NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF ENERGY, MINERAL AND LAND RESOURCES

FACT SHEET

PHASE I MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT TO DISCHARGE STORMWATER

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Background Information

Stormwater is rainfall or snowmelt that runs off the ground or impervious surfaces. As stormwater flows across land surfaces, it picks up and carries with it significant amounts of pollutants. The stormwater flow eventually reaches surface waters where the pollutants it carries may be introduced to the receiving waters. The pollutant loads associated with stormwater runoff can cause significant water quality impairment in the surface waters of the state. Some of the major influences on potential stormwater pollution in a given area are the types of activities, intensity of development and amount of built-upon surfaces in the area. Built-upon surfaces prevent precipitation from naturally infiltrating into the soil surface and therefore increase the stormwater runoff. In addition, the change in activities associated with developed and developing areas also generate increased levels of various types of pollutants. These pollutants are deposited on built-upon surfaces where stormwater runoff can easily pick them up and transport them.

In urban and urbanizing areas, the affects of increased built-upon area and highly intensive urban activities result in an environment where significant stormwater pollutant sources may exist. Section 402(p) of the *Clean Water Act* (CWA) and related federal regulations (40 CFR 122.26) recognize the pollutant contribution of stormwater runoff from urbanized areas and require NPDES permits and stormwater quality management programs for stormwater discharges from certain *municipal separate storm sewer systems* (MS4s). A separate storm sewer system is a conveyance or system of conveyances designed or used to collect and carry stormwater runoff. This can include, but is not limited to, municipal streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains that convey stormwater runoff and ultimately discharge to waters of the State. These storm sewer systems are not part of a combined sewer system or treatment works, and the stormwater entering the systems usually receives little no treatment before entering surface waters. In urban areas, a high percentage of stormwater runoff flows through separate storm sewer systems and then directly to surface waters often without management measures for pollutant removal.

This Fact Sheet outlines the conditions of stormwater discharge permits for MS4s in accordance with federal and state NPDES requirements. The provisions of these permits require that pollutants associated with stormwater discharged from the MS4 are reduced to the maximum extent practicable (MEP). The municipal areas involved in NPDES stormwater permit coverage are responsible for reviewing pollutant sources and activities throughout their jurisdictional area and developing and implementing a comprehensive *stormwater management program* to control pollutants discharged to, and ultimately from, their storm sewer systems.

Location of Discharge

The discharges covered by these permits are located within the jurisdictional areas of the regulated entities. Areas adjacent to, surrounding or interconnected with these areas may also be covered by this permit as appropriate.

Receiving Waters

Discharges from the Permittees' MS4 enter the waters of the state in multiple river basins. Each permittee lists in their Stormwater Management Plan the major stream segments that receive stormwater discharge from the individual storm sewer systems covered by their municipal stormwater permits, as well as the classifications of the streams.

Description of Permit Coverage

Coverage Under the Permits

The permits authorize existing and new point source discharges of stormwater runoff from the Permittee's MS4 in accordance with the permit conditions which include the Permittee's approved Stormwater Management Plan. The Stormwater Management Plan is incorporated by reference, and is an enforceable part of the stormwater NPDES permit. Discharges from the MS4 are, in general, to be composed only of stormwater runoff. Some incidental non-stormwater flows are allowed to enter the MS4 as long as these flows are not significantly impacting water quality. A list of non-stormwater sources is contained in Part I.I. of the permit and includes flow to the MS4 from sources such as water line flushing, irrigation, springs, footing drains, street washing and fire fighting.

Non-stormwater discharges into the MS4, such as process and non-process wastewater discharge, may be allowed, but only if these discharges are covered by NPDES permits. In addition, there are eleven categories of industries that are required by the CWA and federal regulations (40 CFR 122.26) to obtain NPDES stormwater permits for point source discharges of stormwater runoff from their sites. These specific facilities are responsible for the pollutants discharged through stormwater runoff from their site and are required to obtain independent NPDES stormwater discharge permits and to develop stormwater pollution prevention programs for their sites. Those industrial stormwater discharges that have been permitted independently under NPDES stormwater requirements are allowed to discharge stormwater through the MS4. Discharge of stormwater from these industrial areas into the MS4 without an appropriate NPDES permit and management program is not allowed.

The authorized discharges covered by this permit include all point source discharge locations (or outfalls) from the MS4 to waters of the state. This includes all currently located outfalls from the system and new outfalls located or constructed after finalization of this permit. The area of physical coverage of the permit may be expected to change, not only due to new outfalls, but also due to change in the Permittee's jurisdictional boundaries.

