

# Stormwater Annual Report



City of Concord

Water Resources Department

NPDES Permit Number NCS000423

Reporting Year: July 1, 2020 – June 30, 2021

## Table of Contents

Stormwater Annual Report Overview .....	1
Status of Implementation .....	1
Water Quality .....	1
FY 20-21 Adopted Budget .....	3
Organizational Chart.....	5
Capital Improvement Projects .....	7
Yearly Maintenance Activities.....	8
Minimum Control Measures .....	9
Public Education and Outreach .....	9
Public Involvement and Participation .....	15
Illicit Discharge Detection and Elimination (IDDE).....	17
Construction Site Runoff Controls.....	24
Post-Construction Site Runoff Control .....	25
Pollution Prevention and Good Housekeeping .....	32
Total Maximum Daily Loads (TMDL's).....	38
Appendices .....	39
Appendix A: Goals of Public Education and Outreach .....	39
Appendix B: Stormwater Pollution Brochure .....	40
Appendix C: Illicit Discharge Ad.....	41
Appendix D: Stormwater Wrap on Sweeper Truck.....	42
Appendix E: Illicit Discharge Related Code of Ordinances.....	43
Appendix F: Illicit Discharge Inspection Form.....	48
Appendix G: Illicit Discharges, Illicit Connections, and Illegal Dumping Brochure.....	49
Appendix H: Stop Mud Ad from website.....	50
Appendix I: Stormwater Quality Control and Management.....	51

## Stormwater Annual Report Overview

The City of Concord is a federally designated National Pollutant Discharge Elimination System (NPDES) Phase II community and operates under the authority of the Stormwater Management Program which operates as a division of the Engineering Department. The North Carolina Division of Water Quality renewed NPDES Phase II Permit NCS000423 to the City of Concord February 20, 2017 – February 19, 2022. The Stormwater Annual Report is the City of Concord’s program to comply with NPDES Permit NCS000423 authorization to discharge Stormwater from the Municipal Separate Storm Sewer System (MS4s) located within the City of Concord Jurisdictional Area.

### Status of Implementation

The City of Concord is pleased to report progress for year 15 compliance with requirements of NPDES Phase II permit in the following six minimum control measures in the plan:

- Public Education and Outreach
- Public Participation and Involvement
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-Construction Site Runoff Control
- Pollution Prevention and Good Housekeeping for Municipal Operations

On June 28, 2005 the City of Concord adopted Stormwater Ordinance No. 05-53 (Chapter 60), which details the stormwater utility control and management. Articles IV and V of the Stormwater Ordinance were adopted on December 13, 2007.

### Water Quality

The City of Concord is delegated by the state to enforce the Stormwater and Illicit Discharge regulations within our jurisdictional area. The city has adopted and enforces a stormwater ordinance. (Chapter 60, Stormwater Utility Control and Management, of the Code of Ordinances)

The City reviews and approves all development plans associated with grading, stormwater, and erosion control. For projects that cumulatively disturb more than one acre a formal plan is required. All formal plans are required to be prepared by a qualified registered NC professional engineer or landscape architect.

For projects that disturb less than an acre and are not part of a larger development are exempt from the stormwater ordinance. For all other projects, stormwater controls must be designed by a licensed professional and installed. The city requires 85% removal of Total Suspended Solids and also

## Stormwater Annual Report Overview

requires that the post construction discharge not exceed pre-development discharge for the 1-year and 10-year storm event. Additionally, Article 4 of the Technical Standards Manual requires that Class 1 streams have a minimum 50 ft undisturbed buffer and a 20 ft vegetated setback. Class 2 streams require an undisturbed buffer of 30 ft and a 10 ft vegetated setback.

## FY 20-21 Adopted Budget

### Stormwater Fund

Budgeted Revenues	<b>\$4,892,875.00</b>
Rates and Charges	\$4,838,975.00
Permits and Fees	\$11,400.00
Miscellaneous	\$42,500.00
Stormwater Expenses	<b>(\$3,717,012.00)</b>
Stormwater	(\$3,717,012.00)
Other Financing Sources	<b>(\$2,180,137.00)</b>
Transfers Out	(\$1,678,000.00)
Fund Balance Appropriated	(\$502,137.00)
<b>Retained Earnings</b>	<b>(\$1,004,274.00)</b>

### Program Funding and Budget

#### General

In accordance with the issued permit, the City of Concord shall maintain adequate funding and staffing to implement and manage the provisions of the SWMP and comply with the requirements of the NPDES MS4 Permit. The budget includes the permit administering and compliance fee, which is billed by the Division annually.

The annual program funding and budgeting of the City's Stormwater Section within the Water Resources Department is based on revenue projections from stormwater utility service charges/fees that are assessed to and collected from customers located within the existing Concord City limits.

#### Establishment of Stormwater Utility

As noted in Section 60-20 of the City Code of Ordinances, the stormwater utility (enterprise fund) was established to support management programs in order to protect water quality by controlling the level of pollutants in and the quantity and flow of stormwater, as well as stormwater structures and natural stormwater drainage systems. In addition, the City manages a Capital Improvement Program (CIP) within the Stormwater Section of the Water Resources Department in an effort to plan for future projects as part of the City's stormwater management system.

#### Basis for Stormwater Utility Service Charges/Fees

As noted in Section 60-21 of the City Code of Ordinances, collected stormwater utility service charges/fees are solely used by the department for funding the operational costs, maintenance costs, management costs, indirect costs, capital improvements, debt principal and debt service payments, and establishment of a reserve fund for stormwater services. In recent years, the annual Stormwater

## FY 20-21 Adopted Budget

Section budget ranged between \$5,000,000 and \$7,000,000, with approximately \$2,000,000 being allocated to fund Stormwater Section Capital Improvement Program (CIP) projects. As noted in the Stormwater Services section of the City's FY 2020-2021 Fees, Rates and Charges Schedule, the current monthly stormwater equivalent runoff unit (ERU) rate is \$5.16/ERU. An ERU is equal to 3,120 sq. ft. This particular rate is projected to be the same within the City's FY 2021-2022 Fees, Rates and Charges Schedule. Similarly, residential homes are charged as follows:

<b>Single-Family Residential Lot Total Impervious Surfaces</b>	<b>Percentage of ERU (1 ERU = 3,120 sq. ft.)</b>	<b>Amount Added to Utility Bill</b>
Small (401 to 1,899 sq. ft.)	0.6 (60%)	\$3.10
Medium (1,890 to 5,507 sq. ft.)	1.0 (100%)	\$5.16
Large (Greater than 5,507 sq. ft.)	1.8 (180%)	\$9.29

*Table 1. Breakdown of the City of Concord stormwater residential home fee.*

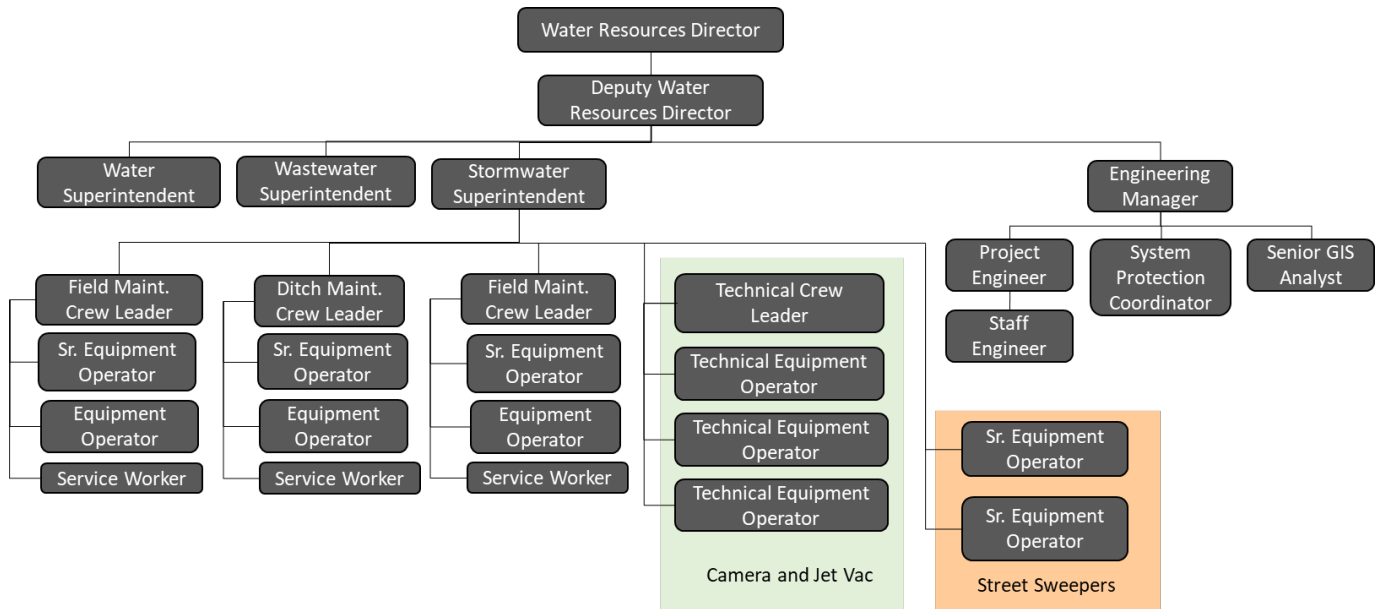
Currently, there is a total of 21.26 full-time equivalent (FTE) staff within the City's Stormwater Section for providing the following services:

- A. Program administration.
- B. Response to customer service inquiries related to drainage and stormwater quality.
- C. Drainage system maintenance within City maintained street right-of-ways.
- D. Compliance with the City's NPDES Phase II Stormwater Permit.
- E. Review of development plans to ensure compliance with City ordinances.
- F. Capital engineering and planning.
- G. Inspections and enforcement of stormwater infrastructure.

### Stormwater Section 5-Year Capital Improvements Program (CIP) Planning, Funding and Budgeting

The City of Concord's 5-Year Stormwater Section CIP planning documents are refined and include a list of future capital projects that have mainly been identified in a completed master plan report, long range and facility studies, or similar planning documents. These projects are included in the 5-Year CIP listing in order to provide satisfactory services to the community, as well as meet future needs, goals and policies of the City. Other planning documents within the CIP include project descriptions and corresponding justifications/impacts, status (i.e. new, revised, returning), priority numbers, as well as projected project costs for each of the planned phases (i.e. preliminary design, final design, environmental assessment, easement or right-of-way acquisition, construction). In addition, cost estimates and corresponding budgets are completed and/or revised on all 5-Year CIP projects on an annual basis, and include all costs associated with the engineering, environmental assessment, easement or right-of-way acquisition, and construction phases.

# Organization Chart



## Summary of Responsible Parties

SWMP Component	Responsible Position(s)	Staff Name	Department
Stormwater Program Administration	Water Resources Director	Jeff Corley	Water
SWMP Management	Project Manager	Crystal Scheip	Stormwater
	Staff Engineer	Juliana Lima	Stormwater
Public Education & Outreach	Project Manager	Crystal Scheip	Stormwater
	Staff Engineer	Juliana Lima	Stormwater
Public Involvement & Participation	Staff Engineer	Juliana Lima	Stormwater
Illicit Discharge Detection & Elimination	System Protection Superintendent	Josh Legg	Wastewater
Construction Site Runoff Control	Construction Coordinator	Sean Radford	Engineering
	Construction Manager	Gary Stansbury	Engineering
Post-Construction Stormwater Management	Project Manager	Crystal Scheip	Stormwater

## Organization Chart

Pollution Prevention/Good Housekeeping for Municipal Operations	System Protection Superintendent	Josh Legg	Wastewater
	Engineering Manager	Tom Bach	Water
Municipal Facilities Operation & Maintenance Program	Engineering Manager	Tom Bach	Water
Spill Response Program	Water Resources Director	Jeff Corley	Water
MS4 Operation & Maintenance Program	Water Resources Director	Jeff Corley	Water
	Water Resources Deputy Director	Rusty Campbell	Water
Municipal SCM Operation & Maintenance Program	Project Manager	Crystal Scheip	Stormwater
	Engineering Manager	Clint Shoaf	Engineering
Pesticide, Herbicide & Fertilizer Management Program	Buildings & Grounds Deputy Director	Joel White	Buildings & Grounds
Vehicle & Equipment Cleaning Program	Engineering Manager	Tom Bach	Water
Pavement Management Program	Water Resources Deputy Director	Rusty Campbell	Water
Total Maximum Daily Load (TMDL) Requirements	Water Resources Director	Jeff Corley	Water



## Capital Improvement Projects

### Equipment:

- Replacement Sweeper Truck - \$278,231

### Completed Construction Projects:

- Chadbourne Avenue Culvert Replacement - \$784,606
- Chelwood Drive Culvert Replacement - \$813,370

### Began Construction Projects:

- Glen Eagles Culvert Replacement - \$767,850

## Yearly Maintenance Activities

Maintenance activities include pipe repair, storm drain cleaning, grate replacement, catch basin repair, culvert repair, shoulder repair and ditching. These activities are conducted by the Stormwater crews.

<b>Stormwater Work Orders FY 20-21</b>	
<b>Description</b>	<b>Number Completed</b>
Clean Inlet	2
Ditch Cleaning	51
Ditch General	16
Inlet Maintenance	13
Junction Box Install	1
Jet Inlet	2
Jet Vac	6
Junction Box Maintenance	3
Storm Main Install	5
Storm Main Removal	1
Storm Main Maintenance	4
TV Pipe	4
<b>Total</b>	<b>108</b>

### Yearly Operation Activities

### Total Number

#### Inspections (7/1/20 – 6/30/21)

Internal Stormwater Control Measures	150
Annual Stormwater Control Measures	
- Passing Reports	101
- Failed Reports	20

#### Plan Reviews (7/1/20 – 6/30/21)

### Total Number

Received	108
Reviewed	108
Approved	71

## Public Education and Outreach

### Objectives for Public Education and Outreach

Distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps the public can take to reduce pollutants in stormwater runoff.

### BMPs for Public Education and Outreach

The permittee shall implement the following BMPs to meet the objectives of the Public Education and Outreach Program and shall notify the Division prior to modification of any goals.

