



**CITY OF BURLINGTON  
STORMWATER DIVISION**

**NPDES PERMIT NO: NCS000428**

# **NEW DEVELOPMENT PROGRAM**

**FOR COMPLIANCE WITH THE JORDAN LAKE RULES**

**DRAFT for EMC Approval**

*Prepared By:*

**Michael Layne, PE  
Field Operations Manager  
Water Resources Department  
City of Burlington**

**March 20, 2011**

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## BACKGROUND

In an effort to reduce chlorophyll a levels in B. Everett Jordan Lake, the NC Environmental Management Commission (EMC) approved the development of the Jordan Lake Nutrient Management Strategy in 2008. The strategy was reviewed by the NC General Assembly and approved for implementation in August, 2009. One of the approved tactics for reducing chlorophyll a levels was to reduce the amount of nitrogen and phosphorus that reaches the lake by restricting nutrient loading from new development and redevelopment projects within the lake's watershed. The City of Burlington falls within the Haw River watershed which is located within the Jordan Lake watershed and therefore is subject to the requirements of the Rules. This program focuses on obtaining the goals of the Jordan Lake Nutrient Management Strategy while striving to meet existing regulatory requirements related to new development and redevelopment, notably Phase II regulations and Water Supply Watershed regulations.

The City of Burlington's Water Resources Department - Stormwater Division is charged with the implementation of this program.

## PROPOSED ADOPTION AND TIMELINE

The City of Burlington will adhere to the implementation timeline requirements as outlined in 15A NCAC 02B .0265 and Session Law 2009-484 for adopting the new development regulations promulgated by the Jordan Lake legislation. The anticipated adoption date is August 21, 2012. The proposed New Development Ordinance is more restrictive on development than current Phase II Regulations, therefore this Ordinance will replace the existing Stormwater Ordinance that the City implements, which was based on Phase II Regulations. The City anticipates applying this Ordinance universally on development, including state and federal entities which are not subject to an individual Phase II NPDES Permit.

## STORMWATER ADMINISTRATOR

The City is required to appoint a Stormwater Administrator to implement the stormwater rules and regulations outlined in this program. This position requires a working knowledge of stormwater regulations and water quality protocols and programs. At a minimum, the person must be competent in the area and hold the necessary professional qualifications such as a licensed professional engineer,

registered NC professional surveyor, landscape architect, soil scientist, aquatic biologist, or NC Cooperative Extension Service certificate for approving stormwater management plans and completing BMP inspections.

The qualifications for the Stormwater Administrator can be found in [Appendix A](#).

## GOVERNING PERMITS, RULES, AND REGULATIONS

### *NCDENR ISSUED MS4 PERMIT*

The NC Department of Environment and Natural Resources (NCDENR) issues NPDES (National Pollutant Discharge Elimination System) permits to local governments which allows the flow of stormwater runoff from the lands within the local government's jurisdiction to those lands and waters outside of the jurisdiction. This permit is referred to as Municipal Separate Storm Sewer System (MS4) permit. The MS4 permit is renewed every five years and is the most effective means NCDENR utilizes for implementing non-point source regulations. Being individual permits, each MS4 permit is tailored to specifically meet the needs of each jurisdiction.

The City of Burlington's MS4 permit ([Appendix B](#)) was originally issued in July, 2005 with a 5 year renewal cycle. This permit requires the City to establish stormwater programs and policies that are designed to meet or exceed EPA's six minimum measures of Phase II stormwater programs (see *Phase II Regulations* below). In addition, the permit requires the City to create and implement programs for water bodies which are listed as impaired by NCDENR and have a Total Maximum Daily Load (TMDL) approved by EPA.

#### *Phase II Regulations*

The Environmental Protection Agency (EPA), under the direction of the Clean Water Act, developed six minimum measures that MS4 permit holders should implement in order to protect and restore water quality. The measures are as follows:

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Runoff Controls

5. Post-Construction Site Runoff Controls
6. Pollution Prevention and Good Housekeeping for Municipal Operations

The requirements of each measure are outlined in detail later in this document under the Water Quality Programs section.