Scope of Permit Coverage

The intent of municipal stormwater NPDES coverage, and requirements of the CWA, is to reduce pollutant discharge to the MEP. The goal is protection of the integrity and quality of the state's surface waters from potential impacts of runoff from urban areas. Accomplishing this objective requires that a broad-based approach be taken in developing stormwater permit conditions. The reasons for this approach are found in the nature of urban stormwater runoff. Stormwater runoff essentially begins as a diffuse or nonpoint source of pollution. Unlike other nonpoint sources, stormwater runoff in urban settings is generally directed to stormwater conveyance systems (storm sewers) and is ultimately discharged directly to surface waters as a point source which may be regulated under the NPDES stormwater program. Because of the large number of stormwater discharge points in an urban setting and the variability in stormwater flow, controlling these discharges like conventional wastewater point sources with end-of-pipe controls is not appropriate. Instead, the coverage for these discharges is necessarily based on a broader approach directed at management and control of the sources of pollutants throughout the jurisdictional area of the Permittee. This approach allows a flexible means by which municipalities can develop comprehensive stormwater programs that focus on the needs within their municipal area.

The comprehensive stormwater programs, and the permit itself, are to be implemented throughout the jurisdictional areas of the Permittees. This coverage area may expand based on changes in the jurisdictional area of the city. Implementation of these programs is required to the extent that

pollutant discharge to waters of the state must be controlled and reduced to the MEP. Permit conditions are tied to long-term control of pollutants discharged from the municipal storm sewer system and reduction of pollutant loading from the system. In this context, the Division of Energy, Mining and Land Resources, herein referred to as the Division, considers the municipal system to include discharges from public and private storm sewer networks within the city's jurisdictional control. The scope of this coverage recognizes that situations may exist where the Permittees will not have complete authority for the storm sewer system and outfalls (i.e. private systems). However, within the Permittee's jurisdiction, the Permittee's have authority through land use control to manage the pollutants introduced to, and ultimately discharged from, the system regardless of ownership of the specific segment of the sewer system.

Urban Stormwater Quality

Pollutants of Concern

A wide range of land uses and activities can be expected to exist within a large urban area. All of these uses can potentially contribute pollutants to the municipal storm sewer system. With various levels and types of residential, commercial, industrial, institutional and construction activity ongoing in an urban area, it is often difficult to pinpoint specific pollutants or pollutant levels expected for individual urban activities or locations. However, it has been shown that urban development and the subsequent stormwater runoff from these areas represent a major cumulative source of pollution to surface waters. Table 1. indicates some of the major pollutant categories that are of primary concern in dealing with urban stormwater quality management. The table represents a general overview of expected categories of pollutants. Various additional pollutants may be present in a given area due to the activities ongoing within the area.

Management Alternatives

The Division and the *U. S. Environmental Protection Agency* (EPA) stress a source reduction/pollution prevention approach for stormwater quality management. This is essentially founded on the basis that the quality of stormwater discharged from the storm sewer system is dependent on the sources of pollutants available to be contributed to the system through stormwater runoff. Reducing the pollutant sources reduces the pollutant impact of storm sewer discharge. On a local level, this type of management program may consist of various components including, but not limited to, sedimentation and erosion control programs for disturbed areas, land use planning and ordinance controls in developing areas including post-construction stormwater controls, municipal pollution prevention and good housekeeping programs, public out reach and participation programs, spill failure/containment programs, and programs to detect and remove illicit connections to the storm sewer system. These types of *Best Management Practices* (BMPs) are considered to be the most efficient and effective methods from a cost and management standpoint. The Permittees involved in the NPDES stormwater program must evaluate the land uses and activities in their area to determine the most appropriate management practices to manage and control stormwater discharges.

Table 1. Categories of Pollutants Expected in Urban Stormwater Runoff

Sediment	• Sediment is often viewed as the largest pollutant load associated with stormwater runoff in an urban setting. The loadings have been shown to be exceptionally high in the case of construction activity. • Sediment is associated with numerous impacts in surface waters including increased turbidity, effects on aquatic and benthic habitat and reduction in capacity of impoundments. • A number of other pollutants often attach to, and are carried by, sediment particles.
Nutrients	• The nutrients most often identified in stormwater runoff are phosphorus and nitrogen. • In surface waters, these nutrient loads can lead to heavy algae growth, eutrophication (especially in impoundments) and low dissolved oxygen levels. • Nutrients are input into the urban system in a variety of ways including landscaping practices (commercial and home) and leaks from sanitary sewers and septic systems.
Organic Matter	• Various forms of organic matter may be carried by stormwater in urban areas. Decomposition of this material by organisms in surface waters results in depleted oxygen levels. • Low levels of dissolved oxygen severely impact water quality and life within surface waters. • Sources of organic matter include leaking septic systems, garbage, yard waste, etc.
Bacteria	• High bacterial levels may be found in stormwater runoff as a result of leaking sanitary systems, garbage, pet waste, etc. • The impacts of bacteria on surface waters may affect recreational uses and aquatic life as well as presenting possible health risks.
Oil and Grease	• Numerous activities in urban areas produce oil, grease and lubricating agents that are readily transported by stormwater. • The intensity of activities, including vehicle traffic, maintenance and fueling activities, leaks and spills and manufacturing processes within an urban setting contribute heavily to the level of these pollutants present in adjacent surface waters.
Toxic Substances	• Many toxic substances may potentially be associated with urban stormwater including metals, pesticides, herbicides and hydrocarbons. • Toxic compounds may affect biological systems, and accumulate in bottom sediments of surface waters.
Heavy Metals	• Heavy metals such as copper, lead, zinc, arsenic, chromium and cadmium may be typically found in urban stormwater runoff. • Metals in stormwater may be toxic to some aquatic life and may accumulate in aquatic animals. • Urban sources of metals in stormwater may include automobiles, paints, preservatives, motor oil and various urban activities.