BMP	Measurable Goals
a. Goals and Objectives	Defined goals and objectives of the Local Public Education and Outreach Program based on community wide issues

### 20-21 Accomplishments

The City of Concord reviewed and updated the defined goals and objectives of the Public Education and Outreach program (Appendix A).

### 20-21 Objectives

- Continue to develop public education and outreach opportunities for our target audiences.
- Stormwater staff will continue participating in existing educational events and partnering with community organizations in order to educate the public through the stormwater program.
- Review program goals and objectives, update as necessary.

BMP	Measurable Goals
b. Describe target pollutants and/or stressors	The permittee shall maintain a description of the target pollutants and/or likely stressors and likely sources.

### 20-21 Accomplishments

Based on the NCDEQ 303 (d) Impaired Waterbodies list and continuing concerns throughout the local community, the City of Concord has developed the following list of target pollutants and/or likely stressors and likely sources:

## Public Education and Outreach

Target Pollutants/Stressors	Likely Sources
Litter	General Public, Businesses, Schools
Illicit Discharge	General Public, Businesses, Municipal Employees
Illegal Dumping	General Public, Businesses, Municipal Employees
Improper Disposal of Waste	General Public, Businesses, Municipal Employees
Pet Waste	General Public, Schools, Parks
Sediment	Contractors, Construction Erosion, Stream Bank Erosion
Car Washing	Businesses, General Public
Yard Waste	Residential, Commercial, Municipal Employees
Pesticides, Herbicides, and Fertilizers	General Public, Businesses, Schools, Municipal Employees

**21-**

### 22 Objectives

- Continue to monitor target pollutants in the MS4 and update table above, as needed.

BMP	Measurable Goals
c. Describe target audiences	The permittee shall maintain a description of the target audiences likely to have significant stormwater impacts and why they were selected.

### 20-21 Accomplishments

The City of Concord identified target audiences likely to significantly impact stormwater quality. The following table lists the target audience and activities associated with each group that contributed to their selection:

Target Audiences	Reason for Selection
General Public (Residents, Tourists, etc.)	Car washing, littering, owning pets, and other illicit discharges
Businesses (Commercial and Industrial)	General illicit discharges, illegal dumping, improper waste disposal, construction site runoff, improper fat, oil, and grease (FOG) disposal, car washing, etc.
Schools	Potential general litter issues and improper disposal of FOG
Municipal Employees	Municipal vehicle/equipment operation and cleaning, construction activities

## Public Education and Outreach

### **21-22 Objectives**

- Continue outreach to target audiences and update the above table list of target audiences, as needed.

BMP	Measurable Goals
d. Describe residential and industrial/commercial issues	The permittee shall describe issues, such as pollutants, the likely sources of those pollutants, potential impacts, and the physical attributes of stormwater runoff, in their educational program

### **20-21 Accomplishments**

The City updated its Stormwater Pollution brochure, available on the stormwater webpage (Appendix B). This brochure describes the previously identified target pollutants, likely sources of those pollutants, potential impacts, physical attributes of stormwater runoff, ways to prevent stormwater pollution, and stormwater pollution reporting procedures.

The City has also maintained its Environmental Education social media pages. Posts this year have discussed topics such as litter, illicit connections and illegal dumping, pet waste, yard waste, proper disposal of oil and household chemicals, and fertilizers. The City's stormwater infrastructure, as well as tips for reducing stormwater pollution were also addressed through our social media pages. Additionally, information on illicit discharges, illicit connections, and illegal dumping was advertised in the Summer 2021 edition of the City Circular magazine (Appendix C).

### **21-22 Objectives**

- Continue to educate target audiences on the sources and impacts of target pollutants, as well as general stormwater pollution information, utilizing various platforms and medias.
- Continue to create informative advertisements concerning stormwater pollution for the quarterly City Circular magazine.
- Create stormwater pollution and IDDE brochures specifically for industrial and commercial facilities to be mailed out with backflow device reminders.

## Public Education and Outreach

BMP	Measurable Goals
e. Informational Website	The permittee shall promote and maintain an internet website designed to convey the program's message.

### **20-21 Accomplishments**

The Stormwater Division continues to maintain a webpage dedicated to the Public Education & Outreach Program: <https://concordnc.gov/Departments/Stormwater/NPDES-Phase-II/public-education-outreach>. The webpage provides information about how the program is implemented throughout the City, including educational opportunities. The division also maintains a primary stormwater webpage: <https://concordnc.gov/Departments/Stormwater>. The page includes information on the City's stormwater infrastructure, stormwater pollution, and reporting mechanisms. From this webpage, the public can access our Stormwater Pollution page which further details types of pollution, sources, and prevention methods: <https://concordnc.gov/Departments/Stormwater/Stormwater-Pollution>. All relevant webpages are advertised in the stormwater educational information created and provided by the City.

A vinyl wrap promoting the message of "only rain down the storm drain", the stormwater hotline and website link was designed and installed on the City's streetsweeper vehicle (Appendix D).

### **21-22 Objectives**

- Continue to maintain and update our current webpages with all relevant program information.
- Add of links to educational materials from other sources, including the EPA and NCDEQ.

BMP	Measurable Goals
f. Distribute public education materials to identified target audiences and user groups.	The permittee shall distribute stormwater educational material to appropriate target groups. Instead of developing its own material the permittee may rely on Public Education and Outreach materials supplied by state, and/or other entities through a cooperative agreement, as available, when implementing its own program.

## Public Education and Outreach

### 20-21 Accomplishments

The City of Concord distributed educational material to identified target audiences through the following mediums:

Material	Number Distributed	Approximate Reach
Social Media Posts Related to Stormwater	30 posts	(Average) 205 per Facebook post 3,100 per Nextdoor post
City Circular Magazine Advertisements*	2 advertisements	40,000 each quarter
Emails Related to Stormwater	3 emails	1,000 City Coworkers per email

\*Note: The City Circular is also available on the City's website for anyone to access at any time.

These materials covered topics such as, target pollutants, stormwater infrastructure, illicit discharges and illegal dumping, and more. Due to the COVID-19 pandemic, the City was unable to handout physical, in-person educational information.

### 21-22 Objectives

- Continue to distribute and track stormwater educational material to target audiences.
- Create stormwater pollution and IDDE brochures specifically for industrial and commercial facilities to be mailed out with backflow device reminders.

BMP	Measurable Goals
g. Maintain Hotline/Help line	The permittee shall promote and maintain a stormwater hotline/helpline for the purpose of public education and outreach

### 20-21 Accomplishments

The City provides a stormwater hotline, 704-920-5555, for citizens to report illicit discharge, spills, erosion/sediment problems, and other stormwater related issues. This number is promoted on the city website, in the City Circular magazine, and on social media.

A vinyl wrap promoting the message of "only rain down the storm drain", the stormwater hotline and website link was designed and installed on the City's streetsweeper vehicle (Appendix D).

## Public Education and Outreach

### **21-22 Objectives**

- Continue to maintain and promote the stormwater hotline/helpline.

BMP	Measurable Goals
h. Implement a Public Education and Outreach Program	The permittee outreach program, including those elements implemented locally or through a cooperative agreement, shall include a combination of approaches designed to reach the target audiences. For each media, event or activity, including those implemented locally or through a cooperative agreement the permittee shall estimate and record the extent of exposure.

### **20-21 Accomplishments**

The City of Concord held two primary educational events for the 2020-2021 fiscal year. Due to the COVID-19 pandemic, the City was not able to offer all typical events, such as the Journey Through Concord and Civic Education programs. Our Environmental Educator facilitated the following educational events:

Educational Event	Number of Participants
UNCC Environmental Planning Class	24
Virtual Concord 101	22

### **21-22 Objectives**

Continue to:

- Search for public education and outreach opportunities
- Maintain and update website
- Document the extent of exposure of educational materials and programs.
- Post information on social media to reach target audiences
- Work with other City departments and local organizations to provide stormwater education and outreach.



## Public Involvement and Participation

### Objectives for Public Involvement and Participation

Comply with State and Local public notice requirements when implementing a public involvement and participation program

### BMP's for Public Involvement and Participation

The permittee shall implement the following BMP's to meet the objectives of the Public Involvement and Participation program and shall notify the Division prior to any modifications of any goals

BMP	Measurable Goals
a. Volunteer community involvement program	The permittee shall include and promote volunteer opportunities designed to promote ongoing citizen participation

### 20-21 Accomplishments

The City of Concord provides two stream-cleaning programs: Adopt-A-Stream and Clean-A-Creek. These programs encourage local groups to reduce the amount of trash and debris in City streams, helping improve water quality. Both opportunities are advertised on the City's stormwater webpage (<https://concordnc.gov/Departments/Stormwater/Adopt-a-Stream>) and annually in the City Circular magazine.

The City of Concord also offers a storm drain marking program. This fiscal year, other volunteer opportunities such as a storm drain mural program were researched and proposed.

Each year the City of Concord organizes the Litter Sweep event for all City coworkers. For the Spring 2021 Litter Sweep event, 416 City staff members collected a total of 462 bags of trash and 52 bags of recycling. This event is advertised to City staff through email, the City Circular magazine, and on the City's Intranet page.

### 21-22 Objectives

- Continue to promote and maintain the volunteer activities currently offered
- Continue to seek out more volunteer options.
- Look for partnership opportunities to perform various stormwater activities.

## Public Involvement and Participation

BMP	Measurable Goals
b. Mechanism for Public involvement	The permittee shall provide and promote a mechanism for public involvement that provides for input on stormwater issues and the stormwater program.

### **20-21 Accomplishments**

The City of Concord held one Stormwater Management Advisory Committee (SMAC) meeting on March 2, 2020 and, due to the COVID-19 pandemic, postponed all quarterly meetings until June 7, 2021. Agendas and minutes were kept for each meeting.

### **21-22 Objectives**

- Continue to hold quarterly meetings, as done prior to the pandemic, to engage the public in addressing stormwater issues and regulations throughout the City.

BMP	Measurable Goals
c. Hotline/Help line	The permittee shall promote and maintain a hotline/helpline for the purpose of public involvement and participation.

### **20-21 Accomplishments**

The City provides a stormwater hotline, 704-920-5555, for citizens to ask about stormwater related issues. This number is promoted on the city website, in the City Circular magazine, and on social media.

A vinyl wrap promoting the message of “only rain down the storm drain”, the stormwater hotline and website link was designed and installed on the City’s streetsweeper vehicle.

### **21-22 Objectives**

- Continue to maintain and promote the stormwater hotline/helpline.

## Illicit Discharge Detection and Elimination (IDDE)

### Objectives for Illicit Discharge Detection and Elimination

- a. Implement and enforce a program to detect and eliminate illicit discharges into the MS4;
- b. Maintain a storm sewer system map, showing the location of major outfalls and the names and locations of waters of the United States that receive discharges from those outfalls;
- c. Prohibit, through ordinance, or other regulatory mechanism, non-stormwater discharges except as allowed in this permit and implement appropriate enforcement procedures and actions;
- d. Implement a plan to detect and address non-stormwater discharges, including illegal dumping into the MS4;
- e. Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste; and
- f. Address the following categories of non-stormwater discharges or flows (i.e., illicit discharges) only if you identify them as significant contributors of pollutants to the MS4: waterline flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitat and wetlands, dechlorinated swimming pool discharges, and street wash water (discharges or flows from firefighting activities are excluded from the effective prohibition against non-stormwater and need only be addressed where they are identified as significant sources of pollutants to waters of the United States)

### BMPs for Illicit Discharge Detection and Elimination

The permittee shall implement the following BMPs to meet the objectives of the Illicit Discharge Detection and Elimination Program and shall notify the Division prior to modification of any goals.

BMP	Measurable Goals
a. Maintain an Illicit Discharge Detection and Elimination Program	Maintain a written Illicit Discharge Detection and Elimination Program, including provisions for program assessment and evaluation and integrating program.

## Illicit Discharge Detection and Elimination (IDDE)

### **20-21 Accomplishments**

The City of Concord continued operation of the Illicit Discharge Detection and Elimination (IDDE) program. The Water Resources Department began creating a written document of program procedures and information that describe current practices.

### **21-22 Objectives**

- Finish the written document for the IDDE program, which will also establish provisions for program assessment and evaluation and integrating program.
- Maintain the current IDDE program

BMP	Measurable Goals
b. Maintain adequate legal authorities	The permittee shall maintain an IDDE ordinances or other regulatory mechanisms that provides the legal authority to prohibit illicit connections and discharges.

### **20-21 Accomplishments**

The City of Concord maintained Chapter 60, Article IV of the City Code of Ordinances which provides the legal authority to prohibit illicit connections and discharges, as well as detailing enforcement actions (Appendix E).

### **21-22 Objectives**

- Continue to maintain the ordinance and update, as necessary.

BMP	Measurable Goals
c. Maintain a Storm Sewer System Base Map of Major Outfalls	The permittee shall maintain a current map showing major outfalls and receiving waters.

### **20-21 Accomplishments**

The City maintains and updates maps of the stormwater system throughout the city in ArcGIS, a GIS based system. The maps are updated annually to show new storm drainage systems that have been installed. This mapping system shows locations of streams, rivers, ponds, lakes, SCM's, storm drains, outfalls, and drainage networks.

## Illicit Discharge Detection and Elimination (IDDE)

### **21-22 Objectives**

- Continue to maintain and update maps of the stormwater system in ArcGIS.
- Add flow direction of storm sewer system pipes to map
- Publish stormwater system map online for general public to access.

BMP	Measurable Goals
d. Implement a program to detect dry weather flows	The permittee shall maintain a program for conducting dry weather flow field observations in accordance with written procedures.

### **20-21 Accomplishments**

The City of Concord stormwater staff established a dry weather screening process and plan to begin Outfall Assessments, including written procedures for inspections and an inspection form through ArcGIS. Staff has set a goal of inspecting 20% of all major outfalls annually.

### **21-22 Objectives**

- Complete and finalize written procedures for conducting the dry weather flows program.
- Update GIS map of all major outfalls
- Continue to perform routine outfall inspections, in accordance with the written procedures.