### TMDLs

A Total Maximum Daily Load (TMDL) consists of an individualized study of a specific surface water and its associated watershed. Typically, the surface water has been included on the state's 303(d) list, a compiled list of surface waters in NC not meeting water quality standards, prior to initiation of the TMDL process. The purpose of the TMDL is to determine what characteristics of the watershed are promoting deviations from water quality standards. The TMDL then sets limits or numerical targets for the pollutant that the MS4 permit holder is responsible for achieving. This target is expressed in the form of a Waste Load Allocation (WLA). *Currently the City of Burlington does not have any surface waters within its jurisdiction that have an approved TMDL.*

## JORDAN LAKE NUTRIENT MANAGEMENT STRATEGY

B. Everett Jordan Lake is a 46,768 acre water supply reservoir and recreation facility near Cary, NC. There are three distinct watersheds that drain to Jordan Lake, including the Haw River Watershed which encompasses the City of Burlington. The lake has consistently experienced excessive chlorophyll a levels since its impoundment in 1973. To address this, NCDENR initiated a TMDL and subsequently rulemaking to develop a nutrient management strategy aimed at reducing the nutrients that promote high chlorophyll a levels, nitrogen and phosphorus. This strategy became commonly known as the "Jordan Lake Rules" or simply "the Rules" and consisted of 13 separate rules, each addressing a separate area of concern. The Rules, as approved by the EMC, were opposed by many local governments and thereby required the NC General Assembly to take action on the Rules. In June and August of 2009, two separate session laws were approved by the NC General Assembly representing a compromise from the Rules as originally approved. The rules, background and implementation schedules can be found at [www.jordanlake.org](http://www.jordanlake.org). The website includes the following list of rules and session laws that collectively represent the Jordan Lake Nutrient Management Strategy:

1. [15A NCAC 02B .0262 - Purpose and Scope](#)

2. [15A NCAC 02B .0263 - Definitions](#)
3. [15A NCAC 02B .0264 - Agriculture](#)
4. [15A NCAC 02B .0265 - Stormwater Management for New Development](#)
5. 15A NCAC 02B .0266 - Stormwater Management for Existing Development (Replaced by session laws.)
6. [15A NCAC 02B .0267 - Protection of Existing Riparian Buffers](#)
7. [15A NCAC 02B .0268 - Mitigation for Riparian Buffers](#)
8. [15A NCAC 02B .0269 - Riparian Buffer Mitigation Fees to NC EEP](#)
9. [15A NCAC 02B .0270 - Wastewater Discharge Requirements](#)
10. [15A NCAC 02B .0271 - Stormwater Requirements for State and Federal Entities](#)
11. [15A NCAC 02B .0272 - Fertilizer Management](#)
12. [15A NCAC 02B .0273 - Options for Offsetting Nutrient Loads](#)
13. [15A NCAC 02B .0311 - Cape Fear River Basin](#)
14. [Session Law 2009-216](#) signed into law June 30, 2009. (Includes revisions to Stormwater Management for Existing Development and changed one date affecting Wastewater Discharge Requirements.)
15. [Session Law 2009-484](#) signed into law Aug. 26, 2009. (Part II of this law revises three other rules, including Stormwater Management for New Development, Stormwater Requirements for State and Federal Entities and Protection of Existing Riparian Buffers.)

The Rules can be found in [Appendix C](#) and will apply to the both the corporate limits and extraterritorial jurisdiction. As of the development of this program, the City has implemented an Existing Riparian Buffer Protection Ordinance ([Appendix E](#)) in compliance with 15A NCAC 02B .0267, .0268, & .0269 and has submitted a Stage One Program ([Appendix F](#)) as required by Session Law 2009-216. The City will revise its Stormwater Ordinance in compliance with 15A NCAC 02B .0265 and Session Law 2009-484 within the timeline outlined in the Rules. The forms and processes that will be utilized for permitting and compliance can be found in the Post-Construction Administrative Manual ([Appendix G](#)). These forms include:

1. TRC Application (Not Included)
2. Environmental Review Certification
3. Structural Stormwater BMP Maintenance Agreement
4. Stormwater Permit Application
5. Stormwater Permit
6. As-built Built Certification
7. BMP Inspection Form

## GOVERNING CITY ORDINANCES FOR WATER QUALITY

The City has developed and enforces several ordinances aimed at protecting water quality. With exception to the Stormwater Ordinance, the ordinance that captures the requirements of the New Development Rule ([Appendix D](#)), these ordinances can be found in [Appendix E](#) and are summarized in the paragraphs below.

### *SOIL EROSION AND SEDIMENTATION CONTROL - CHAPTER 31.5*

The Soil Erosion and Sedimentation Control Ordinance applies to all land disturbing activities within both the City limits and the extraterritorial jurisdiction. The purpose of this program is to prevent sedimentation from leaving construction sites and thereby impacting water quality of receiving streams and lakes. This program is managed by the City's Engineering Department and requires plan review, site inspections and enforcement actions, when necessary. Currently, all sites disturbing greater than 1 acre are required to obtain an Erosion and Sedimentation Control Permit prior to commencing work.