Proposed Controls

Permittees are required to implement a stormwater management program. In accordance with the Clean Water Act, permittees shall implement the provisions of these programs to reduce the discharge of pollutants from the municipal storm sewer system to the MEP. Management measures implemented under the program are expected to be sufficient to meet this requirement. The Division may require updates to the program as appropriate to assure compliance.

The actual conditions of the draft stormwater permits for each of the Permittees are very similar. These conditions have been written to focus on general stormwater control areas. All the Permittees have proposed stormwater management programs to address these general areas. The specific components of the Permittee's stormwater programs often vary as the Permittees look at different tools to achieve the stormwater control goals. The permit requires the development and proper implementation of the Stormwater Management Plan. The purpose of the Stormwater Plan is to establish the means by which the permittee will achieve compliance with the provisions of the Clean Water Act and state law. Compliance with the six minimum measures in 40 CFR § 122.34(b), State Stormwater rules for new development, and the additional provisions of 15A NCAC 02H .0153 constitute compliance with the requirements of this permit, the Clean Water Act and 15A NCAC 02H .0153to reduce the discharge of pollutants from the MS4 to the MEP, to protect water quality, and to satisfy the applicable water quality requirements of the Clean Water Act. Implementation of best management practices consistent with the provisions of the Stormwater Plan constitutes compliance with the standard of reducing pollutants to the MEP. Successive iterations of the Stormwater Management Plan and other components of this permit will be driven by the objective of assuring that discharges do not cause or contribute to the violation of water quality standards, through the expansion and tailoring of management measures within the scope of the Stormwater Management Plan.

Adequate Legal Authority

40 CFR § 122.26(d)(ii) requires that local entities have sufficient legal authority in place to control discharges to the MS4.

Pursuant to G.S. 143-214.7(c), the Environmental Management Commission developed a model ordinance in cooperation with local governments and other interested parties that allows the use of both structural and nonstructural best management practices adequate to meet the Phase II requirements of the *stormwater rules*. In the development of the model ordinance, the Commission shall provide for options that take into consideration differences among local governments in the State, including, but not limited to, population, financial resources, and human resources. Local governments are required to submit their local ordinance to the Division for review and approval to ensure the local ordinance is clear, specific, measurable, enforceable, and meets or exceeds the model ordinance.

The Model Ordinance is available at: https://deq.nc.gov/about/divisions/energy-mineral-land-resources/energy-mineral-land-permits/stormwater-permits/npdes-ms4

Public Education and Outreach

Pursuant to Federal Regulations 40 CFR Section 122.34 (b) permittees “must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff.”

Pursuant to State Requirements in 15A NCAC 02H .0153, to obtain a NPDES permit for stormwater management, an applicant shall, to the extent authorized by law, develop, implement, and enforce a stormwater management plan approved by the Commission that satisfies the six minimum control measures required by 40 CFR § 122.34(b). Regulated entities may propose using any existing State or local program that relates to the minimum measures to meet, either in whole or in part, the requirements of the minimum measures.

Under the proposed draft permit the permittee shall implement the BMPs in Part II, Section B to meet the objectives of the Public Education and Outreach Program.

The permittee's 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 elements implemented locally or through a cooperative agreement the permittee shall estimate and record the extent of exposure.

Public Involvement/Participation

Pursuant to Federal Regulations 40 CFR Section 122.34 (b) permittees "must, at a minimum, comply with State, Tribal and local public notice requirements when implementing a public involvement/ participation program."

Pursuant to State Requirements in 15A NCAC 02H .0153 to obtain a NPDES permit for stormwater management, an applicant shall, to the extent authorized by law, develop, implement, and enforce a stormwater management plan approved by the Commission that satisfies the six minimum control measures required by 40 CFR § 122.34(b). Regulated entities may propose using any existing State or local program that relates to the minimum measures to meet, either in whole or in part, the requirements of the minimum measures.

Under the proposed draft permit the permittee shall implement the BMPs in Part II, Section C to meet the objectives of the Public Involvement and Participation Program.

Illicit Discharge Detection and Elimination

Pursuant to Federal Regulations 40 CFR Section 122.34 (b) permittees must:

- ✓ Develop, implement and enforce a program to detect and eliminate illicit discharges (as defined at Sec. 122.26(b)(2)) into your small MS4.
- ✓ Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from those outfalls;
- ✓ Effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into your storm sewer system and implement appropriate enforcement procedures and actions;
- ✓ Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to your system; and
- ✓ Inform public employees, businesses, and the public of hazards associated with illegal discharges and improper disposal of waste.
- ✓ Address the following categories of non-storm water discharges or flows (i.e., illicit discharges) only if you identify them as significant contributors of pollutants to your small MS4: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)), 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 habitats and wetlands, dechlorinated swimming pool discharges, and street wash water (discharges or flows from fire fighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the United States).