BMP	Measurable Goals
e. Investigate sources of identified illicit discharges.	The permittee shall maintain written procedures for conducting investigations of identified illicit discharges.

### **20-21 Accomplishments**

The City of Concord Stormwater Division began creating written procedures for conducting illicit discharge investigations, which describe current practices. The City maintained its system of investigating reported illicit discharges.

The stormwater staff are familiar with the storm sewer system and conduct annual inspections of publicly maintained storm drain systems throughout the city.

If a suspected illicit discharge is discovered, or a resident of the city reports a questionable discharge,

## Illicit Discharge Detection and Elimination (IDDE)

the City of Concord System Protection Superintendent is notified and visits the site to investigate the report. In the event the City is unable to identify the discharge, the NC Division of Water Quality is contacted for testing purposes. Assuming there is evidence of an illicit discharge, the property owner is notified in person (if possible) or by letter detailing the observed violation, the amount of time to take corrective action, and civil penalties, detailed in Sec. 60-48 of the City Code of Ordinances, if they do not comply.

### **21-22 Objectives**

- Complete formal written standard operating procedure (SOP) for investigating, reporting, and documenting illegal dumping, illicit discharges and connections.
- Continue to administer the City’s IDDE Program and review/update the plan annually.
- The Stormwater Division will continue to perform routine inspections of the storm sewer system.

BMP	Measurable Goals
f. Track and document investigations of illicit discharges	For each case the permittee shall track and document 1) the date(s) the illicit discharge was observed; 2) the results of the investigation; 3) any follow-up of the investigation; and 4) the date the investigation was closed.

### **20-21 Accomplishments**

The City of Concord investigates all reported illicit discharges. Currently, the IDDE investigator completes an inspection form noting the results of the investigation and any follow-up actions (Appendix F). Dates pertaining to the investigation are tracked in an Excel spreadsheet. The Stormwater Division began creating a new web-based investigation form that will include date(s) observed, investigation results, any follow-up actions taken, and the date the investigation was closed. This system will make tracking and documentation of all investigations more organized.

### **21-22 Objectives**

- Continue to track and document all illicit discharge investigations using the new web-based system.

## Illicit Discharge Detection and Elimination (IDDE)

BMP	Measurable Goals
g. Provide Employee Training	The permittee shall implement and document a training program for appropriate municipal staff, who as part of their normal job responsibilities, may come into contact with or otherwise observe an illicit discharge or illicit connection.

### **20-21 Accomplishments**

The City of Concord began creating an illicit discharge training video that all appropriate municipal staff will be required to view. The number of municipal employees that watch the training video will be recorded.

### **21-22 Objectives**

- Complete the illicit discharge training video. The video will then be shared with the appropriate staff members, who may come into contact with or otherwise observe an illicit discharge or illicit connection.
- Continue to require IDDE training annually and ensure new staff are trained.

BMP	Measurable Goals
h. Provide Public Education	The permittee shall inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.

### **20-21 Accomplishments**

A brochure, which is available on the City's stormwater webpage, was created to educate the public on illicit discharges, illicit connections, and illegal dumping (Appendix G). This brochure defines all three items, describes common sources, what to look for, and includes the reporting hotline. Additionally, an advertisement with similar information was printed in the Summer 2021 edition of the City Circular magazine (Appendix C). The City's Environmental Educator also posted content about illicit discharges, illicit connections, and illegal dumping on the City's social media pages. The City began working on an educational illicit discharge brochure for both industrial and commercial businesses. These brochures will be mailed to all businesses across the City.

## Illicit Discharge Detection and Elimination (IDDE)

### **21-22 Objectives**

- Update brochures, as needed.
- Continue posting on social media and advertising via the City Circular magazine to inform the public of the hazards associated with illicit discharges and improper disposal of waste.
- Complete and distribute brochures for commercial and industrial businesses.

BMP	Measurable Goals
i. Provide a public reporting mechanism	The permittee shall promote, publicize, and facilitate a reporting mechanism for the public and staff to report illicit discharges and establish and implement citizen request response procedures.

### **20-21 Accomplishments**

The City maintained a stormwater hotline, 704-920-5555, for citizens and staff to report concerns regarding illicit discharges and illegal dumping. This number is promoted on the city website, in the City Circular magazine, and on social media.

A vinyl wrap was designed and installed on the streetsweeper vehicle. It promotes the message of “only rain down the storm drain” while also advertising the illicit discharge reporting hotline and the City’s stormwater webpage.

The City began developing written citizen request response procedures to document practices that are currently in place.

### **21-22 Objectives**

- Continue to provide a hotline to report issues related to illicit discharges and illegal dumping.
- Complete and continue to implement written citizen request response procedures.



## Illicit Discharge Detection and Elimination (IDDE)

BMP	Measurable Goals
j. Enforcement of the IDDE program	The permittee shall implement a mechanism to track the issuance of notices of violation and enforcement actions as administered by the permittee. This mechanism shall include the ability to identify chronic violators for initiation of actions to reduce noncompliance.

### **20-21 Accomplishments**

The City of Concord created an Excel spreadsheet to track the issuance of NOVs and enforcement actions taken as a result of illicit discharge investigations. This spreadsheet helps to identify chronic violators. The City has begun creating an inspection and reporting system using an online platform that will be used to track future investigations.

### **21-22 Objectives**

- Finalize and implement the online system for tracking illicit discharge investigations and use this mechanism to identify chronic violators.
- Continue to save all documentation related to IDDE investigations.

## Construction Site Runoff Controls

All construction site runoff items are handled by the North Carolina Department of Environmental Quality (NCDEQ). The City of Concord maintains a working relationship with State officials to easily communicate and resolve construction site runoff issues. The City also created an advertisement for the State's 1-800-STOPMUD hotline, which can be found on the City's stormwater webpage (Appendix I). City staff are directed to report any concerns regarding construction site runoff directly to the NCDEQ and/or contact the appropriate stormwater staff.

## Post-Construction Site Runoff Control

### Objectives for Post-Construction Site Runoff Controls

- a. Implement and enforce a program to address stormwater runoff from new and redevelopment projects, including public transportation maintained by the permittee, that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, which would discharge into the small MS4. The program shall ensure that controls are in place that would prevent or minimize water quality impacts. The program shall apply to private development sites and sites developed by the permittee, including public transportation maintained by the permittee.
- b. Implement strategies which include a combination of structural and/or non- structural best management practices (BMPs) appropriate for the community.
- c. Enforce an ordinance to address post-construction runoff from new and redevelopment projects.
- d. Ensure adequate long-term operation and maintenance of BMPs through an inspection and maintenance program.

### BMPs for Post-Construction Site Runoff Controls

The permittee shall implement the following BMPs to meet the objectives of the Post-Construction Stormwater management program. To the extent there is any conflict between the permittee and post-construction ordinances adopted by the N.C. Division of Water Quality, the post-construction ordinances shall apply with regard to permit compliance.

BMP	Measurable Goals
a. Adequate legal authorities	<p>Maintain through ordinance, or other regulatory mechanism, adequate legal authorities designed to meet the objectives of the Post-Construction Site Runoff Controls Stormwater Management program.</p> <p>The permittee shall have the authority to review designs and proposals for new development and redevelopment to determine whether adequate stormwater control measures will be installed, implemented, and maintained.</p> <p>The permittee shall have the authority to request information such as stormwater plans, inspection reports, monitoring results, and other information deemed necessary to evaluate compliance with the Post-Construction Stormwater Management Program.</p> <p>The permittee shall have the authority to enter private property for the purpose of inspecting at reasonable times any facilities,</p>

## Post-Construction Site Runoff Control

	equipment, practices, or operations related to stormwater discharges to determine whether there is compliance the Post-Construction Stormwater Management Program.
--	--

### **20-21 Accomplishments**

The primary regulatory mechanism for the City of Concord’s stormwater management program is Chapter 60 of the Concord Code of Ordinances (Stormwater Utility Control and Management). Specifically, Article IV and Article V describe requirements for stormwater quality control and management, and any modification or addition to the MS4, respectively (Appendix J). These articles provide the City with the legal authority to operate a compliant Post-Construction Site Runoff Controls Management program. Part of this authority is the ability to review designs and proposals for new development and redevelopment projects to ensure proper management practices are used.

Section 60-46 requires that property owners must be in compliance with the City’s NPDES Permit and that the city manager or his/her designee shall not approve any post-construction stormwater management structures or practices that do not comply with permit requirements.

Section 60-48(a) grants authorized municipal staff the ability to enter private property for the purposes of observation, inspection, sampling, monitoring, testing, surveying, and measuring compliance.

The City of Concord is currently able to request stormwater plans, inspection reports, and other information deemed necessary to evaluate the efficacy of the SCM. The Stormwater Division began working on formally adding this verbiage to Chapter 60 of the Code of Ordinances.

### **21-22 Objectives**

- Continue to maintain adequate legal authorities for the stormwater management program
- Officially authorize the stormwater program administrator to request any and all relevant documentation through the Code of Ordinances

BMP	Measurable Goals
b. Strategies which include Stormwater Control Measures (SCMs) appropriate for the MS4	Strategies which include Stormwater Control Measures (SCMs) appropriate for the MS4, include, but are not limited to compliance with 15A NCAC 02H Section .1000 effectively meets the Post-construction Stormwater Runoff control requirements.

## Post-Construction Site Runoff Control

### **20-21 Accomplishments**

The City of Concord requires that all projects that involve a structural stormwater SCM have an easement and Operation and Maintenance Agreement filed with the city and recorded in the Cabarrus County Register of Deeds office before a Certificate of Occupancy is granted. The agreement binds the owner and any future owners. The agreement requires the owner to maintain, repair and if necessary, reconstruct the structural SCM and shall state the terms, conditions, and schedule of maintenance for the structural SCM. The easement grants the city a right of entry in the event that the Stormwater Administrator has reason to believe that it has become necessary to inspect, monitor, maintain, repair or reconstruct the structural SCM.

### **20-21 Objectives**

- Continue to require that all projects that involve a stormwater SCM have an easement and Operation and Maintenance Agreement filed with the city and recorded in the Cabarrus County Register of Deeds office before Certificate of Occupancy is granted.

BMP	Measurable Goals
c. Plan reviews	The permittee shall conduct site plan reviews of all new development and redeveloped sites that disturb greater than or equal to one acre (including sites that disturb less than one acre that are part of a larger common plan of development or sale). The site plan review shall address how the project applicant meets the performance standards and how the project will ensure long-term maintenance

### **20-21 Accomplishments**

The Stormwater ordinance provides the mechanism for the City of Concord to review plans. Currently, the Stormwater Division contracts the City's Engineering department to complete all official plan reviews.

### **21-22 Objectives**

- Continue to enforce the stormwater ordinance and complete site plan reviews.

## Post-Construction Site Runoff Control

BMP	Measurable Goals
d. Inventory of projects with post-construction structural stormwater control measures	The permittee shall maintain an inventory of projects with post-construction structural stormwater control measures installed and implemented at new development and redeveloped sites, including both public and private sector sites located within the permittee's corporate limits that are covered by its post-construction ordinance requirements.

### **20-21 Accomplishments**

Every SCM constructed within the City of Concord is required to have an easement and operation and maintenance agreement written that describes the location of the structure, list the owner, describes the structure proper, and describes the function and required maintenance. The owner of the SCM is required to have the structure inspected by a Certified Professional Engineer every year and provide the results of the inspection to the City of Concord Stormwater Administrator. The City of Concord inspects 25% of all SCM's within the City limits that have been approved and certified.

### **21-22 Objectives**

- Maintain and update the current inventory of projects with SCMs

BMP	Measurable Goals
e. Deed Restrictions and Protective Covenants or Recorded Operation and Maintenance Agreements	The permittee provides mechanism such as recorded deed restrictions and protective covenants or recorded operation and maintenance agreements that ensure development activities will maintain the project consistent with approved plans.

### **20-21 Accomplishments**

The Operation and Maintenance Agreement is recorded with Cabarrus County Register of Deeds. The City also maintains a hard copy of the agreement and electronic listing of each SCM which included the location, owner and running list of inspection dates.

## Post-Construction Site Runoff Control

### **21-22 Objectives**

- Continue to require a recorded Operation and Maintenance Agreement for SCMs.

BMP	Measurable Goals
f. Provide a mechanism to require long-term operation and maintenance of Stormwater Control Measures (SCMs).	The permittee shall implement or require an operation and maintenance plan for the long-term operation of the SCMs required by the program. The operation and maintenance plan shall require the owner of each SCM to perform and maintain a record of annual inspections of each SCM. Annual inspection of permitted structural SCMs shall be performed by a qualified professional.

### **20-21 Accomplishments**

City of Concord ordinance requires that an annual inspection of permitted structural SCMs shall be performed by a qualified Professional Engineer and a copy sent to the city.

### **21-22 Objectives**

- Continue to require annual inspections of all SCM's operated in the city limits.
- Continue to complete internal inspections for 25% of all SCMs within city limits.

BMP	Measurable Goals
g. Inspections	<p>To ensure that all stormwater control measures are being maintained pursuant to its maintenance agreement, the permittee shall conduct and document inspections of each project site covered under performance standards, at least one time during the permit term.</p> <p>Before issuing a certificate of occupancy or temporary certificate of occupancy, the permittee shall conduct a post-construction inspection to verify that the permittee's performance standards have been met or a bond is in place to guarantee completion.</p>

## Post-Construction Site Runoff Control

	The permittee shall document and maintain records of inspection findings and enforcement actions and make them available for review by the permitting authority.
--	--

### **20-21 Accomplishments**

To ensure compliance with maintenance agreements, the City performs annual inspections of 25% of all public and privately owned SCMs within the City's limits.

### **21-22 Objectives**

- Continue to annually complete internal inspections for at least 25% of all SCMs within city limits.

BMP	Measurable Goals
h. Educational materials and training for developers	The permittee shall make available through paper or electronic means, ordinances, post-construction requirements, design standards checklist, and other materials appropriate for developers. New materials may be developed by the permittee, or the permittee may use materials adopted from other programs and adapted to the permittee's new development and redevelopment program.