### *WATER SUPPLY WATERSHED PROTECTION REGULATIONS - APPENDIX A, SECTION 32.2 (Q)*

The Water Supply Watershed Protection Regulations apply to a very limited amount of property subject to the City's jurisdictional powers. This property is located within the Lake Mackintosh watershed and applies for a distance of 1 mile from the surface water's normal pool or to the ridge line of the watershed. The regulations have two distinct density designations and development intensity requirements. The low density use regulations limit single family residential uses to 1 dwelling unit per 2 acres or a maximum of 6% built upon area for other uses. Meanwhile, a high density use option allows for 1.5 dwelling units per 1 acre or 24% built upon area is available if public water and sewer are utilized and engineered stormwater controls that treat the first 1" of runoff are implemented. Both designations require a 50' buffer for streams and a 100' buffer for lakes.

### *FLOOD DAMAGE PREVENTION ORDINANCE - APPENDIX B*



The Flood Damage Prevention Ordinance applies to all areas of special flood hazard within the City's jurisdiction. The purpose of the ordinance is to ensure development of flood prone areas is undertaken in a responsible and environmentally sensitive manner. For mapped streams, the ordinance restricts building within floodways and requires base flood elevation determinations. Residential and nonresidential structures are required to be constructed 2' above the base flood elevation, effectively the 100yr flood elevation.

Where streams are unmapped, the ordinance provides setbacks from stream centerlines based upon the size of the upstream drainage area. In addition, elevations of structures are determined by developing a reference elevation. The reference elevation is the overtopping elevation of a downstream culvert or roadbed to which the stream slope is applied to in order to transpose the elevation to the property. The finished floor must be 2' above the determined elevation.

The ordinance requires a development permit to be applied for and approved prior to construction.

### *STORMWATER ORDINANCE - APPENDIX D*

The Stormwater Ordinance (see Appendix D) applies to all land disturbing activities within both the City limits and the extraterritorial jurisdiction. The purpose of this program is to protect the water quality of surface waters located within the City. This program is managed by the City's Stormwater Division and requires plan review, on-site BMPs, site inspections and enforcement actions, when necessary. Detached single family and duplex residential development disturbing greater than 1 acre are required to obtain a Stormwater Permit prior to commencing land disturbing activities. All other sites, including multifamily sites, disturbing greater than 0.5 acres are required to obtain a Stormwater Permit prior to commencing land disturbing activities. The general requirements of the Stormwater Ordinance for new development are as follows:

1. 50' riparian buffer requirements (30' undisturbed and 20' managed) from mapped streams
2. Removal of at least 85% of total suspended solids (TSS) for the first 1" of runoff from new impervious cover (requires on-site BMP)
3. Releasing runoff from the property in the post-development state at a rate equal to the pre-development rate for the 10 yr-24 hr storm, or approximately a 5" rainfall event (requires on-site BMPs)
4. Reducing loading rates for nitrogen to 3.8 lbs/acre/yr (requires on-site BMPs or offset)\*
5. Reducing loading rates for phosphorus to 1.43 lbs/acre/yr (requires on-site BMPs or offset)\*
6. Funding a maintenance escrow account equivalent to 40% of BMP construction costs

7. Securing a performance bond equivalent to 125% of construction costs (bond may be reduced to 125% of landscaping/planting costs upon acceptance of BMP certification and as-builts)

*\*Loading rates will be calculated using Jordan/Falls Nutrient Load Accounting Tool*

The City will allow new development and redevelopment the opportunity to offset nutrient loading rates once certain onsite loading rates have been achieved. For detached single family and duplex residential property a loading rate of 6 lbs/acre/yr must be achieved prior to exercising the offset option. All other sites, including multifamily sites, must achieve a loading rate of 10 lbs/acre/yr prior to exercising the offset option.

The City has developed a Post-Construction Stormwater Administrative Manual ([Appendix G](#)) to guide developers through the permit approval and BMP certification and maintenance process. The manual includes flowchart and the following forms:

1. Stormwater Permit Application
2. Environmental Review Certification
3. Sample Permit
4. Operation and Maintenance Agreement
5. As-built Submission Form
6. BMP Certification Forms

In an effort to ensure BMPs are maintained in good working order, the City has developed a BMP Maintenance and Inspection Program ([Appendix H](#)). This program requires the City staff to consolidate all structural BMPs into a central database for record keeping purposes and requires property owners to submit annual inspection reports, completed by a qualified professional, to the City. City staff reviews the submitted annual reports and, as a compliance check, completes periodic inspections of each BMP once within every 5 yr cycle. Items identified as deficient are required to be repaired by the property owner. Should the property owner fail to complete the repair, the City may exercise its authority to use the escrow funds to make the repair. Should this occur, the City may take necessary legal action to recoup the expenditures from the property owner.

In addition to the new development and BMP maintenance requirements, the ordinance also requires existing illicit discharges and connections to be identified and abated.