Pursuant to State Requirements in 15A NCAC 02H .0153 to obtain a NPDES permit for stormwater management, an applicant shall, to the extent authorized by law, develop, implement, and enforce a stormwater management plan approved by the Commission that satisfies the six minimum control measures required by 40 CFR § 122.34(b). Regulated entities may propose using any existing State or local program that relates to the minimum measures to meet, either in whole or in part, the requirements of the minimum measures.

Under the proposed draft permit the permittee shall implement the BMPs in Part II, Section D, to the extent authorized by law, to meet the objectives of the Illicit Discharge Detection and Elimination Program.

Construction Site Stormwater Runoff Control

Pursuant to Federal Regulations 40 CFR Section 122.34 (b) permittees "must develop, implement, and enforce a program to reduce pollutants in any storm water runoff to your small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in your program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. Pursuant to 40 CFR 122.35, an operator of a regulated small MS4 may share the responsibility to implement the minimum control measures with other entities provided:

(1) The other entity, in fact, implements the control measure;
(2) The particular control measure, or component thereof, is at least as stringent as the corresponding NPDES permit requirement; and
(3) The other entity agrees implements the control measure on behalf of the MS4.

The permittee remains responsible for compliance if the other entity fails to perform the permit obligation and may be subject to enforcement action if the neither the Permittee nor the other entity fully performs the permit obligation.

Pursuant to State Requirements in 15A NCAC 02H .0153, to obtain a NPDES permit for stormwater management, an applicant shall, to the extent authorized by law, develop, implement, and enforce a stormwater management plan approved by the Commission that satisfies the six "minimum control measures" required by 40 Code of Federal Regulations § 122.34(b). Regulated entities may propose using any existing State or local program that relates to the minimum measures to meet, either in whole or in part, the requirements of the minimum measures.

The NCG010000 permit establishes requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality. The NCG010000 permit establishes requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, sanitary waste at the construction site that may cause adverse impacts to water quality and checklists and procedures for conducting construction site

inspections to verify the use of appropriate soil erosion and sediment controls that specify inspection frequencies by either NCDEQ Division of Energy, Mineral, and Land Resources (DEMLR), the delegated program or through mandated self inspections.

Local governments either rely on the NCDEQ DEMLR Erosion and Sediment Control Program or on a county delegated S&EC program; or have their own local delegated S&EC program. The City of Fayetteville relies on the DEMLR Sediment and Erosion Control Program to comply with this minimum measure. The Cities of Charlotte, Durham, Greensboro, Raleigh, and Winston-Salem have their own local delegated Sediment and Erosion Control Program to comply with this minimum measure.

The DEMLR Erosion and Sediment Control Program, whether implemented by the state or a state delegated program, effectively meets the requirements of the Construction Site Runoff Controls by permitting and controlling development activities disturbing one or more acres of land surface and those activities less than one acre that are part of a larger common plan of development. This program is authorized under the Sediment Pollution Control Act of 1973 and Chapter 4 of Title 15A of the North Carolina Administrative Code. The DEMLR Erosion and Sediment Control Program, whether implemented by the state or a local government program, includes:

- ✓ A regulatory mechanism providing for sanctions to ensure compliance, including but not limited to cease and desist orders, ability to abate and clean up discharges, spills, or pollutant releases, and the ability to levy citations or administrative fines against responsible parties, ability to recovery remediation costs, and the ability to impose civil or criminal sanctions and escalate corrective response.
- ✓ Procedures for the receipt and consideration of information submitted by the public.
- ✓ Annually reviews and revisions of ordinances or other regulatory mechanisms that provide the delegated authority with adequate legal authority to meet the objectives of the Erosion and Sediment Control Program.
- ✓ Inventories of all active public and private construction sites. The inventory is continuously updated as new projects are permitted and projects are completed. The inventory contains relevant contact information for each project (e.g., name, address, phone, etc.), the size of the project and area of disturbance, whether the project has submitted for permit coverage under, the date erosion and sediment control/stormwater plan was approved.
- ✓ Requirements to ensure staff whose primary job duties are related to implementing the construction stormwater program, including permitting, plan review, construction site inspections, and enforcement, are trained to conduct these activities.
- ✓ Educational programs in erosion and sedimentation control directed towards State and local governmental officials, persons engaged in land-disturbing activities, and interested citizen groups
- ✓ Authority to review plans for new development and redevelopment to determine whether adequate stormwater control measures will be installed, implemented, and maintained.
- ✓ Review procedures for construction site plans to determine potential water quality impacts and ensure the proposed controls are adequate.
- ✓ Review each erosion and sediment control/stormwater plan using a checklist or similar process.
- ✓ Authority to request information such as stormwater plans, inspection reports, and monitoring results, and other information deemed necessary to assess compliance with the Erosion and Sediment Control Program.
- ✓ Erosion and sediment controls at construction sites and mandatory standards for land-disturbing activitie.
- ✓ Checklist and procedures to review and approve or disapprove all site plans from construction activities that result in a land disturbance of greater than or equal to one acre included

construction activity that is part of a larger common plan of development or sale that would disturb one acre or more which incorporates consideration of potential water quality impacts.