### **20-21 Accomplishments**

Design requirements, technical standards, as-built information and checklists, SCM inspection forms, and other materials for developers and contractors are available in electronic format on the City's stormwater webpage: <https://concordnc.gov/Departments/Stormwater/Stormwater-Control-Measures>. The City's Stormwater Ordinance is available online through Municode ([https://library.municode.com/nc/concord/codes/code\\_of\\_ordinances?nodeld=PTIICOOR\\_CH60\\_STUTCOMA](https://library.municode.com/nc/concord/codes/code_of_ordinances?nodeld=PTIICOOR_CH60_STUTCOMA)). All other resources are available upon request.

### **21-22 Objectives**

- Continue to maintain the website and provide additional documents to developers.



## Post-Construction Site Runoff Control

BMP	Measurable Goals
i. Enforcement	The permittee shall track all issuances of notices of violation and enforcement actions. This mechanism shall include the ability to identify chronic violators for initiation of actions to reduce noncompliance.

### **20-21 Accomplishments**

Copies of all issued NOVs and enforcement actions are saved in a separate folder for each year. Additionally, NOVs are tracked in the City's BMP Database using Microsoft Access.

### **21-22 Objectives**

- Continue to track the issuance of notices of violation and enforcement actions.

## Pollution Prevention and Good Housekeeping

### Objectives for Pollution Prevention and Good Housekeeping for Municipal Operations.

- a. Implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.
- b. Provide employee training to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance.

### BMPs for the Pollution Prevention and Good Housekeeping for Municipal Operations.

The permittee shall implement the following BMPs to meet the objectives of the Pollution Prevention and Good Housekeeping Program and shall notify the Division prior to modification of any goals.

BMP	Measurable Goals
a. Inventory of municipally owned or operated facilities	The permittee shall maintain current inventory of facilities and operations owned and operated by the permittee with the potential for generating polluted stormwater runoff.

### 20-21 Accomplishments

The City updated its current inventory of municipally owned and operated facilities with the potential for generating polluted stormwater runoff. This is a GIS-based inventory that is updated as needed.

### 21-22 Objectives

- Continue to update the inventory, as needed.

## Pollution Prevention and Good Housekeeping

BMP	Measurable Goals
b. Operation and Maintenance (O&M) for municipally owned or operated facilities.	The permittee shall maintain and implement, evaluate annually, and update as necessary an Operation and Maintenance (O&M) program for municipally owned and operated facilities with the potential for generating polluted stormwater runoff. The O&M program shall specify the frequency of inspections and routine maintenance requirements.

### **20-21 Accomplishments**

Stormwater staff are working on a written O&M plan for municipally owned and operated facilities. This plan will detail required maintenance for all facilities, inspection schedules, and responsibilities of each City department. Currently, stormwater staff are communicating with other departments to understand their current operation and maintenance activities.

### **21-22 Objectives**

- Finalize written O&M program for municipally owned and operated facilities
- Continue to maintain and inspect all municipal facilities with the potential for generating polluted stormwater runoff, according to schedule

BMP	Measurable Goals
c. Spill Response Procedures for municipally owned and operated facilities	The permittee shall have written spill response procedures for municipal operations.

### **20-21 Accomplishment**

The City of Concord updated its written spill response procedures for all types of potential spills related to municipal operations. The Stormwater Division also began updating the Spill Prevention, Control, and Countermeasures (SPCC) Plan for the Alfred M. Brown Operations Center.

### **21-22 Objectives**

- Continue to review spill response procedures annually and update as necessary.
- Finish updating the Brown Operations Center's SPCC Plan

## Pollution Prevention and Good Housekeeping

- Ensure each facility has a complete spill kit

BMP	Measurable Goals
d. Streets, road, and public parking lot maintenance	The permittee shall evaluate existing and new BMPs annually that reduce polluted stormwater runoff from municipally-owned streets, roads, and public parking lots within their corporate limits. The permittee must evaluate the effectiveness of these BMPs based on cost and the estimated quantity of pollutants removed.

### **20-21 Accomplishments**

The City of Concord continues to reduce polluted stormwater runoff from streets, road, and public parking lots within our corporate limits by street sweeping, regular yard waste collection, and annual loose-leaf collection. During this fiscal year, the street sweeper operators covered approximately 577.4 miles of curb and gutter. The department tracks the number of loads collected and subsequently disposed of at our operations center by our street sweepers, but a weight is not currently recorded. Street sweeping operations cost the City approximately \$34,120 over the last year, and this total includes the fuel and maintenance costs for both street sweeper vehicles. Approximately 10,284 tons of yard waste and seasonal leaves were collected throughout this fiscal year. Last fiscal year, the yard waste and leaf collection programs combined cost the City a total of \$2,993,026.

### **21-22 Objectives**

- Maintain the street sweeping, yard waste, and loose-leaf collection programs.
- Continue to annually track and evaluate the effectiveness of each program based on cost and estimated quantity of pollutants removed.

BMP	Measurable Goals
e. Operation and Maintenance (O&M) for municipally- owned or maintained catch basins and conveyance systems	The permittee shall maintain and implement an O&M program for the stormwater sewer system including catch basins and conveyance systems that it owns and maintains.

## Pollution Prevention and Good Housekeeping

### **20-21 Accomplishments**

The Stormwater Division began creating a written document that details the proactive and reactive O&M programs that are in place. Stormwater crews complete quarterly inspections of catch basins and inlets, and simultaneously conduct maintenance activities, as needed. Additionally, the City operates two full time street sweepers that follow mapped routes throughout the City. The division also operates a Jet-Vac and camera truck, both of which are used when necessary. The City's 24-hour customer care hotline and online reporting system are available for customers to submit concerns involving catch basins and conveyances.

### **21-22 Objectives**

- Continue to inspect and maintain catch basins throughout the system
- Continue to perform street sweeping operations
- Finish written document for catch basins and conveyance system O&M

BMP	Measurable Goals
f. Identify structural stormwater controls	The permittee shall maintain a current inventory of municipally-owned or operated structural stormwater controls installed for compliance with the permittee's post-construction ordinance.

### **20-21 Accomplishments**

The City of Concord maintained its inventory of municipally-owned and operated stormwater control measures (SCM). Working drawings of each municipally-owned SCM as well as all inspections are filed in the City's BMP Database.

### **21-22 Objectives**

- Continue to update and maintain the database.

BMP	Measurable Goals
g. (O&M) for municipally- owned or maintained structural stormwater controls	The permittee shall maintain and implement an O&M program for municipally-owned or maintained structural stormwater controls installed for compliance with the permittee's post-construction ordinance.

## Pollution Prevention and Good Housekeeping

	<p>The O&amp;M program shall specify the frequency of inspections and routine maintenance requirements.</p> <p>The permittee shall inspect and maintain municipally-owned or maintained structural stormwater controls in accordance with the schedule developed by permittee. The permittee shall document inspections and maintenance of all municipally-owned or maintained structural stormwater controls.</p>
--	--

### **20-21 Accomplishments**

Annual inspections conducted by a licensed PE are required for all municipally-owned and maintained SCMs. Each municipal facility with an SCM on site is responsible for conducting regular maintenance and inspections of their respective SCM.

### **21-22 Objectives**

- Facilities will continue to maintain and inspect their SCMs regularly
- Continue to require annual inspections conducted by a licensed PE

BMP	Measurable Goals
h. Pesticide, Herbicide and Fertilizer Application Management	The permittee shall ensure municipal employees and contractors are properly trained and all permits, certifications, and other measures for applicators are followed.

### **20-21 Accomplishments**

The City of Concord ensures that appropriate municipal employees and contractors are properly trained on application of pesticide, herbicide, and fertilizer. There are currently 33 certified individuals employed by the City.

### **21-22 Objectives**

- Departments will continue to ensure employees are trained and obtain the proper certification.
- The City will continue to assist employees in obtaining the proper training and certifications.

## Pollution Prevention and Good Housekeeping

BMP	Measurable Goals
i. Staff training	The permittee shall implement an employee training program for employees involved in implementing pollution prevention and good housekeeping practices

### **20-21 Accomplishments**

Stormwater staff created a pollution prevention and good housekeeping training video for City employees. As of June 30, 2021, 795 employees from 26 different departments have viewed this training video.

### **21-22 Objectives**

- Continue to require new-hires and all municipal staff to annually watch the training video.
- Continue to track the number of employees trained.

BMP	Measurable Goals
j. Prevent or Minimize Contamination of Stormwater Runoff from all areas used for Vehicle and Equipment Cleaning	The permittee shall describe measures that prevent or minimize contamination of the stormwater runoff from all areas used for vehicle and equipment cleaning.

### **20-21 Accomplishments**

The City has a wash bay with an oil water separator where vehicles and equipment are cleaned. An annual reminder that all vehicle washing is to occur at the wash bay is sent to all City staff. Fire stations also have drains in their wash bays that are connected to the sanitary sewer.

### **21-22 Objectives**

- Continue to require vehicles and equipment be washed at the City's wash bay.
- Send an annual reminder to all City departments about washing equipment and vehicles only at the wash bay.

## TOTAL MAXIMUM DAILY LOADS (TMDL's)

NO TOTAL MAXIMUM DAILY LOADS HAVE BEEN ESTABLISHED IN THE MS4



## APPENDIX A

### Goals and Objectives for the Public Education and Outreach Program

#### Goals

- ❖ Educate target audiences on the defined target pollutants/stressors
- ❖ Educate target audiences on City stormwater infrastructure
- ❖ Educate target audiences on stormwater pollution sources and prevention
- ❖ Promote and distribute educational materials appropriate for all ages

#### Objectives

- ❖ Distribute educational materials to the community and/or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps the public can take to reduce pollutants in storm water runoff.
- ❖ Provide educational materials on stormwater infrastructure and pollution in the form of informational webpages, videos, advertisements, and other medias.
- ❖ Maintain programs for target audiences to learn about stormwater infrastructure and pollution.
- ❖ Advertise opportunities for targeted audiences to independently learn more about stormwater infrastructure and pollution.

Stormwater Pollution Brochure (on Stormwater Web Page)

**Stormwater** is defined by the U.S. Environmental Protection Agency as:

*Rainwater and melted snow that runs off streets, lawns, farms, and construction and industrial sites.*

Stormwater flows over impervious surfaces (those that do not allow water to pass through), carrying pollution we leave behind to our lakes, rivers, creeks, streams, and ponds.



**TO REPORT POLLUTION,**

**PLEASE CALL OUR**

**24 HOUR**

**CUSTOMER CARE CENTER**

**704-920-5555**

City of Concord  
Stormwater Services Department  
704-920-5360  
[www.concordnc.gov](http://www.concordnc.gov)

Brown Operations Center  
635 Alfred Brown Jr Court SW  
Concord, NC 28025

## Stormwater Pollution



**Did you know...**

Our storm drains lead directly into waters we use for swimming, fishing and drinking?

**Learn how you can help keep our waterways clean!**

City of Concord  
Stormwater Services Department  
704-920-5360  
[www.concordnc.gov](http://www.concordnc.gov)



Along with the other common pollutants described here, our streams can be polluted through:

- ❖ **Illicit Discharges**
  - Any discharge to the storm sewer system that is not composed entirely stormwater
- ❖ **Illicit Connections**
  - Any conveyance or connection to the storm sewer system without a permit
- ❖ **Illegal Dumping**
  - The act of intentionally dumping waste into the storm sewer system

### Sediment

*Sediment is the #1 water pollutant in the country!*

Caused by erosion and construction activities which remove the plants that keep soil in place.

**Effects:**

- Clouds water, blocking sunlight needed by plants & animals.
- Increases water temperature
- Impairs feeding, vision, and breathing capabilities of animals.
- Falls to the bottom, upsetting the fragile habitat and fish spawning area and reducing channel flow capacity.

### Ways You Can Help...

- ❖ Clean up after your pet.
- ❖ Properly dispose of cooking oils, fats & grease. They should **NOT** enter the sanitary **OR** storm sewer systems!
- ❖ Wash vehicles & machinery over the lawn or at a commercial carwashes. **NOT** over paved surfaces.
- ❖ Use only *enough* fertilizer and leave grass clippings to decompose naturally on the lawn. This keeps storm drains clear & will recycle fertilizer, keeping you from having to re-apply so often.



- ❖ Sweep excess fertilizer from paved surfaces. Washing with water increases the chances of getting it in the storm drain.
- ❖ Recycle or properly dispose of chemicals and automobile fluids!
- ❖ Compost! Turn yard waste and kitchen scraps into a beneficial soil amendment.
- ❖ Give your lawn or garden just enough water and/or install a rain barrel to create less runoff and conserve water.
- ❖ Make sure your dishwasher, washing machine, sinks, and showers are piped to the sanitary sewer system, **NOT** the storm sewer system!
- ❖ Perform a soil test at your home to determine how much and which type of fertilizer is best for your lawn.

### Pesticides, Herbicides, & Fertilizers

Plants can only use so much! Leftovers are carried away by stormwater, and often end up in bodies of water, increasing levels of nitrates and phosphates.

**Effects:**

- Upset natural nutrient balances.
- Increase algae growth in surface waters
- Decrease oxygen levels in water, often killing aquatic plants and animals.



### Machine/Vehicle Fluids & Other Chemicals

Careless use and disposal of chemicals is a danger to all living things. Product of household appliance leaks, improper plumbing, washing cars over paved areas, and improper use and disposal.

**Effects:**

- Kill and/or disrupt bodily and reproductive functions of plants and animals
- Coat gills and suffocate fish & other aquatic animals.



### Pet Waste

Contains dangerous bacteria and high levels of nitrates and phosphates.

**Effects:**

- Increases algae growth and decreases oxygen levels in aquatic habitats, harming plants and animals
- Increases bacteria (E. coli) levels in water, making fishing and swimming dangerous.

### Oil & Grease

Generated from kitchens, machinery and vehicles & carried by stormwater when disposed of improperly.

**Effects:**

- Block sunlight and decreases oxygen needed by underwater plants & animals
- Damage bottom habitat by clinging to dirt particles and settling on the bottom.
- Can reduce storm drainage system capacity.

### Yard Waste

Enters surface waters when leaves and grass clippings make their way onto paved surfaces.