### **EXISTING RIPARIAN BUFFER PROTECTION ORDINANCE - APPENDIX E**

The Existing Riparian Buffer Protection Ordinance, adopted November 16, 2010, applies to all mapped surface waters within both the City limits and the extraterritorial jurisdiction. In order for the ordinance to be enforceable, the surface water must be depicted on either the USGS Topographic Quadrangle Maps, USDA Soil Survey Maps, or a map approved by the EMC. To date the EMC has not approved a map for lands within the City's jurisdiction.

This ordinance was promulgated by the Jordan Lake Rules and is designed to maximize nutrient uptake along streams and creeks. This is accomplished by protecting a 50' strip of land adjacent to the surface water's bank. For streams and creeks, this equates to a protected corridor of 100' plus the width of the stream (bank to bank). Just as with the buffer requirements for new development, the buffer is divided into two zones. Zone 1 is a 30' undisturbed strip of land located adjacent to the stream and Zone 2 is a 20' managed strip of land adjacent to the undisturbed zone. Zone 2 has maintenance allowances including mowing and tree removal.

Another aspect of the ordinance is the diffuse flow requirement. This restricts the velocity of runoff to non-erosive flows prior to entering the buffer. Flows exceeding this standard should be reduced in order to allow the buffers optimal protection and efficiency.

## WATER QUALITY PROGRAMS

### PUBLIC EDUCATION AND OUTREACH

Environmental stewardship begins with obtaining a knowledge environmental concerns, issues, and developments. In an effort to educate as many citizens and business owners as possible, the City's Stormwater Division has joined forces with the Piedmont Triad Council of Government's Stormwater SMART program and the Piedmont Triad Water Quality Partnership (PTWQP). Both of these programs are dedicated to water quality education and outreach yet each has a unique approach to this end. The Stormwater SMART program focuses on targeted, small group settings while the PTWQP utilizes mass media to a great extent. Collectively, these programs are able to reach out to many schools, churches, local organizations, and citizens via the following methods:

1. Booths at Conferences
2. Classroom Presentations
3. Small Group Presentations

4. Newspaper Articles
5. Brochures
6. Television Commercials

The City supplements the efforts of these organizations by providing one-on-one contact with citizens, a stormwater hotline, (336) 222-5024 or <http://www.burlingtonnc.gov/cbc>, City Works articles and an informational website. Additionally, the City actively seeks other ways to participate and educate its citizens.

### *PUBLIC INVOLVEMENT AND PARTICIPATION*

The City recognizes the need to provide citizens with opportunities to engage in stormwater related activities. The City solicits public involvement and participation both independently and through coordination with Stormwater SMART and the PTWQP. The following activities are examples of activities the City undertakes to encourage public involvement and participation:

1. Public meetings for input on the City's stormwater program
2. Hazardous waste and paint collection day
3. Lake and stream clean-up event
4. Benthic macroinvertebrate identification training

### *ILLICIT DISCHARGE DETECTION AND ELIMINATION*

Illicit discharges and connections are potential locations for direct entry of pollutants into surface waters. The Stormwater Ordinance outlines regulations related to illicit discharge detection and elimination (IDDE). In order to meet the goals of the ordinance, the City of Burlington is in the process of enhancing the implementation of the City's IDDE program. These efforts include, but are not limited to:

1. Staff review and update of the existing Stormwater Map
2. Enhancement of existing wet lab to begin monthly water quality sampling
3. Dry weather outfall screening for IDDE program
4. Site visits to investigate illicit discharges reported by the general public
5. Correspondence with property owners in regards to the IDDE program and stormwater discharges



6. Municipal employee training programs to educate staff on IDDE program
7. Quick fact sheet developed for public education on illicit discharge prevention
8. Development of a watershed map for long term IDDE monitoring locations

### *CONSTRUCTION SITE RUNOFF CONTROLS*

The City of Burlington requires all land disturbing activity that exceeds 1 acre of disturbance to submit an approved S&EC Plan in an effort to comply with the Sediment and Pollution Control Act 1973. S&EC best management practices providing for total suspended solid and volume control during construction. Upon completion of the land-disturbing activity the post-construction site runoff controls are installed. The following are examples of activities undertaken by the S&EC program:

1. Review of new projects exceeding 1 acre which require a S&EC Plan
2. Site inspections by municipal staff of S&EC permitted activities
3. S&EC monitoring and reporting of municipal projects by City staff
4. Continuing education for municipal staff attended NCDENR S&EC Conference
5. Maintaining adequately trained S&EC inspectors on staff