- ✓ Ability to withholding of plan approvals.
- ✓ Procedures to require any revision of the plan that is necessary.
- ✓ Procedures to protect riparian buffers along surface waters.
- ✓ Checklist and procedures for conducting site inspections that specify minimum inspection frequencies of construction sites to verify the use of appropriate soil erosion and sediment controls.
- ✓ Authority to enter private property at reasonable times to inspect any facilities, equipment, practices, or operations related to stormwater discharges to determine whether there is compliance the Erosion and Sediment Control Program.
- ✓ Enforcement strategies and enforcement control measures that include escalating enforcement remedies and enforcement tracking procedures designed to record instances of non-compliance and response actions.
- ✓ Procedures to require a person who engaged in a land-disturbing activity and failed to retain sediment generated by the activity to restore the waters and land affected by the failure.
- ✓ Requirements for construction site operators to select, install, implement, and maintain appropriate erosion and sediment control practices, consistent with the North Carolina Erosion and Sediment Control Planning and Design Manual. The construction site operators must ensure effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed and maintained to:
    - Control stormwater volume and velocity within the site to minimize soil erosion;
    - Control stormwater discharges, including both peak flowrates and total stormwater volume, to minimize erosion at outlets and to minimize downstream channel and streambank erosion;
    - Minimize the amount of soil exposed during construction activity;
    - Minimize the disturbance of steep slopes;
    - Minimize sediment discharges from the site.
    - Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal and maximize stormwater infiltration, unless infeasible; and
    - Minimize soil compaction and, unless infeasible, preserve topsoil.
- ✓ Requirements ensure discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.
- ✓ Requirements to minimize:
    - The discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
    - The exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater; and
    - The discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.
- ✓ Requirements to prohibit discharges of:
    - Wastewater from washout of concrete, unless managed by an appropriate control;
    - Wastewater from washout and cleanout of stucco, paint, from release oils, curing compounds and other construction materials;
    - Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and,

- Soaps or solvents used in vehicle and equipment washing.

✓ Requirements to use outlet structures that withdraw water from the surface.
✓ Procedures that include prioritizing areas of inspections based on local criteria based on size, proximity to an impaired water for sediment or turbidity, and potential to threaten water quality.
✓ Procedures to ensure that prior to allowing an operator to commence land disturbance, the delegated authority must perform an inspection to ensure all necessary erosion and sediment controls are in place and at the conclusion of the project, the delegated authority must inspect all projects to ensure that all graded areas have reached final stabilization and that all temporary control measures are removed (e.g., silt fence).
✓ Tracking the number of inspections for construction sites
✓ Requirements and procedures to document inspection and inspection findings. Requirements and procedures for follow-up actions (i.e., re-inspection, enforcement) to ensure compliance.
✓ Tracking follow-up and enforcement actions.

Post-Construction Stormwater Management in New Development and Redevelopment

Pursuant to Federal Regulations 40 CFR Section 122.34 (b) permittees "must develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects 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, that discharge into your small MS4. (Their) program must ensure that controls are in place that would prevent or minimize water quality impacts. (They) must:

(A) Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for your community;
(B) Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State, Tribal or local law; and
(C) Ensure adequate long-term operation and maintenance of BMPs.

Pursuant to State Requirements in 15A NCAC 02H .0153, to obtain a NPDES permit for stormwater management, an applicant shall, to the extent authorized by law, develop, implement, and enforce a stormwater management plan approved by the Commission that satisfies the six "minimum control measures" required by 40 Code of Federal Regulations § 122.34(b). Regulated entities may propose using any existing State or local program that relates to the minimum measures to meet, either in whole or in part, the requirements of the minimum measures.

To fulfill the post-construction minimum measure program requirement the permittees may use the Department's model ordinance, design its own post-construction practices that meet the Department's standards in 15A NCAC 02H .1000, or develop its own comprehensive watershed plan that is determined by the Department to meet the post-construction stormwater management measure required by 40 Code of Federal Regulations § 122.34(b)(5).

Under the proposed draft permit the permittee shall implement the BMPs in Part II, Section F, to the extent authorized by law, to meet the objectives of the post-construction minimum measure program.

The permittee shall meet the requirements of the post-construction program for construction projects that are performed by, or under contract for, the permittee. To meet this requirement, the permittee may either develop the necessary requirements for post-construction controls that will pertain to their own projects, or develop procedures to ensure that the permittee meets these requirements by complying with another entity's Stormwater Management Programs for post-construction. If the

permittee decides to rely on another program for compliance with these program areas for their own projects, they shall indicate in their Stormwater Management Program that the permittee will fully comply with the requirements of the second party's post-construction programs.

Pursuant to 15A NCAC 02H .1017(9), for areas draining to Nutrient Sensitive Waters, permittees, delegated programs, and regulated entities must use stormwater control measures (SCMs) that reduce nutrient loading to meet local program requirements, while still incorporating the stormwater controls required for the project's density level. Documentation shall be provided where it is not feasible to use stormwater control measures (SCMs) that reduce nutrient loading. In areas where the Department has approved a Nutrient Sensitive Water Urban Stormwater Management Program, the provisions of that program fulfill the nutrient loading reduction requirement.

