N/A, Report additional measures taken	N/A



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
Part II Section J.3 (f) Implementation Plan	Continue to monitor TMDL development. If a TMDL is developed that assigns an individual numeric WLA to the City, establish a schedule to address the NPDES WLA pollutant of concerns	Continue to monitor TMDL development. If a TMDL is developed that assigns an individual numeric WLA to the City MS4, establish a schedule to address the NPDES WLA pollutant of concerns	N/A, Report achievement of schedule milestones	N/A
Part II Section J.3 (g) Incremental Success	Continue to monitor TMDL development. If a TMDL is developed that assigns an individual numeric WLA to the City, track successes per the plan. Review and update as needed	Continue to monitor TMDL development. If a TMDL is developed that assigns an individual numeric WLA to the City MS4, track successes per the plan. Review and update as needed	N/A, Report successes	N/A
Part II Section J.3 (h) Reporting	Continue to monitor TMDL development. If a TMDL is developed that assigns an individual numeric WLA to the City, prepare an assessment of activities and data analysis for the TMDL watershed plan	Continue to monitor TMDL development. If a TMDL is developed that assigns an individual numeric WLA to the City MS4, prepare an assessment of activities and data analysis for the TMDL watershed plan	N/A, Report annual assessment outcomes	N/A



Permit Reference/BMP	FY2023	FY2024	Reporting Metric(s)	2022-2023 Results
<p>Part II Section J.4. If no MS4 NPDES regulated waste load allocation (WLA) is specified in the TMDL</p>	<p>Develop Watershed Action Plans for Pigeon House Branch and Perry Creek that include strategies and tailor BMPs to address the POC in the watersheds.</p>	<p>Complete development of Watershed Action Plans for Pigeon House Branch and Perry Creek that include strategies and tailor BMPs to address the POC in the watersheds.</p>	<p>Report the development/maintenance of the Watershed Action Plans and modifications, if necessary</p>	<p>Draft Watershed Action Plan documents and databases for Perry Creek and Pigeon House Branch watersheds are under development. This alternative approach is underway with continued coordination with NCDEQ staff.</p>
	<p>Implement the Watershed Action Plans.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Implement the Watershed Action Plans.</p> <p>Coordinate with the Department of Water Resources to integrate the Pigeon House Branch and Perry Creek Watershed Action Plans into the DEQ StoryMap format, as staff and resources are available within DEQ.</p> <p>Evaluate the program effectiveness annually and notify the Water Quality Manager of program modifications.</p>	<p>Report BMPs implemented</p>	<p>Existing/on-going BMPs include the City's six MCMs as required by the NPDES permit. In addition, the City has proactively implemented measures such as the Raleigh Rainwater Rewards program and Green Stormwater Infrastructure retrofits, stream restoration projects, partnership initiatives with local universities and community groups, watershed studies, and more.</p>



J.3 Program Assessment

Working with an outside consultant and coordinating with NCDEQ, staff have been evaluating strategies to tailor or expand BMPs within the scope of the six MCMs to enhance water quality recovery strategies that acknowledge the TMDL and reduce pollutants of concern. A feasibility study was completed resulting in the selection of Watershed Action Plans (WAP) as the acceptable alternative approach to address Raleigh's local TMDLs (without assigned WLAs) per Section J.2 of the permit. WAP documents and databases for Perry Creek and Pigeon House Branch watersheds are under development, with completion expected within the next reporting year. Existing measures already underway in these watersheds will be documented within the final WAPs.



Section K: Annual Assessment and Annual Summary

This section assesses overall compliance with the permit during the FY2022-2023 reporting period and documents identified program improvements that will be implemented in FY2023-2024, including changes to the SWMP as required by the new permit.

K.1 Assessment

During the 2022-2023 reporting period, City staff continued to develop and improve program components required by the City MS4 permit based on the August 2022 NCDEQ compliance audit recommendations. In addition, City staff completed a self-audit and gap analysis in May 2023, utilizing the NCDEQ Self-Audit template. Staff reviewed all programs, conducted eight site visits, and documented that while the City is meeting and/or exceeding all permit requirements, there are opportunities for continuous improvement in program areas. Consequently, since the self-audit was completed, City teams responsible for implementing each MCM made minor updates and adjustments to further enhance their programs. Findings from completed assessments have been summarized at the end of each section in this report.

K.2 Program Improvements

Following the program enhancements implemented per the May 2023 self-audit, the SWMP was updated, provided for public comment, and submitted to NCDEQ. During this reporting period, program FY24-27 schedules were updated, ensuring continuance and completion of annual tasks. The organizational chart was updated to reflect organizational changes and the receiving waters list was updated to reflect the current EPA-approved NCDEQ Final 303(d) List. Lastly, Table 10- Program Elements for Post-Construction Site Runoff Controls was expanded to incorporate Part II Sections F. 3-7 of the permit (sections included in the self-audit report that needed to be added to the SWMP). The updated SWMP supports the Stormwater Division's ability to meet and exceed permit requirements by serving as an effective mechanism to track all required activities and related metrics throughout the permit year.

A concise summary of data for each MCM, as required by the SWMP, is outlined in each section of the report. These summaries describe staff effort, program effectiveness, and changes and improvements implemented during the reporting period. While several programs experienced staff turnover during the reporting year, the programmatic achievements were not significantly impacted and were comparable to previous years. The City proactively added an additional metric under Section G: PPGH for Municipal Operations (Part II Section G.2 (f)) to include miles swept during maintenance activities.

The City's annual review and maintenance of all legal authorities to effectively meet all permit requirements resulted in updates to the Uniform Development Ordinance to comply with changes in the readopted Neuse Nutrient Strategy Stormwater Rule (15A NCAC 02B .0711). In addition, enforcement actions were conducted over this reporting year in the Illicit Discharge Detection and Elimination, Construction Site Runoff Controls & Post-Construction Site Runoff Controls programs to meet and exceed permit compliance.

K.3 2023-2024 Program Initiatives

This next reporting year will bring significant changes to the City of Raleigh Stormwater Program. Issuance of a new MS4 permit by NCDEQ is pending. As outlined by this new permit language, a revised SWMP will be required to be submitted to NCDEQ for review within 12 months of issuance. Upon approval of the SWMP, program plans across the MCMs will also need to be updated to correspond with



the new permit language. Stormwater staff have engaged with a consulting firm to complete these pending tasks within the compliance schedule.

The Stormwater Division also plans to increase staff resources for the Water Quality Assessment and Monitoring and Illicit Discharge Detection and Elimination programs. A new full-time position was approved in Fiscal Year 2024 and will be filled during this next reporting year to assist with anticipated enhancements in water quality monitoring, IDDE, and dry weather flow inspections.

New Watershed Action Plans for the TMDL watersheds Pigeon House Branch and Perry Creek will be completed during this upcoming reporting year. Staff look forward to continuing to coordinate with NCDEQ staff on this innovative initiative.