### *POST-CONSTRUCTION SITE RUNOFF CONTROLS*

The City of Burlington regulates new development and redevelopment projects for both private and public entities, including state and federal projects. Projects begin with plan submittal and review of Stormwater Management Plan and are followed through to BMP certification. Prior to the acceptance of all permanent stormwater BMP's the City receives maintenance and access easements, operations and maintenance manuals, and final as-built paperwork. The stormwater division receives annual self-inspections of all accepted Post-Construction Site Runoff Controls and performs compliance inspections of these facilities a minimum of one time during the permit cycle. Municipal compliance inspections that result in maintenance items are monitored for completion of corrective actions. The City has the ability to pursue enforcement actions in the event of continued non-compliance with the post development stormwater ordinance. The following are examples of activities undertaken by the Stormwater Division in regards to post-construction:

1. Review of new projects required to obtain a SWMP
2. Monitoring of municipal project requiring NCG10000 stormwater inspections by municipal staff

3. Post development stormwater facility inspections conducted by municipal staff
4. Issuing routine maintenance requirements for BMPs under the post development stormwater ordinance
5. Review of annual reports submitted by BMP owners
6. Approving the construction of new BMPs
7. Maintenance and inspection of City owned BMPs

The BMP Maintenance and Inspection Program is included in [Appendix H](#).

### *POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS*

The City has dedicated stormwater personnel to administer the educational and monitoring of internal operations. The Stormwater Division provides a point of contact for all municipal housekeeping and stormwater related issues. The review of existing operations and existing SOP's for stormwater compliance are among many of the Good Housekeeping initiatives the City of Burlington has instituted. The review of municipal operations has included additional training and corrective action where necessary to provide increased stormwater compliance for the City. Some example Pollution Prevention and Housekeeping efforts include:

1. Household Waste Recycling Program with private contractor collection service
2. Used Oil Recycling program with private contractor Nobel Oil Service
3. No Illegal Dumping signage added as necessary
4. Salt storage facility under a regular inspection and maintenance program
5. Municipal employees trained in road salt application
6. Municipal employees trained in automobile maintenance pollution prevention
7. Municipal employees trained in general stormwater pollution prevention
8. Individual stormwater permits reviewed for compliance by municipal staff
9. Stormwater operation and maintenance inspections for municipal owned properties
10. Storm drain marker installation
11. Issuance of corrective action items to resolve deficiencies identified from municipal operation and maintenance inspections
12. Storm drains checked and cleaned of debris, if necessary, within the City's ETJ

## SUPPLEMENTAL APPENDICES

The following appendices include documents referenced in the New Development Program that may be modified over time to meet the changing regulatory, programmatic and cultural environments necessary to achieve water quality goals specific to the City of Burlington. With the exception of the paragraphs of the Stormwater Ordinance (Appendix D) specific to the Jordan Lake Rules, modifications to these documents will not require EMC approval.

APPENDIX A - STORMWATER ADMINISTRATOR QUALIFICATIONS



***STORMWATER ADMINISTRATOR QUALIFICATIONS***

The City of Burlington currently requires the position of Stormwater Administrator to be a licensed professional engineer in the state of North Carolina. All projects submitted for new development and redevelopment are approved under the direction of the Stormwater Administrator. Delegation of review due to workload by can be authorized by the Stormwater Administrator. Staff review will be done by a professional familiar with the Jordan Lake New Development Rules and hold at the minimum a North Carolina BMP Reviewer Certification. These delegated tasks will be subject to final review by the Stormwater Administrator.

Stormwater Administrator: Michael Layne, PE

Contact Information: PO Box 1358, Burlington, NC 27216  
1103 S. Mebane St. Burlington, NC 27215  
(336) 222-5140  
[stormwater@ci.burlington.nc.us](mailto:stormwater@ci.burlington.nc.us)  
[www.BurlingtonNC.gov/Stormwater](http://www.BurlingtonNC.gov/Stormwater)

Qualifications: Licensed Professional Engineer  
Stormwater BMP Reviewer Certification  
Stormwater BMP Inspection & Maintenance Certification  
Surface Water Identification Certification

APPENDIX B – MS4 PERMIT



**D-19**

North Carolina Department of Environment and Natural Resources  
Division of Water Quality

Beverly Eaves Perdue  
Governor

Coleen H. Sullins  
Director

Dee Freeman  
Secretary

November 7, 2011

City of Burlington  
Michael Layne PE, Field Operations Manager  
1103 Mebane Street  
Burlington, North Carolina 27216

Subject: NPDES Permit Number NCS000428  
City of Burlington

Dear Mr. Layne:

In accordance with your application for a stormwater discharge permit received on February 1, 2010, we are forwarding herewith the subject state - NPDES permit. This permit is issued pursuant to the requirements of North Carolina General Statute 143-215 .1 and the Memorandum of Agreement between North Carolina and the US Environmental Protection agency dated May 9, 1994 (or as subsequently amended).