The design volume of SCMs shall account for the runoff at build out from all surfaces draining to the system. Where streets "convey" stormwater, all SCM shall be sized to treat and control stormwater runoff from all surfaces draining to the SCM including streets, driveways, and other impervious surfaces.

To fulfill the post-construction minimum measure requirement for linear transportation projects, including private transportation projects constructed to North Carolina Department of Transportation standards that will be conveyed to the State or another public entity upon completion, a permittee, delegated program, or regulated entity may use the Stormwater Best Management Practices Toolbox developed by the North Carolina Department of Transportation.

Pollution Prevention/Good Housekeeping for Municipal Operations

Pursuant to Federal Regulations 40 CFR Section 122.34 (b) permittees "must develop and 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. Using training materials that are available from EPA, your State, Tribe, or other organizations, your program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance."

Pursuant to State Requirements in 15A NCAC 02H .0153, to obtain a NPDES permit for stormwater management, an applicant shall, to the extent authorized by law, develop, implement, and enforce a stormwater management plan approved by the Commission that satisfies the six "minimum control measures" required by 40 Code of Federal Regulations § 122.34(b). Regulated entities may propose using any existing State or local program that relates to the minimum measures to meet, either in whole or in part, the requirements of the minimum measures.

Under the proposed draft permit the permittee shall implement the BMPs in Part II, Section G to meet the objectives of the Pollution Prevention and Good Housekeeping Program.

Program to Monitor & Control Pollutants in Stormwater Discharges to Municipal Systems

Pursuant to Federal Regulations 40 CFR Section 122.26(d) permittees must implement a program to evaluate pollutants in storm water discharges to the permittee's MS4 from hazardous waste treatment, disposal, and recovery facilities, industrial facilities subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), and industrial facilities that the Permittee determines

are contributing or have a potential to contribute a substantial pollutant loading to the municipal storm sewer system.

Under the proposed draft permit the permittee shall implement the BMPs in Part II, Section H to meet the objectives of the this requirement.

Water Quality Assessment & Monitoring

Pursuant to Federal Regulations 40 CFR Section 122.26(d) permittees must implement a water quality assessment and monitoring plan.

Under the proposed draft permit the permittee shall implement the BMPs in Part II, Section I to meet the objectives of the this requirement.

Impaired Waters & Total Maximum Daily Load (TMDL)

Pursuant to Federal Regulations 40 CFR Section 122.34(c) as appropriate, more stringent terms and conditions may be included based on an approved TMDL.

For impaired waters the Permittee must evaluate strategies and tailor and/or expand BMPs within the scope of the six minimum measures to enhance water quality recovery strategies in the watershed(s) and describe the strategies and tailored and/or expanded BMPs in their annual reports.

Under the proposed draft permit the permittee shall implement the TMDL Plans and BMPs in Part II, Section J to meet the objectives of the TMDL requirements.

At any time during the effective dates of the permit, if a TMDL has been approved that does not assign a waste load allocation (WLA) for the pollutant of concern (POC) to the MS4, or if there was no WLA specified for the POC in the TMDL assigned to the MS4, in lieu of developing a plan within the permit Section J, within 24 months the Permittee shall evaluate strategies and tailor BMP's within the Permittee's MS4 service area and in the context of the scope of the six minimum permit measures to address the POC in the watershed(s) to which the TMDL applies, to the MEP and to the extent allowable by law.

Evaluation and Assessment

A key requirement in the stormwater MS4 rule is a report (40 CFR 122.34(g)(3)) that includes "the status of compliance with permit conditions, an assessment of the appropriateness of identified [control measures] and progress towards achieving identified measurable goals for each of the minimum control measures." This assessment is critical to the stormwater program framework which uses the iterative approach of implementing controls, conducting assessments, and designating refocused controls leading toward attainment of water quality standards. There are many components involved in evaluating program compliance, the appropriateness of best management practices, and progress towards achieving your identified measurable goals. Without assessing the effectiveness of the stormwater management program the local government will not know which parts of the program need to be modified to protect and/or improve water quality.

Pursuant to 40 CFR 122.34(g) Evaluation and Assessment, permittees "must evaluate program compliance, the appropriateness of your identified best management practices, and progress towards achieving your identified measurable goals."

Unless permittee is relying on another entity to satisfy their NPDES permit obligations under Sec. 122.35(a), they must submit annual reports to the NPDES permitting authority. The report must include:

(i) The status of compliance with permit conditions, an assessment of the appropriateness of your identified best management practices and progress towards achieving your identified measurable goals for each of the minimum control measures;
(ii) Results of information collected and analyzed, including monitoring data, if any, during the reporting period;
(iii) A summary of the storm water activities you plan to undertake during the next reporting cycle;
(iv) A change in any identified best management practices or measurable goals for any of the minimum control measures; and
(v) Notice that you are relying on another governmental entity to satisfy some of your permit obligations (if applicable).