**Effects:**

- Carries applied fertilizers, herbicides, and pesticides which reduce water quality.
- Like other debris, blocks storm drains, grates, or otherwise clogs the storm drainage system leading to reduced capacity, standing water, and flooding.



Illicit Discharge Ad in the Summer 2021 City Circular Magazine

# Protect Our Waterways!



## Examples of Stormwater Pollutants:

- Litter
- Leaves & grass clippings
- Fertilizers & pesticides
- Sediment
- Pet waste
- Household chemicals
- Vehicle oil & fluids

**Stormwater** flows across parking lots, streets, lawns and construction sites, picking up pollutants people leave behind. Rainwater is not treated as it is carried by the storm drainage system into local lakes, creeks, streams and rivers.

**It is illegal** to dump anything other than stormwater down a storm drain, and consequences include civil penalties of up to \$1000 per day with perpetrators responsible for cleanup costs.

**Report illegal dumping**  
**704.920.5555**



Learn more at [concordnc.gov/stormwater](http://concordnc.gov/stormwater)

12 • CONCORD CITY CIRCULAR • SUMMER 2021 • [concordnc.gov](http://concordnc.gov)

APPENDIX D

Street Sweeper Vehicle with New Vinyl Wrap



## APPENDIX E

### Illicit Discharge Related Code of Ordinances

#### Sec. 60-47. - Non-stormwater discharge controls.

(a) *Illicit discharges.* No person shall cause the commencement, conduct, or continuance of any nonstormwater discharge to the stormwater conveyance system except as provided below.

(1) Nonstormwater discharges associated with the following activities are allowed:

- a. Filter backwash and draining associated with raw water intake screening and filtering devices;
- b. Potable water line flushing and hydrostatic testing water associated with utility operations;
- c. Flushing and cleaning of stormwater conveyances with unmodified potable water;
- d. Uncontaminated pumped groundwater and other discharges from potable water sources such as water line leaks, draining for pipes for repairs, and emptying of potable water storage tanks;
- e. Landscape irrigation and lawn watering water;
- f. Diverted stream flows;
- g. Uncontaminated rising groundwater;
- h. Groundwater infiltration to the storm drain system;
- i. Uncontaminated groundwater from foundation and footing drains;
- j. Uncontaminated groundwater from crawl space pumps;
- k. Residential or commercial air conditioning condensation;
- l. Uncontaminated water from roof drains;
- m. Wash water from the cleaning of the exterior of buildings, including gutters, provided that the discharge does not pose an environmental or health threat;
- n. Uncontaminated groundwater from springs;
- o. Individual residential and occasional non-commercial car washing;
- p. Water from riparian habitats and wetlands;
- q. Discharges from the pumping or draining of natural watercourses or waterbodies;
- r. Filter backwash and draining associated with swimming pools provided that water quality is not significantly impacted;
- s. Street wash water;
- t. Flows from firefighting;
- u. Discharges associated with emergency removal and treatment activities, for hazardous materials, authorized by the federal, state, or local government on-scene coordinator; and
- v. Other non-stormwater discharges for which a valid NPDES discharge permit, waiver, or waste discharge order has been approved and issued by the State of North Carolina under the authority of the Federal Environmental Protection Agency, provided that:
  1. The discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations;

## APPENDIX E

2. Written notification of such permitted discharge has been filed with the stormwater administrator, in a form acceptable to the stormwater administrator; and
3. Discharges to the municipal separate storm sewer system have been authorized by the stormwater administrator.

(2) Prohibited substances include, but are not limited to:

- a. Oil and grease of petroleum or synthetic hydrocarbon origin;
- b. Fats, oils, and grease of plant or animal origin;
- c. Anti-freeze, parts cleaner, and other motor equipment fluids;
- d. Chemicals, paints, pesticides, and other household hazardous wastes;
- e. Animal waste, gray water and waste water from RV's and travel trailers;
- f. Washdown water from concrete trucks, and floor mop water;
- g. Garbage, litter, yard waste, and any other solid waste materials; and
- h. Contaminated washdown or drainage from dumpster drains.

(3) With written concurrence of the North Carolina Department of Environment and Natural Resources, the city may exempt in writing other non-stormwater discharges, which are not a source of pollutants to the storm water conveyance system or waters of the state.

(b) *Illicit connections*. Note: This regulation first became effective on December 13, 2007.

(1) The construction, use, maintenance, or continued existence of illicit connections to the storm drain system is prohibited. Prohibited connections include, but are not limited to:

- a. Floor drains,
- b. Wastewater from washing machines,
- c. Wastewater from sanitary sewers,
- d. Wash water from commercial vehicle washing or steam cleaning, and
- e. Wastewater from septic systems.

(2) This prohibition expressly includes, without limitation, illicit connections made prior to the adoption of this provision or any other ordinance prohibiting such connections, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection. The property owner or the person using said connection shall remove the connection within one year following the effective date of this regulation; provided that the grace period shall not apply to connections which may result in the discharge of hazardous materials or other discharges which pose an immediate threat to health and safety, or are likely to result in immediate injury and harm to real or personal property, natural resources, wildlife, or habitat.

(3) Where it is determined that said connection may result in the discharge of hazardous materials or may pose an immediate threat to health and safety, or is likely to result in immediate injury and harm to real or personal property, natural resources, wildlife, or habitat; or was made in violation of any

## APPENDIX E

applicable regulation or ordinance, the city manager or his designee shall designate the time within which the connection shall be removed. In setting the time limit for compliance, the city shall take into consideration:

- a. The quantity and complexity of the work;
- b. The consequences of delay;
- c. The potential harm to the environment, to the public health, and to public and private property; and
- d. The cost of remedying the damage.

(c) *Waste disposal.* No person shall throw, deposit, leave, maintain, keep, or permit to be thrown, deposited, left, or maintained, in or upon any public or private property, driveway, parking area, street, alley, sidewalk, component of the storm drain system, or waters of the state, any refuse, rubbish, garbage, litter, or other discarded or abandoned objects, articles, and accumulations, so that the same may cause or contribute to pollution. Wastes deposited in streets in proper waste receptacles for the purposes of collection are exempted from this prohibition.

(d) *Discharges in violation of industrial or construction activity NPDES stormwater discharge permit.* Any person subject to an industrial or construction activity NPDES stormwater discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the city prior to or as a condition of a subdivision map, site plan, building permit, or development or improvement plan; upon inspection of the facility; during any enforcement proceeding or action; or for any other reasonable cause.

(e) *Spills.* Spills or leaks of polluting substances discharged to, or having the potential to be indirectly transported to the stormwater conveyance system, shall be contained, controlled, collected, and removed promptly. All affected areas shall be restored to their preexisting condition. Persons associated with the spill or leak shall immediately notify the City of Concord Fire Chief or his designee of all spills or leaks of polluting substances. Notification shall not relieve any person of any expenses related to the restoration, loss, damage, or any other liability which may be incurred as a result of said spill or leak, nor shall such notification relieve any person from other liability which may be imposed by state or other law.

(Ord. No. 07-108, § 1, 12-13-2007)

### **Sec. 60-48. - Enforcement of stormwater control and management.**

(a) *Authority to enter.* Any authorized city personnel shall be permitted to enter upon public or private property for the purposes of observation, inspection, sampling, monitoring, testing, surveying, and measuring compliance. Should the owner or occupant of any property refuse to permit such reasonable access, the city manager or his designee shall proceed to obtain an administrative search warrant pursuant to G.S. § 15-27.2 or

## APPENDIX E

its successor. No person shall obstruct, hamper or interfere with any such representative while carrying out his official duties.

(b) *Civil penalties.* Civil penalties may be assessed simultaneously for each kind of violation: discharge, connection, improper BMP, maintenance or other violation.

(1) *Illicit discharges.* Any designer, engineer, contractor, agent, or any other person who allows, acts in concert, participates, directs, or assists directly or indirectly in the creation of a violation of this chapter shall be subject to civil penalties as follows:

- a. For first time offenders, if the quantity of the discharge is equal to or less than five gallons and consists of domestic or household products in quantities considered ordinary for household purposes, said person shall be assessed a civil penalty not to exceed \$100.00 per violation or per day for any continuing violation, and if the quantity of the discharge is greater than five gallons or contains non-domestic substances, including but not limited to process waste water, or if said person cannot provide clear and convincing evidence of the volume and nature of the substance discharged, said person shall be assessed a civil penalty not to exceed \$1,000.00 per violation or per day for any continuing violation.
- b. For repeat offenders, the amount of the penalty shall be at least double the amount assessed for the previous penalty, not to exceed \$10,000.00 per violation or per day for any continuing violation.
- c. In determining the amount of the penalty, the city manager or his designee shall consider:
  1. The degree and extent of harm to the environment, the public health, and public and private property;
  2. The cost of remedying the damage;
  3. The duration of the violation;
  4. Whether the violation was willful;
  5. The prior record of the person responsible for the violation in complying or failing to comply with this chapter;
  6. The costs of enforcement to the public; and
  7. The amount of money saved by the violator through his, her, or its noncompliance.

(2) *Illicit connections.* Any person found with an illicit connection in violation of this chapter and any designer, engineer, contractor, agent, or any other person who allows, acts in concert, participates, directs, or assists directly or indirectly in the establishment of an illicit connection in violation of this chapter, shall be subject to civil penalties as follows:

- a. First time offenders shall be subject to a civil penalty not to exceed \$500.00 per day of continuing violation.
- b. Repeat offenders shall be subject to a civil penalty not to exceed \$1,000.00 per day of continuing violation.
- c. In determining the amount of the penalty, the city manager or his designee shall consider:
  1. The degree and extent of harm to the environment, the public health, and public and private property;



## APPENDIX E

- 2.The cost of remedying the damage;
- 3.The duration of the violation;
- 4.Whether the violation was willful;
- 5.The prior record of the person responsible for the violation in complying or failing to comply with this chapter;
- 6.The costs of enforcement to the public; and
- 7.The amount of money saved by the violator through his, her, or its noncompliance.

d. Procedures for assessing penalties pursuant to illicit connections. Said penalties shall be assessed by the city manager or his designee. No penalty shall be assessed until the person alleged to be in violation is served written notice of the violation by registered mail, certified mail-return receipt requested, or personal service. Refusal to accept the notice shall not relieve the violator of the obligation to pay the penalty. The notice shall describe the violation with particularity and specify the measures needed to come into compliance. The notice shall designate the time within which such measures must be completed. In setting the time limit for compliance, the city shall take into consideration:

- 1.The quantity and complexity of the work;
- 2.The consequences of delay;
- 3.The potential harm to the environment, the public health, and public and private property; and
- 4.The cost of remedying the damage.

The notice shall warn that failure to correct the violation within the specified time period will result in the assessment of a civil penalty and/or other enforcement action. If after the allotted time period has expired, and the violation has not been corrected, the penalty shall be assessed from the date of receipt of notice of violation and each day of continuing violation thereafter shall constitute a separate violation under this section.

(Ord. No. 07-108, § 1, 12-13-2007)

APPENDIX F

Illicit Discharge Inspection Form

Stormwater Illicit/Illegal Discharge Site Inspection

Date:

Time:

Address

Nature of Complaint:

Number of Photos taken:

Findings:

Inspected by:

**Illicit Discharges, Illicit Connections, and Illegal Dumping Brochure**

The City of Concord is an MS4...  
What Does That Mean?

**MS4** stands for **Municipal Separate Storm Sewer System**. The EPA defines an MS4 as:

a conveyance or system of conveyances that is:

- ✓ owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.,
- ✓ designed or used to collect or convey stormwater (e.g., storm drains, pipes, ditches),
- ✓ not a combined sewer, and
- ✓ not part of a sewage treatment plant, or publicly owned treatment works (POTW).

As an MS4, the City of Concord is required to follow certain rules to help identify, remediate, and prevent stormwater pollution.





**TO REPORT AN ILLICIT DISCHARGE,**

**PLEASE CALL OUR**

**24 HOUR**

**CUSTOMER CARE CENTER**

**704-920-5555**

---

City of Concord  
Stormwater Services Department  
704-920-5360  
[www.concordnc.gov](http://www.concordnc.gov)

Brown Operations Center  
635 Alfred Brown Jr Court SW  
Concord, NC 28025

**Illicit Discharges, Illicit Connections, & Illegal Dumping**

*Where do they come from?*




*What do they look like?*





*And how can you stop them?*

**What Are They?**



**Illicit Discharge:**  
Any discharge to an MS4 that is not composed entirely of stormwater

**Illicit Connection:**  
Any unapproved drain or conveyance which allows a non-stormwater discharge to flow into the storm drainage system






**Illegal Dumping:**  
The intentional dumping of any unauthorized substance or item into the storm drainage system



**What to Look for...**

- Suds in water
- Odors or discoloration
- Appearance of runoff flow when it is dry and not raining
- Broken sanitary sewer or storm sewer pipes
- Intentional dumping of waste (paint, oils, pet waste, etc.) directly into the storm drain
- Excess sediment or yard waste in and around the storm drain

**Sources of Illicit Discharges**

Look out for the following common sources of illicit discharges:

- Sanitary wastewater
- Effluent from septic tanks
- Car wash wastewater
- Improper oil disposal
- Radiator flushing disposal
- Laundry wastewater
- Spills from roadway accidents
- Improper disposal of auto and household toxics
- Cracked sanitary sewer pipes
- Laundry and dishwashing wastewater not connected to the sanitary sewer system
- Chemical or oil spills
- Yard waste (grass, clippings, leaves, etc.)