If any parts contained in this permit are unacceptable to you, you have the right to an adjudicatory hearing upon written request within thirty (30) days following receipt of this letter. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, Post Office Drawer 27447, Raleigh, North Carolina 27611 -7447. Unless such demand is made, this decision shall be final and binding.

This permit does not affect the legal requirements to obtain other permits which may be required by the Division of Environmental Management or permits required by the Division of Land Resources, Coastal Area Management Act or any other State, Federal or Local governmental permit that may be required.

If you have any questions concerning this permit, please contact Mike Randall at telephone number 919-807-6474 or [mike.randall@ncdenr.gov](mailto:mike.randall@ncdenr.gov).

Sincerely,

for Coleen H. Sullins

cc: Mike Mitchell, EPA Region IV  
Stormwater and General Permit Unit Files  
DWQ Winston-Salem Regional Office

Wetlands and Stormwater Branch  
1617 Mail Service Center, Raleigh, North Carolina 27699-1617  
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604  
Phone: 919-807-6300 \ FAX: 919-807-6494 \ Customer Service: 1-877-623-6748  
Internet: [www.ncwaterquality.org](http://www.ncwaterquality.org)

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City of Burlington  
Michael Layne PE, Field Operations Manager  
1103 Mebane Street  
Burlington, North Carolina 27216



**STATE of NORTH CAROLINA  
DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES  
DIVISION of WATER QUALITY**

**PERMIT NO. NCS000428  
TO DISCHARGE STORMWATER UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended,

City of Burlington

is hereby authorized to discharge stormwater from their municipal separate storm sewer system located:

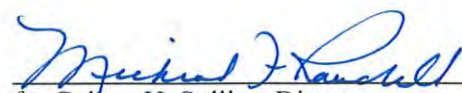
Within the City of Burlington corporate limits

to receiving waters, Back Creek (Little Creek), Bowden Branch, Gum Creek, Haw River, Little Alamance Creek, Service Creek, Staley Creek, and associated unnamed tributaries within the Cape Fear River Basin in accordance with the discharge limitations, monitoring requirements, and other conditions set forth in Parts I, II, III, IV, V, VI, VII and VIII hereof.

This permit shall become effective November 11, 2011.

This permit and the authorization to discharge shall expire at midnight on November 10, 2016.

Signed this day November 1, 2011.



for Coleen H. Sullins, Director

Division of Water Quality

By the Authority of the Environmental Management Commission

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**PART I PERMIT COVERAGE**

1. During the period beginning on the effective date of the permit and lasting until expiration, the City of Burlington is authorized to discharge stormwater from the municipal separate storm sewer system (MS4) to receiving waters, Back Creek (Little Creek), Bowden Branch, Gum Creek, Haw River, Little Alamance Creek, Service Creek, Staley Creek, and associated unnamed tributaries within the Cape Fear River Basin. Such discharge will be controlled, limited and monitored in accordance with the permittee's Stormwater Quality Management Program, herein referred to as the Stormwater Plan. The Stormwater Plan shall detail the permittee's stormwater management program for the five-year term of the stormwater permit including, for each measure identified in the permit, a narrative description of the program, a table that identifies each best management practice (BMP) used, the frequency of the BMP, the measurable goals for each BMP, the implementation schedule, funding and the responsible person or position for implementation.
2. All discharges authorized herein shall be managed in accordance with the terms and conditions of this permit. Any other point source discharge to surface waters of the state is prohibited unless it is an allowable non-stormwater discharge or is covered by another permit, authorization, or approval.
3. This permit does not relieve the permittee from responsibility for compliance with any other applicable federal, state, or local law, rule, standard, ordinance, order, judgment, or decree.
4. This permit covers activities associated with the discharge of stormwater from the MS4 owned and operated by the permittee within the corporate limits of the permittee. The permit applies to the corporate limits of the permittee, as well as areas that seek coverage under this permit through inter-local or other similar agreements with permittee. Agreements for coverage under this permit shall be approved by the Division of Water Quality, herein referred to as the Division.
5. The Division may deny or revoke coverage under this permit for separate entities and require independent permit coverage as deemed necessary. In addition, the permittee may petition the Division to revoke or deny coverage under this permit for specific entities.
6. All provisions contained and referenced in the Stormwater Plan along with all provisions and approved modifications of the Stormwater Plan are incorporated by reference and are enforceable parts of this permit.
7. The permit requires the proper implementation of the Stormwater Plan. The purpose of the Stormwater Plan is to establish the means by which the permittee will describe how it is in compliance with the permit. Compliance with the six minimum measures in 40 CFR § 122.34(b) and the additional provisions of Session Law 2006-246 constitute compliance with the requirements of this permit, the Clean Water Act and Session Law 2006-246 to reduce the discharge of pollutants from the MS4 to the maximum extent practicable, 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 maximum extent practicable.