The Division will monitor the progress of the stormwater programs implemented under each municipal permit to assure that appropriate progress is being made toward meeting the ultimate goals of the stormwater program.

The Division works closely with the permittees to assure a proper understanding of federal and state expectations and related local programs. The Division pays close attention to overall program progress, appropriateness of program development schedules and modifications in programs and program direction.

Annual Report

The permittee will submit reporting and monitoring information on an annual basis, in accordance with the deadline in Part IV.B of the permit. The annual report shall document:

- ✓ A summary of past year activities, including where available, specific quantities achieved and summaries of enforcement actions.
- ✓ A description of the effectiveness of each program component
- ✓ Planned activities and changes for the next reporting period, for each program component or activity.
- ✓ Discussion of program funding.

Reports submitted to satisfy other State Stormwater Reporting requirements satisfy the annual reporting requirements of this permit.

Posting the results on the permittee website of an approved assessment process, such as the one established by the Stormwater Association of North Carolina (SWANC), NC APWA and their partners as conducted by another local government, a third party, or a self-assessment, satisfy the annual reporting requirements of this permit.

In accordance with the final NPDES Electronic Reporting Rule (40 CFR 127), starting on December 21, 2020, MS4 annual reports must be submitted electronically. Electronic Reporting Rule information can be found on EPA's website: https://www.epa.gov/compliance/npdes-ereporting

Basis for Proposed Stormwater Management Programs

General

The conditions of the permits and the Permittee's Stormwater Management Plan (which are an enforceable part of the permits) have been developed to achieve water quality protection in accordance with the provisions of the Clean Water Act. These provisions mandate that municipal storm sewer system NPDES permits include requirements to:

- Effectively prohibit non-stormwater discharges into the storm sewer system; and
- Control the discharge of pollutants from the storm sewer system to the MEP.

The assessment of stormwater management alternatives in the proposed permit is based on the intent of the NPDES municipal program to control pollutants discharged through the storm sewer system of urbanized areas. The CWA, federal regulations and state permitting requirements recognized that control of stormwater flows from MS4s must be accomplished through techniques using source reduction and pollution prevention, often on a site specific basis. This necessitates that flexibility be allowed in the development of local programs so that local conditions, land uses, activities and existing programs are appropriately considered.

The draft permits propose that implementation of the Permittee's Stormwater Management Plan and best management practices along with appropriate review and modification of the Stormwater Management Plan will control pollutant discharges from the Permittee's MS4 in compliance with section 402(p) of the Clean Water Act. The permits do not address specific water quality based controls or effluent limitations for a number of reasons. First of all, the Clean Water Act and associated federal regulations do not require that these strict provisions be a part of municipal NPDES permits. In fact, the records from these federal actions indicate that in development of the NPDES stormwater permit requirements, it was recognized that MS4 permits would not be like other discharge permits and should be structured to allow flexibility for development of site-specific programs for stormwater management.

The Division feels that the most economically and environmentally feasible alternatives for stormwater management are Best Management Practices (BMPs). In the case of stormwater discharges from MS4s, this approach has been taken through the programs established in the Permittee's Stormwater Management Plan and implemented through various ordinances and programs. These ordinances and programs are established on a local level and reflect local priorities, principals, practices and authorities that will be most effective in managing stormwater discharges. In using this approach, the Division has recognized the provisions of the Clean Water Act, along with previous experiences which indicate that BMPs can effectively reduce pollutant discharges. It should be noted that federal regulations - 40 CFR Part 122.44(k)(2) - authorize the use of best management practices (BMPs) for pollutant reduction when the permitting agency finds that numeric limits are infeasible. The proposed permit is based on considerations for appropriate stormwater management practices in an urban setting and considerations as outlined in this section.

In developing the draft NPDES permit conditions, consideration has been given to the usefulness of engineered treatment alternatives for stormwater management. The Division recognizes that in some situations these methods may be the best alternatives available on a small scale. On a broad basis, however, these methods would not appear to be an answer to stormwater pollutant problems throughout the municipal area. The large number of discharge (outfall) locations associated with the municipal storm sewer system and with the intermittent high flow conditions associated with stormwater runoff do not allow efficient design or integration of end-of-pipe treatment methods on a

system scale. This leads to permit conditions in the form of comprehensive stormwater quality management programs implemented on a jurisdiction-wide basis to control sources of pollution to the storm sewer system.

Coverage

A wide range of land use activities occur in urban areas. These activities potentially discharge stormwater and pollutants associated with stormwater to the municipal storm sewer system. To effectively reduce the discharge of pollutants, the municipal stormwater management programs involve the development and implementation of comprehensive programs that address stormwater management and source reduction/pollution prevention for a variety of land use activities including: residential, commercial, industrial, institutional and construction areas. The draft permit proposes that the Permittee's stormwater management programs be implemented over the jurisdictional area rather than only in those areas where the Permittees own the storm sewer system. This requirement is based on the Division's interpretation of the intent of the Clean Water Act in addressing stormwater flows from urban areas, the emphasis of which is to reduce pollutant discharge from the storm sewer system to achieve water quality benefits in adjacent surface waters.