Stop Mud Advertisement on Website



TO REPORT AN EROSION OR SEDIMENTATION PROBLEM  
FROM CONSTRUCTION SITES, CALL:

**1 - 866 - STOPMUD**

## APPENDIX I

### ARTICLE IV. STORMWATER QUALITY CONTROL AND MANAGEMENT

#### **Sec. 60-46. Duty of owner to comply with National Pollution Discharge Elimination (NPDES) Permit, Phase 2 and utility compliance.**

- (a) The city manager or his designee shall not be authorized to approve any development not in compliance with:
  - (1) The NPDES Phase 2 Permit granted to the city by the State of North Carolina; or
  - (2) The applicable sections of the North Carolina Administrative Code; or
  - (3) The zoning and development ordinances of the city.
- (b) The city manager or his designee shall not be authorized to approve any connection to city drainage facilities unless he is of the opinion that the size, shape, and location of the newly installed drainage facilities are adequate for handling the anticipated amount of water.
- (c) It shall be the responsibility of the property owner of any parcel of land when making any improvements or changes affecting the land, which alter the existing flow pattern of runoff (storm) water, to install appropriate facilities according to the provisions of subsection (a) immediately above for carrying the runoff (storm) water into a properly approved conveyance, engineered stormwater control structure or via a best management practice approved by the city. No zoning compliance permit shall be issued for any property within the jurisdiction of the city until the conditions of this section are met.
- (d) It shall be illegal for any utility company to allow electricity or public water to be connected to any facility on any land that has not complied with the provisions of this section.
- (e) Any stormwater maintenance agreement shall be approved and accepted by the city council before recordation at the Cabarrus County register of deeds.

(Ord. No. 07-108, § 1, 12-13-2007; Ord. No. 11-14, § 1, 3-10-2011)

#### **Sec. 60-47. Non-stormwater discharge controls.**

- (a) *Illicit discharges.* No person shall cause the commencement, conduct, or continuance of any nonstormwater discharge to the stormwater conveyance system except as provided below.
  - (1) Nonstormwater discharges associated with the following activities are allowed:
    - a. Filter backwash and draining associated with raw water intake screening and filtering devices;
    - b. Potable water line flushing and hydrostatic testing water associated with utility operations;
    - c. Flushing and cleaning of stormwater conveyances with unmodified potable water;
    - d. Uncontaminated pumped groundwater and other discharges from potable water sources such as water line leaks, draining for pipes for repairs, and emptying of potable water storage tanks;
    - e. Landscape irrigation and lawn watering water;
    - f. Diverted stream flows;
    - g. Uncontaminated rising groundwater;
    - h. Groundwater infiltration to the storm drain system;
    - i. Uncontaminated groundwater from foundation and footing drains;

## APPENDIX I

- j. Uncontaminated groundwater from crawl space pumps;
  - k. Residential or commercial air conditioning condensation;
  - l. Uncontaminated water from roof drains;
  - m. Wash water from the cleaning of the exterior of buildings, including gutters, provided that the discharge does not pose an environmental or health threat;
  - n. Uncontaminated groundwater from springs;
  - o. Individual residential and occasional non-commercial car washing;
  - p. Water from riparian habitats and wetlands;
  - q. Discharges from the pumping or draining of natural watercourses or waterbodies;
  - r. Filter backwash and draining associated with swimming pools provided that water quality is not significantly impacted;;
  - s. Street wash water;
  - t. Flows from fire fighting;
  - u. Discharges associated with emergency removal and treatment activities, for hazardous materials, authorized by the federal, state, or local government on-scene coordinator; and
  - v. Other non-stormwater discharges for which a valid NPDES discharge permit, waiver, or waste discharge order has been approved and issued by the State of North Carolina under the authority of the Federal Environmental Protection Agency, provided that:
    - 1. The discharger is in full compliance with all requirements of the permit, waiver, or order and other applicable laws and regulations;
    - 2. Written notification of such permitted discharge has been filed with the stormwater administrator, in a form acceptable to the stormwater administrator; and
    - 3. Discharges to the municipal separate storm sewer system have been authorized by the stormwater administrator.
- (2) Prohibited substances include, but are not limited to:
- a. Oil and grease of petroleum or synthetic hydrocarbon origin;
  - b. Fats, oils, and grease of plant or animal origin;
  - c. Anti-freeze, parts cleaner, and other motor equipment fluids;
  - d. Chemicals, paints, pesticides, and other household hazardous wastes;
  - e. Animal waste, gray water and waste water from RV's and travel trailers;
  - f. Washdown water from concrete trucks, and floor mop water;;
  - g. Garbage, litter, yard waste, and any other solid waste materials; and
  - h. Contaminated washdown or drainage from dumpster drains.
- (3) With written concurrence of the North Carolina Department of Environmental Quality, the city may exempt in writing other non-stormwater discharges, which are not a source of pollutants to the storm water conveyance system or waters of the state.
- (b) *Illicit connections*. Note: This regulation first became effective on December 13, 2007.

## APPENDIX I

- (1) The construction, use, maintenance, or continued existence of illicit connections to the storm drain system is prohibited. Prohibited connections include, but are not limited to:
  - a. Floor drains,
  - b. Wastewater from washing machines,
  - c. Wastewater from sanitary sewers,
  - d. Wash water from commercial vehicle washing or steam cleaning, and
  - e. Wastewater from septic systems.
- (2) This prohibition expressly includes, without limitation, illicit connections made prior to the adoption of this provision or any other ordinance prohibiting such connections, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection. The property owner or the person using said connection shall remove the connection within one year following the effective date of this regulation; provided that the grace period shall not apply to connections which may result in the discharge of hazardous materials or other discharges which pose an immediate threat to health and safety, or are likely to result in immediate injury and harm to real or personal property, natural resources, wildlife, or habitat.
- (3) Where it is determined that said connection may result in the discharge of hazardous materials or may pose an immediate threat to health and safety, or is likely to result in immediate injury and harm to real or personal property, natural resources, wildlife, or habitat; or was made in violation of any applicable regulation or ordinance, the city manager or his designee shall designate the time within which the connection shall be removed. In setting the time limit for compliance, the city shall take into consideration:
  - a. The quantity and complexity of the work;
  - b. The consequences of delay;
  - c. The potential harm to the environment, to the public health, and to public and private property; and
  - d. The cost of remedying the damage.
- (c) *Waste disposal.* No person shall throw, deposit, leave, maintain, keep, or permit to be thrown, deposited, left, or maintained, in or upon any public or private property, driveway, parking area, street, alley, sidewalk, component of the storm drain system, or waters of the state, any refuse, rubbish, garbage, litter, or other discarded or abandoned objects, articles, and accumulations, so that the same may cause or contribute to pollution. Wastes deposited in streets in proper waste receptacles for the purposes of collection are exempted from this prohibition.
- (d) *Discharges in violation of industrial or construction activity NPDES stormwater discharge permit.* Any person subject to an industrial or construction activity NPDES stormwater discharge permit shall comply with all provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the city prior to or as a condition of a subdivision map, site plan, building permit, or development or improvement plan; upon inspection of the facility; during any enforcement proceeding or action; or for any other reasonable cause.
- (e) *Spills.* Spills or leaks of polluting substances discharged to, or having the potential to be indirectly transported to the stormwater conveyance system, shall be contained, controlled, collected, and removed promptly. All affected areas shall be restored to their preexisting condition. Persons associated with the spill or leak shall immediately notify the City of Concord Fire Chief or his designee of all spills or leaks of polluting substances. Notification shall not relieve any person of any expenses related to the restoration, loss,

## APPENDIX I

damage, or any other liability which may be incurred as a result of said spill or leak, nor shall such notification relieve any person from other liability which may be imposed by state or other law.

(Ord. No. 07-108, § 1, 12-13-2007; Ord. No. 21-19, § 2, 3-11-2021)

### **Sec. 60-48. Enforcement of stormwater control and management.**

- (a) *Authority to enter.* Any authorized city personnel shall be permitted to enter upon public or private property for the purposes of observation, inspection, sampling, monitoring, testing, surveying, and measuring compliance. Should the owner or occupant of any property refuse to permit such reasonable access, the city manager or his designee shall proceed to obtain an administrative search warrant pursuant to G.S. § 15-27.2 or its successor. No person shall obstruct, hamper or interfere with any such representative while carrying out his official duties.
- (b) *Civil penalties.* Civil penalties may be assessed simultaneously for each kind of violation: discharge, connection, improper BMP, maintenance or other violation.
- (1) *Illicit discharges.* Any designer, engineer, contractor, agent, or any other person who allows, acts in concert, participates, directs, or assists directly or indirectly in the creation of a violation of this chapter shall be subject to civil penalties as follows:
- a. For first time offenders, if the quantity of the discharge is equal to or less than five gallons and consists of domestic or household products in quantities considered ordinary for household purposes, said person shall be assessed a civil penalty not to exceed \$100.00 per violation or per day for any continuing violation, and if the quantity of the discharge is greater than five gallons or contains non-domestic substances, including but not limited to process waste water, or if said person cannot provide clear and convincing evidence of the volume and nature of the substance discharged, said person shall be assessed a civil penalty not to exceed \$1,000.00 per violation or per day for any continuing violation.
  - b. For repeat offenders, the amount of the penalty shall be at least double the amount assessed for the previous penalty, not to exceed \$10,000.00 per violation or per day for any continuing violation.
  - c. In determining the amount of the penalty, the city manager or his designee shall consider:
    1. The degree and extent of harm to the environment, the public health, and public and private property;
    2. The cost of remedying the damage;
    3. The duration of the violation;
    4. Whether the violation was willful;
    5. The prior record of the person responsible for the violation in complying or failing to comply with this chapter;
    6. The costs of enforcement to the public; and
    7. The amount of money saved by the violator through his, her, or its noncompliance.
- (2) *Illicit connections.* Any person found with an illicit connection in violation of this chapter and any designer, engineer, contractor, agent, or any other person who allows, acts in concert, participates, directs, or assists directly or indirectly in the establishment of an illicit connection in violation of this chapter, shall be subject to civil penalties as follows:



## APPENDIX I

- a. First time offenders shall be subject to a civil penalty not to exceed \$500.00 per day of continuing violation.
  - b. Repeat offenders shall be subject to a civil penalty not to exceed \$1,000.00 per day of continuing violation.
  - c. In determining the amount of the penalty, the city manager or his designee shall consider:
    1. The degree and extent of harm to the environment, the public health, and public and private property;
    2. The cost of remedying the damage;
    3. The duration of the violation;
    4. Whether the violation was willful;
    5. The prior record of the person responsible for the violation in complying or failing to comply with this chapter;
    6. The costs of enforcement to the public; and
    7. The amount of money saved by the violator through his, her, or its noncompliance.
  - d. Procedures for assessing penalties pursuant to illicit connections. Said penalties shall be assessed by the city manager or his designee. No penalty shall be assessed until the person alleged to be in violation is served written notice of the violation by registered mail, certified mail-return receipt requested, or personal service. Refusal to accept the notice shall not relieve the violator of the obligation to pay the penalty. The notice shall describe the violation with particularity and specify the measures needed to come into compliance. The notice shall designate the time within which such measures must be completed. In setting the time limit for compliance, the city shall take into consideration:
    1. The quantity and complexity of the work;
    2. The consequences of delay;
    3. The potential harm to the environment, the public health, and public and private property; and
    4. The cost of remedying the damage.

The notice shall warn that failure to correct the violation within the specified time period will result in the assessment of a civil penalty and/or other enforcement action. If after the allotted time period has expired, and the violation has not been corrected, the penalty shall be assessed from the date of receipt of notice of violation and each day of continuing violation thereafter shall constitute a separate violation under this section.
- (3) *Improper BMP maintenance, inspection and reporting.* Any permittee found in violation of the BMP maintenance, inspection and reporting requirements of their maintenance agreement with the city or the conditions of their stormwater conveyance and control system permit shall be subject to civil penalties as follows:
- a. First time offenders shall be subject to a civil penalty not to exceed \$500.00 per day of continuing violation.
  - b. Repeat violators shall be subject to a civil penalty not to exceed one \$1,000.00 per day of continuing violation.
  - c. In determining the amount of the penalty, the city manager or his designee shall consider:

## APPENDIX I

1. The degree and extent of harm to the environment, the public health, and public and private property;
  2. The cost of remedying the damage;
  3. The duration of the violation;
  4. Whether the violation was willful;
  5. The prior record of the person responsible for the violation in complying or failing to comply with this chapter;
  6. The costs of enforcement to the public; and
  7. The amount of money saved by the violator through his, her, or its noncompliance.
- d. Procedures for assessing penalties pursuant to improper BMP maintenance, inspection and reporting. Said penalties shall be assessed by the city manager or his designee. No penalty shall be assessed until the permittee alleged to be in violation is served written notice of the violation by registered mail, certified mail-return receipt requested, or personal service. Refusal to accept the notice shall not relieve the violator of the obligation to pay the penalty. The notice shall describe the violation with particularity and specify the measures needed to come into compliance. The notice shall designate the time within which such measures must be completed. In setting the time limit for compliance, the city shall take into consideration:
1. The quantity and complexity of the work;
  2. The consequences of delay;
  3. The potential harm to the environment, the public health, and public and private property; and
  4. The cost of remedying the damage.
- The notice shall warn that failure to correct the violation within the specified time period will result in the assessment of a civil penalty and/or other enforcement action. If after the allotted time period has expired, and the violation has not been corrected, the penalty shall be assessed from the date of receipt of notice of violation and each day of continuing violation thereafter shall constitute a separate violation under this section.
- (4) *Other violations.* Any person found in violation of other provisions of this chapter, not specifically enumerated elsewhere, shall be subject to a civil penalty not to exceed \$100.00 per violation or per day for any continuing violation.
- (5) *Payment/collection procedures.* Penalties shall be assessed by the city manager or his designee. No penalty shall be assessed until the person alleged to be in violation is served written notice of the violation by registered mail, certified mail-return receipt requested, or personal service. Refusal to accept the notice shall not relieve the violator of the obligation to pay the penalty. The city manager or his designee shall make written demand for payment upon the person in violation. If the payment is not received or equitable settlement reached within 30 days after demand for payment is made, the matter shall be referred to the city attorney for institution of a civil action in the name of the city, in the appropriate division of the general court of justice in Cabarrus County for recovering the penalty.
- (c) *Injunctive relief.*
- (1) Whenever the city council has a reasonable cause to believe that any person is violating or threatening to violate this chapter, rule, regulation, order duly adopted or issued pursuant to this chapter or making a connection to a stormwater conveyance or stormwater conveyance system other than in

## APPENDIX I

accordance with the terms, conditions, and provisions of approval, the city may, either before or after the institution of any other action or proceeding authorized by the Code, institute a civil action in the name of the city for injunctive relief to restrain and abate the violation or threatened violation.