8. The permit authorizes the point source discharge of stormwater runoff from the MS4. In addition, discharges of non-stormwater are also authorized through the MS4 of the permittee if such discharges are:
- (a) Permitted by, and in compliance with, another permit, authorization, or approval, including discharges of process and non-process wastewater, and stormwater associated with industrial activity; or
  - (b) Determined to be incidental non-stormwater flows that do not significantly impact water quality and may include:
    - water line and fire hydrant flushing;
    - landscape irrigation;
    - diverted stream flows;
    - rising groundwaters;
    - uncontaminated groundwater infiltration;
    - uncontaminated pumped groundwater;
    - discharges from uncontaminated potable water sources;
    - foundation drains;
    - air conditioning condensate (commercial/residential);
    - irrigation waters;
    - springs;
    - water from crawl space pumps;
    - footing drains;
    - lawn watering;
    - residential and charity car washing;
    - flows from riparian habitats and wetlands;
    - dechlorinated swimming pool discharges;
    - street wash water;
    - flows from fire fighting activities.

The Division may require that non-stormwater flows of this type be controlled by the permittee's Stormwater Plan.

9. Unless otherwise stated, full compliance with the requirements of the permit is expected upon the effective date of the permit.

**PART II FINAL LIMITATIONS AND CONTROLS FOR PERMITTED DISCHARGES**

**SECTION A: PROGRAM IMPLEMENTATION**

The permittee will implement, manage and oversee all provisions of its Stormwater Plan to control to the maximum extent practical the discharge of pollutants from its municipal storm sewer system associated with stormwater runoff and illicit discharges, including spills and illegal dumping. The overall program implementation, however, will be subject to, at a minimum, annual review by the Division to determine implementation status and progression toward meeting the pollutant control intent of the Stormwater Plan. This includes, but is not limited to, the following areas:

1. The permittee will develop and maintain adequate legal mechanism, such as regulations, ordinances, policies and procedures to implement all provisions of the Stormwater Plan. The Division will be notified of major modifications of these authorities, the reasons and justifications for these changes. The Division may comment on these modifications as deemed necessary to assure appropriate implementation of the Stormwater Plan.
2. The permittee must evaluate program compliance, the appropriateness of best management practices, and progress towards achieving measurable goals at least annually.
3. The permittees will maintain adequate funding and staffing to implement and manage the provisions of the Stormwater Plan and meet all requirements of this permit. The Stormwater Plan shall identify a specific position(s) responsible for the overall coordination implementation, and revision to the Plan. Responsibilities for all components of the Plan shall be documented and position(s) assignments provided.
4. The permittee will implement provisions of the Stormwater Plan and evaluate the performance and effectiveness of the program components at least annually. Results will be used by the permittee to modify the program components as necessary to accomplish the intent of the Stormwater Program. If the permittee implements the six minimum control measures and the discharges are determined to cause or contribute to non-attainment of an applicable water quality standard, to address the non-attainment, the permittee shall expand or better tailor its BMPs within the scope of the six minimum control measures.
5. The permittee is required to keep the Stormwater Plan up to date. Where the permittee determines that modifications are needed to address any procedural, protocol, or programmatic change, such changes shall be made as soon as practicable, but not later than 90 days, unless an extension is approved by the Division. Major modifications to the Stormwater Plan shall be submitted to the Director for approval. The permittee is required to make available its Stormwater Plan to the Division upon request. At a minimum, the permittee shall include ordinances, or other regulatory mechanisms or a list identifying the ordinances, or other regulatory mechanisms providing the legal authority necessary to implement and enforce the requirements of the permit. The Division may review reports submitted by the Permittee to assure that the Stormwater Plan is implemented appropriately to address the requirements of the permit. The Division may require modifications to any part of the Permittee's Stormwater Plan where deficiencies are found. If modifications to the Stormwater Plan are necessary then the Division will notify the permittee of the need to modify the Stormwater Plan to be consistent with the permit and will establish a deadline to finalize such changes to the program.

6. 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:

- a. The other entity, in fact, implements the control measure;
- b. The particular control measure, or component thereof, is at least as stringent as the corresponding NPDES permit requirement; and
- c. The other entity agrees to 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 neither the permittee nor the other entity fully performs the permit obligation.

7. The Permittee shall maintain, and make available to the Division upon request, written procedures for implementing the six minimum control measures. Written procedures shall identify specific action steps, schedules, resources and responsibilities for implementing the six minimum measures. Written procedures can be free standing, or where appropriate, integrated into the Storm Water Management Plan.