Limiting the NPDES permit and stormwater management programs to those areas of the storm sewer system under public ownership does not appropriately address the potential stormwater pollutant sources present in the municipal area. In municipal areas it would be impossible to attempt to obtain water quality benefits in receiving streams by addressing only those storm sewer system segments owned by the local governments. Excluding private areas would produce a fragmented stormwater management program that would not only be ineffective, but would also be difficult to administer on the local level. It is apparent that privately owned storm sewer systems collect and convey pollutants to surface waters either through interconnection with the MS4 or directly, regardless of the ownership of these systems.

At a minimum, the Permittees have authority over land use activities and pollutants that may be discharged in areas under their jurisdiction. Although they may not have ownership in these areas, the Permittees can use these legal authorities to control the pollutant contribution from these areas. The Permittee's stormwater management programs and the proposed permits allow flexibility for the Permittees to deal with stormwater problems, including those in private areas, according to the best alternatives available in any given situation. The permits do not direct the Permittees to obtain these more specific authorities, but allows flexibility for other control alternatives to be utilized to control stormwater runoff in the context of their authorities. It is anticipated that total program coverage may vary depending on the available authorities of the local entities.

Permit Conditions

In evaluating the stormwater management program for the Permittees and developing the draft permits, the Division has given consideration to the need for flexibility in total program coverage. This flexibility allows for the location, targeting and control of stormwater pollutant sources throughout the municipal areas and potentially surrounding areas as appropriate according to local authorities and programs. The ultimate condition of the permits is that pollutants discharged from the Permittee's MS4 must be reduced to the MEP. In order to meet this condition, the Permittees are required to develop and implement the provisions of their SWQMP that includes various components aimed at addressing specific needs and priorities of the Permittee's stormwater program. The Permittee's Stormwater Plan is an enforceable part of the draft permits and include components to address stormwater management through education and outreach programs; pollutant reduction construction sites; post-construction stormwater runoff controls; detection and removal of illicit connections; and

operation and maintenance of facilities as necessary. Additional provisions of the draft permits require that adequate and appropriate legal authorities and financial assurances be developed and maintained by the Permittees to administer the stormwater management programs, and that the Permittees continue to assess their programs.

The Administrative Record

The administrative record, including the permittee's application, Stormwater Management Plan, draft permit, fact sheet, public notice, comments received and additional information is available by writing to:

N. C. Department of Environment Quality
Division of Energy, Mineral, and Land Resources
Stormwater Program
1612 Mail Service Center
Raleigh, North Carolina 27699-1612

The above information is available for review and copying between the hours of 8:00 AM and 5:00 PM Monday through Friday at:

Archdale Building, 9th Floor
Division of Energy, Mineral, and Land Resources
Stormwater Program
512 North Salisbury Street
Raleigh, North Carolina

Copies will be provided at a charge of 10 cents per page.

State Contact

Additional information concerning the permit application and draft permit may be obtained at the above address or by contacting Robert Patterson at (919) 807-6369 or at Robert.Patterson@ncdenr.gov.

Proposed Schedule for Permit Issuance

Draft Permit Scheduled for Public Notice – **February 28, 2018**
Public Comment Period Closes – **March 30, 2018**
Permit Scheduled to be Issued – **April 16, 2018**

Procedure for the Formulation of Final Determinations

Comment Period

The Division of Energy, Mineral, and Land Resources proposes to issue an NPDES Stormwater Permit for the above described stormwater discharge subject to the outlined limitations, management practices, and special conditions. These determinations are tentative and are open to comment from the public. Interested persons are invited to submit written comments on the permit application or on the Division of Energy, Mineral, and Land Resources's proposed determinations to the following address:

N. C. Department of Environment Quality
Division of Energy, Mineral, and Land Resources
Stormwater Program
1612 Mail Service Center
Raleigh, North Carolina 27699-1612

All comments received within thirty days following the date of public notice will be considered in the formulation of final determinations with regard to this application.

Public Meeting

The Director of the Division of Energy, Mineral, and Land Resources may hold a public meeting if there is a significant degree of public interest in a proposed permit. Public notice of such a meeting will be circulated in newspapers in the geographic area of the discharge and to those on the Division of Energy, Mineral, and Land Resources's mailing list at least thirty days prior to the meeting.

Appeal Hearing

An applicant whose permit is denied, or is granted subject to conditions he deems unacceptable, shall have the right to a hearing before the Commission upon making written demand to the Office of Administrative Hearing within 30 days following issuance or denial of the permit.

Issuance of a Permit When no Hearing is Held

If no public meeting or appeal hearing is held, after review of the comments received, and if the Division of Energy, Mineral, and Land Resources's determinations are substantially unchanged, the permit will be issued and become effective immediately. This will be the final action of the Division of Energy, Mineral, and Land Resources.

If a public meeting or appeal hearing is not held, but there have been substantial changes, public notice of the Division of Energy, Mineral, and Land Resources's revised determinations will be made. Following a 30-day comment period, the permit will be issued and will become effective immediately. This will be the final action of the Division of Energy, Mineral, and Land Resources unless a public meeting or appeal is granted.