- (2) The institution of an action for injunctive relief under subsection (c) shall not relieve any party to such proceeding from any further civil or criminal penalty prescribed for violations of this Code.
- (d) *Criminal penalties.* Any person who knowingly or willfully violates any provision of this chapter, rule, regulation, order duly adopted or issued pursuant to this chapter shall be guilty of a misdemeanor, punishable by a fine not to exceed \$500.00 or imprisonment for not longer than 30 days. Each violation shall be a separate offense.

Criminal penalties are enforceable through the provisions of G.S. §160A-175 and Code of Ordinances § 1.6

- (e) Appeals of this section 60-48 shall follow the procedures outlined in section 60-49.

(Ord. No. 07-108, § 1, 12-13-2007)

### **Sec. 60-49. Appeals.**

- (a) *Persons entitled to a hearing.* The following persons are entitled to a hearing pursuant to this section, for any actions taken by the city pursuant to this Article IV, each of whom is hereafter referred to as "aggrieved person."
  - (1) Any person whose application for a permit extending city stormwater utility under this article is denied;
  - (2) Any person against whom the city assesses a penalty pursuant to this article.
- (b) *Procedures for requesting a hearing.* The aggrieved person shall exercise such right to a hearing by making a written demand for a hearing in accordance with this subsection. Any person making a demand for a hearing shall deliver the demand to the stormwater administrator within 30 days of the following:
  - (1) The date of issuance of the contested permit;
  - (2) The date of the notice of the denial of permit issuance;
  - (3) The date of the notice of a revocation, modification, or suspension of an issued permit; or
  - (4) The date that a penalty was assessed.
- (c) *Content of hearing request.* The written demand for a hearing must identify separately and with particularity the following:
  - (1) The aggrieved person or persons;
  - (2) The specific permit provision or condition or other issues contested to be considered;
  - (3) The reason for the objection; and
  - (4) Any alternate provisions, conditions, or terms the aggrieved person proposes.
- (d) *Hearing procedures.*
  - (1) The hearing shall be conducted by the stormwater administrator and shall be subject to such rules as have been approved by the city council or the stormwater administrator as hereinafter set forth.
  - (2) If the demand for a hearing is not made in accordance with the provisions of this section, the stormwater administrator shall reject the demand and any right to a hearing shall be terminated.

## APPENDIX I

- (3) If any person demanding a hearing shall fail to comply with an order of the stormwater administrator or with any rules issued by the stormwater administrator or approved by the city council concerning the conduct of the hearing, the stormwater administrator may reject the demand and any right to a hearing shall be terminated.
- (4) Within 90 days of the receipt of the written hearing request, the stormwater administrator shall conduct a hearing and issue a final order or decision. The stormwater administrator shall transmit a copy of the final order or decision to the aggrieved person by registered or certified mail.
- (5) The stormwater administrator is authorized to take any action which is reasonably necessary or convenient in considering a demand for a hearing and in resolving the issues raised therein so long as such action is not contrary to the provisions of this article, or other applicable law.
- (6) The stormwater administrator may appoint a hearing officer to conduct any hearing authorized by this section. A hearing officer shall have the same authority to conduct a hearing and reach a decision as is provided to the stormwater administrator, provided that the decision of the hearing officer shall not be final, but shall be a recommended decision for consideration by the stormwater administrator.
- (7) The stormwater administrator may approve such decision without change, reject the decision that is supported by evidence presented at the hearing, or issue a different or revised decision that is supported by evidence presented at the hearing.
- (8) The decision of the stormwater administrator shall be final.
- (9) A final order may provide that the action that is the basis for the demand for a hearing is approved without change or may modify such action in any manner that is supported by the evidence presented at the hearing.
- (10) The stormwater administrator may, but is not required to, provide for any part of the hearing to be recorded by any reasonable means including, but not limited to, audio and/or video recording, stenographer, or court reporter. A transcript of any hearing, part thereof, which is recorded need not be prepared unless requested. The original of a requested transcript shall be filed with the stormwater department. Each person shall bear the cost of the transcript which such person requests, including any copy thereof. The decision of the stormwater administrator shall be reviewable only by seeking a writ of mandamus from the superior court within 30 days of the entry of the final order set forth herein.

(Ord. No. 07-108, § 1, 12-13-2007)

### **Secs. 60-50—60-75. Reserved.**

## ARTICLE V. CREATION, EXTENSION, MODIFICATION, OR CONNECTION TO THE STORMWATER UTILITY SYSTEM (THE MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4))

### **Sec. 60-76. Purpose of article.**

The purpose of this article is to set forth the standards by which the city's municipal separate storm sewer system (MS4) may be extended.

The standards of this article apply to all extensions, both publicly and privately owned. In addition, this article contains standards for private extensions planned to be incorporated into the MS4.

The city provides the MS4 in public rights-of-way and city stormwater easements according to the provisions of this chapter. In an effort to plan for future extensions of the Concord stormwater management system, the city

## APPENDIX I

maintains a Capital Improvement Plan (C.I.P.). The city shall endeavor to provide the extensions and services proposed in the C.I.P. if funded through the city's capital improvements budget. Extensions to the system may be made during the course of development. Consideration shall be given to each proposed developments in conformity to the city's "stormwater master plan," the adopted land use and other plans of the city, and the city's adopted annexation plan. If an extension or stormwater control measure is authorized, then all city design standards shall be met and the permit application process in [Unified Development Ordinance] (UDO) Articles 4 and 5 or 6 shall be followed. All such extensions shall become a part of the city's MS4 if accepted for public ownership and maintenance by the city council.

(Ord. No. 07-108, § 1, 12-13-2007)

### **Sec. 60-77. Procedures and standards for creation, extension, modification, or connection to the Concord Municipal Separate Storm Sewer System (MS4).**

- (a) *Prior to application submittal.* Preliminary site plans and engineering plans shall be prepared in accordance with the city's ordinances, including this chapter 60, the UDO (see article 4 and articles 5 or 6), and the city's technical standards manual prior to an application package submittal. Applicants shall meet with the city's stormwater administrator or his designee to review these preliminary plans prior to the preparation of the final plans and the application package.
- (b) *Application requirements.*
  - (1) All persons intending to construct, alter, modify, expand or connect to any portion of the Concord Stormwater Management System shall make timely and proper application to the city's stormwater administrator and provide such information as may be required by the stormwater administrator and director of engineering. At a minimum, the applicant shall:
    - a. Provide a plan that shows the acreage of the area to be served, identifies the type of development (residential, commercial etc.), estimates the maximum potential demands that the development may impose on the existing system, and determine the adequacy of the existing system to meet those demands;
    - b. Provide a proposed schedule for the construction of the development and any proposed development phases;
    - c. Document the intended use of the stormwater conveyance and control system extension;
    - d. Design and install the infrastructure in accordance with the C.I.P. and/or the city's standard specifications and design standards. If the proposed extension has not been identified in a C.I.P., the design engineer shall evaluate the infrastructure's ability to adequately serve surrounding sites in the area of consideration. This evaluation shall be reviewed and approved by the stormwater administrator or his designee;
    - e. Contract and fund the complete range of design services required for all on-site and off-site utilities. The alignment and design of the utilities shall meet the intent of a project identified in the city's standard specifications and design standards. The design shall meet the design standards of this article and shall be submitted to the city for review and approval in accordance with this chapter. Designs and alignments that do not comply with the intent of the C.I.P. and/or the city's standard specifications and design standards may be rejected regardless of project's compliance with other portions of this chapter.
    - f. Grant to the city, at no cost, all on-site utility rights-of-way and easements deemed necessary by the stormwater administrator and the director of engineering.

## APPENDIX I

- (c) *Incomplete application package.* Any application package determined incomplete by the stormwater administrator shall be returned to the applicant. Revised engineering plans and specifications shall constitute a re-submittal, shall be accompanied by a new fee, and shall require additional time for review. A complete application package that contains sufficient information to ascertain reasonable grounds to believe the application package and its contents meet all applicable standards of this chapter shall be acknowledged by a letter setting a date for a pre-construction conference. No discussion at the review conference shall preclude or otherwise bar the city from denying a permit, or issuing a permit that incorporates conditions, based upon changed circumstances or information not previously known by the stormwater administrator or the applicant. In either event, no single submittal of an application package will be held open for review longer than 90 days without the issuance of a letter requesting additional information or an "authorization to construct" permit being issued following a pre-construction conference. Application packages delayed by lack of action by any person or entity other than the city shall be deemed denied and shall require re-submittal.
- (d) *Authorization to construct.* It shall be unlawful to begin the construction of a building or project infrastructure until the stormwater administrator has issued an "authorization to construct" permit, and any additional required permits have been issued by either the city, Cabarrus County and/or the State of North Carolina, as needed and required.
- (e) *Funding of oversized utilities.* The city shall take reasonable steps to ensure that adequate funding is available to accommodate any requested oversizing or upsizing needs, as provided in section 60-78 below, however the city cannot guarantee the funding of specific proposed projects.
- (f) *Standards for Concord separate stormwater sewer system (MS4) extensions and/or connections.* The responsibility for and cost of such extension within new developments shall be borne by the requesting party, unless upsizing is required by the city in accordance with section 60-78. Where a proposed development of property located within the city necessitates a replacement, upgrade, or expansion in size or capacity of stormwater conveyance and appurtenant facilities that are already available to serve the property (as opposed to an extension of a line to make service available), and the replacement, upgrade, or expansion for the proposed development cannot be constructed in the time requested by the owner or developer under the city's scheduled and budgeted C.I.P. or capital improvements budget, the city may enter into a contract with the owner or developer of such property pursuant to which the owner or developer shall pay some or all of the cost of the necessary improvements.

(Ord. No. 07-108, § 1, 12-13-2007)

### **Sec. 60-78. Standards for oversizing Concord's Stormwater Management System and infrastructure reimbursement agreements.**

- (a) Pursuant to G.S. 160A-499 this section authorizes and sets forth the procedures and terms under which the city may approve reimbursement agreements with private developers and property owners for the design and construction of MS4 that is included on the city's capital improvement plan and serves the developer or property owner.
- (b) The city manager, or designee, is authorized to negotiate municipal infrastructure reimbursement agreements with private developers and property owners pursuant to this section. In negotiating such agreements, the city manager, or designee, shall determine that:
  - (1) The cost to the city will not exceed the estimated cost of providing for the municipal infrastructure through either eligible force account qualified labor or through a public contract let pursuant to G.S. 143-128 et seq.; or

## APPENDIX I

- (2) The coordination of separately constructed municipal infrastructure with the associated private development would be impracticable.
  - (3) City approval authority for agreements under this section shall be governed by general city contracting authorizations and delegations.
- (c) Such reimbursements, if any, may be paid from any lawful source if approved by the city council.
- (d) A municipal infrastructure reimbursement agreement approved pursuant to this section shall not be subject to G.S. Ch. 143, Art. 8 unless the award of a contract for work would have required competitive bidding if the contract had been awarded by the city. If the city would have been required to follow G.S. Ch. 143, Art. 8, then the developer or property owner is required to comply with the requirements of G.S. Ch. 143, Art. 8.
- (e) A municipal infrastructure reimbursement agreement approved pursuant to this section shall require the private developer or property owner party to comply with all of the city's rules, regulations and ordinances and be current on all debts, fees or taxes owed to the city.

(Ord. No. 07-108, § 1, 12-13-2007)

### **Sec. 60-79. Infrastructure capital recovery fee for CIP investments.**

The Concord Stormwater Management Program will exercise a capital investment program following the needs identified in the stormwater master plan and to meet other infrastructure and water quality needs as they are identified by other means, based upon the availability of funds and approval by city council. As pipe sizes are upsized and regional stormwater detention and/or treatment systems are installed to accommodate future land development, a significant capital investment is made by the city that includes annual maintenance and monitoring costs. When new developments are constructed that will have access to these city owned and operated facilities, the new developments will be required to pay a proportionate share of the capital investment and operating costs associated with all downstream pipes and detention and/or treatment facilities. The cost of these capital recovery fees will be charged to the developer and must be paid prior to receiving final plat approval.

(Ord. No. 07-108, § 1, 12-13-2007)

### **Sec. 60-80. Pre-construction conference and issuance of permit.**

- (a) The developer, design engineer, and contractor or a designated representative for each shall attend the pre-construction conference. If a representative for each of the aforementioned parties is not in attendance, the pre-construction conference shall be rescheduled to a later date when each party can be represented.
- (b) The developer, design engineer, and contractor or a designated representative for each, shall provide copies of all applicable federal, state, and local permits, easements, rights-of-way and encroachments and the appropriate engineering drawings to the stormwater administrator for approval prior to the pre-construction conference.
- (c) The "authorization to construct" permit shall be issued by the stormwater administrator after all applicable federal, state and local permits, recorded easements and encroachments have been received and written approval from the stormwater administrator has been issued for the submitted engineering drawings and the developer, design engineer, and contractor or a designated representative for each has met the pre-construction conference requirements.
- (d) Any construction activity initiated prior to the receipt of a written "authorization-to-construct" permit from the stormwater administrator shall be prohibited and subject to a civil penalty of up to ten percent per day of the posted bond or letter of credit. If no bond or letter of credit has been posted, any utility construction

## APPENDIX I

activity initiated prior to the receipt of a written "authorization-to-construct" permit from the stormwater administrator shall be prohibited and subject to a civil penalty of up to ten percent per day of the amount of the bond or letter of credit that should have been posted if the permitting process set forth in this chapter had been followed as by law provided.

- (e) In the event that construction does not commence and complete within 12 months of the issuance of the permit, the permit shall expire and a new permit must be applied for and obtained by the applicant. An active permit must be maintained until full final approval has been issued for the infrastructure defined in the permit. Written requests for an extension of time received prior to expiration of the permit may be granted by the stormwater administrator for good cause shown.
- (f) The denial of the issuance of a permit, subject to the provisions in this section shall be made in writing and shall contain the reasons for the denial and the city's estimate of the general changes in the applicant's proposed activities or plan which will be required in order that the applicant may obtain a permit. Nothing in such estimate shall preclude or otherwise bar the city from denying a permit, which incorporates such changes, based upon changed circumstances or information not previously known by the stormwater administrator or the applicant.
- (g) Copies of all applicable federal, state, and local permits shall be submitted to the stormwater administrator prior to the City of Concord's issuance of an "authorization-to-construct" permit.

(Ord. No. 07-108, § 1, 12-13-2007)

### **Sec. 60-81. Modifications and revocations of permits.**

Any permit issued by the city pursuant to this article is subject to revocation, suspension or modification, in whole or in part, upon 14 days' written notice to the applicant by the stormwater administrator for good cause including, but not limited to the following:

- (1) Violation of any terms, conditions, or requirements of this article or the permit; or
- (2) Falsification or misrepresentation of information provided in the permit application and/or in the engineering plans and specifications; or
- (3) Failure to disclose relevant information; or
- (4) Refusal of or by the owner/developer or their contractor, agent, and employees to allow authorized officers, employees, or agents of the city, upon presentation of credentials, to inspect or observe any activity, system, or other work approved within the owner/developer's permit; or
- (5) Failure to follow the approved contract documents and engineering plans and specifications without receiving proper authority from the city.

(Ord. No. 07-108, § 1, 12-13-2007)

### **Sec. 60-82. Construction process.**

- (a) Deviations from the approved engineering plans and specifications or changes in site conditions shall be submitted in writing by the engineer to the stormwater administrator for written approval prior to any further construction or installation activity.
- (b) Modifications to the approved plans requiring federal, state, and local regulatory approval shall be the responsibility of the developer, contractor, and/or engineer. The developer shall assume full responsibility



## APPENDIX I

for acquiring the applicable regulatory permits and approvals, prior to further construction or installation activity.

- (c) The developer shall hold the city and/or stormwater administrator, their officers and agents harmless of any responsibility or liability, upon the failure of the developer to obtain required regulatory approvals prior to further construction activity and the developers' failure to adhere to regulatory requirements during the construction activities.

(Ord. No. 07-108, § 1, 12-13-2007)

### **Sec. 60-83. Inspection.**

- (a) The developer shall obtain the services of a competent and experienced engineer. The engineer shall provide the services of project design, surveying and grade control, right-of-way and easement recordation and construction inspection. It shall be the engineers' responsibility to supervise construction, establish grades or to provide solutions to grade, construction, or design problems and to obtain the appropriate federal, state, and local permits, encroachments, easements, and rights-of-way, as applicable.
- (b) The stormwater administrator shall have a field representative periodically observe the work while construction is in progress. This periodic construction observation by the stormwater administrator shall be subject to reasonable development construction observation fees and any other reasonable fees that may be applicable. Failure of the stormwater administrator to discover deficiencies at the time of construction shall not relieve the developer or his/her agent of the responsibility to correct such defects.
- (c) The engineer shall certify that the installation of the extensions is in accordance with all applicable federal, state, and local regulations and standards and constructed in accordance with the approved contract documents and engineering plans.
- (d) Contract documents, approved engineering plans and specifications bearing the city's stamp of approval and associated permits shall be present at the project site at all times and made available upon request.

(Ord. No. 07-108, § 1, 12-13-2007)

### **Sec. 60-84. Video assessment.**

The interior of all storm sewers shall be cleaned and the contents disposed in a manner acceptable to the city and NC DEQ and shall be video recorded on a CD, DVD or equivalent successor media after the installation and testing is complete and submitted to the stormwater administrator for review prior to the acceptance and final approval of the extension. All associated costs shall be borne by the developer. Only those pipes located within the public road rights-of-way and city easements accepted for public ownership and maintenance by city council will become part of the Concord MS4.

(Ord. No. 07-108, § 1, 12-13-2007; Ord. No. 21-19, § 1, 3-11-2021)

### **Sec. 60-85. As-built drawings.**

- (a) The developer, and his/her engineer and/or contractor or his/her designee shall maintain current as-built drawings and survey the location and elevation of the infrastructure during the construction process. As-built drawings shall be maintained and available for inspection, upon the stormwater administrator's request.
- (b) The engineer shall submit and certify a legible copy of the "as-built" drawings for the review, approval, and recordation to the stormwater administrator upon the completion of construction.

## APPENDIX I

(c) As-built drawings shall include, but are not limited to, all of the information submitted on the engineering construction drawings as corrected, as well as the information listed below:

(1) *General information.*

- a. Road names, as approved by the business and neighborhood services department, shall be identified on the plan view.
- b. Underground utility location, if not noted, if not identified on the approved engineering plans, or if the exact location not previously identified. Additional information shall be identified on the profile view.
- c. Relative features, including but not limited to street addresses, property line, natural features, etc. Additional information shall be identified on the plan view.

(2) *Conveyance-related information.*

a. *Pipes.*

1. Location of pipes within right-of-way limits, if changed. Corrections shall be identified on the plan view.
2. Installed distances and slopes. Information shall be identified on the profile view.
3. Pipe type and size, if changed. Corrections shall be identified on the profile view.
4. Bore casing sizes and distances. Information shall be identified on the plan view.
5. Details on aerial creek crossings. Information shall be identified on the plan and profile view as needed.
6. Station location of special devices or appurtenances (e.g., anti-seep collars), measured from the downstream structure. Information shall be identified on the profile view.
7. Information concerning distance to other utilities shall be identified on the profile view.
8. Station location of laterals, measured from the downstream structure shall be identified on the plan view.

b. *Structures.*

1. Structure shape, size and inlet type. Information shall be identified on the profile view.
2. Elevations. Information shall be identified on the profile view.
  - i. Inverts in, inverts out, and drop inverts (top and bottom).
  - ii. Inlets and rims. Elevations shall be provided in vertical feet.
  - iii. Overflow structures. Elevations shall be provided in vertical feet.

(3) *Detention-related information.*

- a. Location of perimeter within right-of-way limits, if changed. Corrections shall be identified on the plan view.
- b. Perimeter and distances. Information shall be identified on the plan view.
- c. Installed slopes. Corrections shall be identified on the profile view.
- d. Distance to other utilities. Information shall be identified on the plan view.

## APPENDIX I

- e. Corrections to design and performance parameters in approved engineering design package for each BMP as required.

(Ord. No. 07-108, § 1, 12-13-2007)

### **Sec. 60-86. Record drawings.**

- (a) The engineer shall provide to the stormwater administrator "record" drawings and a digital copy of "record" drawings. Record drawings shall be signed and sealed by a professional engineer licensed to practice in North Carolina. Digital record drawings shall be supplied in format AutoCAD Release 14 or a later release, or in a format as specified by the stormwater administrator. All surveys shall be referenced to North Carolina grid coordinates. In addition the vertical monuments and datum from which the project was designed shall be designated on the map.
- (b) As-built drawings shall be signed and sealed by a professional surveyor licensed to practice in North Carolina and shall reflect actual field location of infrastructure as installed. All information required on the as-built drawings shall be reflected on the record drawings.
- (c) Recorded rights-of-way and easements shall be shown on the record drawings, including the required digital record drawings. Utility rights-of-way and easements shall be surveyed and recorded in accordance with the city's current rights-of-way, easements and encroachments policy. All recorded rights-of-way, easements, and encroachments shall be submitted to the stormwater administrator prior to final approval of the infrastructure.
- (d) Record drawings shall be submitted prior to the certification and activation of the extension.

(Ord. No. 07-108, § 1, 12-13-2007)

### **Sec. 60-87. Certification.**

The engineer shall be responsible for sealing and certifying that materials and the construction of the extension and/or modification to the stormwater conveyance and control system have met all the applicable rules, regulations, statutes, and ordinances of the City of Concord, State of North Carolina, and the United States of America and is in substantial compliance with the approved engineering plans, specifications, supporting materials, and associated permits. A copy of the certification shall be provided to the stormwater administrator prior to final approval. Projects may be certified in phases.

(Ord. No. 07-108, § 1, 12-13-2007)

### **Sec. 60-88. Application package for final approval.**

The application package for final approval of the stormwater conveyance and control system extensions and/or modifications (or any phase thereof) shall include but shall not be limited to the following:

- (1) Three completed copies of the final certification executed and sealed by an engineer, one copy of the sealed "as-built" drawings, three sets of the sealed "record" drawings, and one digital copy of the "record" drawings, as specified in section 60-87 of this article, shall be submitted to the stormwater administrator for review and approval.
- (2) The applicant shall satisfactorily prove that the applicant, or any parent, subsidiary, or other affiliate, has obtained all necessary permits, encroachments, and rights-of-way and executed all necessary

## APPENDIX I

maintenance agreements, in accordance with the city's UDO Section 4.4.6, required to carry out the activity for which the permit is being requested.

- (3) All executed and recorded rights-of-way, easements, encroachments, and maintenance agreements shall be submitted to the stormwater administrator in a form and content acceptable to the city attorney prior to final approval of the infrastructure.

(Ord. No. 07-108, § 1, 12-13-2007)

### **Sec. 60-89. Final approval requirements and conditions.**

- (a) Final approval shall not be issued until the construction of the extension and/or modification to the stormwater conveyance and control system have meet all the applicable rules, regulations, statutes, and ordinances of the city, the State of North Carolina, and the United States of America.
- (b) The engineer shall certify that the installation and the construction of any extension and/or modification to the stormwater conveyance and control system shall meet all regulatory design standards and is in substantial compliance with the approved engineering plans and associated permits.
- (c) If the stormwater administrator should find that final approval should be denied, the denial shall be made in writing and shall contain each reason for the denial and the stormwater administrator's estimate of the general changes in the applicant's proposed activities or plan which will be required, in order that the applicant may obtain a final approval. Nothing in such estimate shall preclude or otherwise bar the stormwater administrator from denying final approval, which incorporates such changes, based upon changed circumstances or information not previously known by the stormwater administrator.
- (d) A properly executed certification, the "as-built" drawings, the "record" drawings, and the video assessment, as prescribed in section 60-85 of this article, shall be submitted to the stormwater administrator for review and shall be determined complete by the stormwater administrator before final approval is issued.
- (e) No construction, alteration, or expansion of the stormwater conveyance and control system shall be placed into final service until the applicant has fully complied with all applicable federal, state, and local regulations and standards and has obtained final approval from the stormwater administrator.

(Ord. No. 07-108, § 1, 12-13-2007)

### **Sec. 60-90. Donation/acceptance of systems to the city.**

- (a) Stormwater management systems and associated rights-of-way and other appurtenances as required that are intended for public use and transport stormwater from city roadways shall be granted and conveyed to and become the property of the city upon the final written approval of the stormwater administrator and acceptance by the city council.
- (b) The city council shall not accept the ownership, operation, or maintenance responsibility of modifications or extensions that do not meet the requirements of this article or other applicable law and regulation.
- (c) Following the developer's donation and the city's acceptance of a modification or extension, the city shall have sole ownership and rights to the modification or extension and shall assume all operation and maintenance responsibilities.

(Ord. No. 07-108, § 1, 12-13-2007)

## APPENDIX I

### **Sec. 60-91. Warranty.**

- (a) The developer shall be responsible for the material and craftsmanship of all donated infrastructure for a period of one year from the date of certification of the project or the phase of the project. The city has the right to increase the warranty period for atypical construction materials or construction techniques. The warranty period shall begin on the date that the city accepts ownership of the modification or extension.
- (b) In accordance with Article 5, Section 5.7.10 of the City of Concord Unified Development Ordinance, this warranty shall include any damages that may arise from construction by other utility companies or homebuilders.
- (c) The city shall relieve the developer of their obligation under the warranty period by when the developer shall performs a one-year warranty inspection satisfactory to the city that shall include, but not be limited to cleaning the interior of all storm sewers and dispose of the contents in a manner acceptable to the city and NC DEQ and shall video recorded on a CD, DVD or equivalent successor media all pipes and appurtenances, and all video and a written summary of condition of the stormwater system with an itemized list of deficiencies shall be complete and submitted to the stormwater administrator for review prior to the acceptance and final approval of the extension. The city reserves the right to have an observer present during the cleaning and video inspection activities, and to receive copies of the unedited videos immediately upon request at no cost to the city. All associated cleaning and inspection costs shall be borne by the developer.

Any and all defects found at this time that do not conform to the city's standards or this article shall be repaired or replaced at the developer's expense. The city stormwater administrator shall be the final judge of the acceptability of workmanship and quality of materials and installation.

- (d) The city shall, upon final acceptance at the end of the applicable warranty period, release the developer's bond of surety or letter of credit.

(Ord. No. 07-108, § 1, 12-13-2007; Ord. No. 21-19, § 1, 3-11-2021)

### **Sec. 60-92. Design standards.**

Stormwater conveyance and control system extensions and/or modifications shall be designed in accordance with all applicable federal; state, including but not limited to 15A NCAC 2H .1008 and the NCDEQ Stormwater BMP Manual; local regulations; and the city's Technical Standards Manual.

(Ord. No. 07-108, § 1, 12-13-2007; Ord. No. 21-19, § 1, 3-11-2021)

### **Sec. 60-93. Required design calculations.**

The engineer shall provide all necessary evaluations, justifications, and calculations to the city's stormwater department deemed necessary to meet the requirements of all federal, state, and local requirements and to ensure that the design conforms to good engineering practice.

(Ord. No. 07-108, § 1, 12-13-2007)

## APPENDIX I

### **Sec. 60-94. Exception.**

- (a) The City of Concord may grant an exception from the requirements of this chapter if:
- (1) There are unique circumstances applicable to the site such that strict adherence to the provisions of the chapter will result in unnecessary hardship or create practical difficulties; and
  - (2) The exception is in harmony with the general purpose and intent of this chapter and no violation of the city's NPDES stormwater discharge permit or Interbasin Transfer Certificate conditions will result; and
  - (3) In granting this exception, water quality has been protected, public safety and welfare has been assured, and substantial justice has been done; and
  - (4) The exception request is approved by both the stormwater administrator and the director of engineering.
- (b) A written request for an exception shall be submitted to the stormwater administrator and shall state the specific variance sought, the justification for the variance, and what measures will be taken to insure the requirements of this chapter have been met to the maximum extent practicable. It shall include descriptions, drawings, calculations and any other information that is necessary to evaluate the proposed exception.

(Ord. No. 07-108, § 1, 12-13-2007)