**SECTION B: PUBLIC EDUCATION AND OUTREACH**

**1. Objectives for Public Education and Outreach**

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.

**2. 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.

<b>BMP</b>	<b>Measurable Goals</b>
a. Goals and Objectives	Defined goals and objectives of the Local Public Education and Outreach Program based on community wide issues.
b. Describe target pollutants and/or stressors	The permittee shall maintain a description of the target pollutants and/or stressors and likely sources.
c. Describe target audiences	The permittee shall maintain a description of the target audiences likely to have significant storm water impacts and why they were selected.
d. Describe residential and industrial/commercial issues	The permittee shall describe issues, such as pollutants, likely sources of those pollutants, impacts, and the physical attributes of stormwater runoff, in their education/outreach program.
e. Informational Web Site	The permittee shall promote and maintain, an internet web site designed to convey the program's message.
f. Distribute public education materials to identified target audiences and user groups. For example, schools, homeowners, and/or businesses.	The permittee shall distribute stormwater educational material to appropriate target groups. Instead of developing its own materials, the permittee may rely on Public Education and Outreach materials supplied by the state, and/or other entities through a cooperative agreement, as available, when implementing its own program.
g. Maintain Hotline/Help line	The permittee shall promote and maintain a stormwater hotline/helpline for the purpose of public education and outreach.
h. Implement a 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.

**SECTION C: PUBLIC INVOLVEMENT AND PARTICIPATION**

**1. Objectives for Public Involvement and Participation**

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

**2. BMPs for Public Involvement and Participation**

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

<b>BMP</b>	<b>Measurable Goals</b>
a. Volunteer community involvement program	The permittee shall include and promote volunteer opportunities designed to promote ongoing citizen participation.
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.
c. Hotline/Help line	The permittee shall promote and maintain a hotline/helpline for the purpose of public involvement and participation.



**SECTION D: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)**

**1. 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 all major outfalls and the names and location of all waters of the United States that receive discharges from those outfalls;
- c. Prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges except as allowed in this permit and implement appropriate enforcement procedures and actions;
- d. Implement a plan to detect and address non-storm water discharges, including illegal dumping, to 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-storm water discharges or flows (i.e., illicit discharges) only if you identify them as significant contributors of pollutants to the MS4: water line 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 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).

**2. 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.

a. Maintain adequate legal authorities	The permittee shall annually review the permittee's IDDE ordinances or other regulatory mechanisms, or adopt any new ordinances or other regulatory mechanisms that provide the permittee with adequate legal authority to prohibit illicit connections and discharges and enforce the approved IDDE Program.
b. Maintain a Storm Sewer System Base Map of Major Outfalls.	The permittee shall maintain a current map showing major outfalls and receiving streams
c. Detect dry weather flows	The permittee shall develop and implement a program for conducting dry weather flow field observations in accordance with a written procedure for detecting and removing the sources of illicit discharges.

<p>d. Investigations into the source of all identified illicit discharges.</p>	<p>The permittee shall maintain, and <b>evaluate</b> annually written procedures for conducting investigations of identified illicit discharges.</p>
<p>e. Track investigations and document illicit discharges</p>	<p>The permittee shall track all investigations and document the date(s) the illicit discharge was observed; the results of the investigation; any follow-up of the investigation; and the date the investigation was closed.</p>
<p>f. Employee Training</p>	<p>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 to the storm sewer system.</p>
<p>g. Provide Public Education</p>	<p>The permittee shall inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.</p>
<p>h. Public reporting mechanism</p>	<p>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.</p>
<p>i. Enforcement</p>	<p>The permittee shall implement a mechanism to track the issuance of notices of violation and enforcement actions taken by the permittee. This mechanism shall include the ability to identify chronic violators for initiation of actions to reduce noncompliance.</p>

**SECTION E: CONSTRUCTION SITE RUNOFF CONTROLS**

1. The permittee has a delegated Sediment and Erosion Control Program. As such, the permittee is responsible for compliance with the Sediment Pollution Control Act of 1973 and Chapter 4 of Title 15A of the North Carolina Administrative Code. The delegated Sediment and Erosion Control Program effectively meets the maximum extent practicable (MEP) standard for Construction Site Runoff Controls by permitting and controlling development activities disturbing one or more acres of land surface and those activities less than one acre that are part of a larger common plan of development as authorized under the Sediment Pollution Control Act of 1973 and Chapter 4 of Title 15A of the North Carolina Administrative Code.
2. The NCG010000 permit, as administered by the State, 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.
3. The permittee shall provide and promote a means for the public to notify the appropriate authorities of observed erosion and sedimentation problems. The permittee may implement a plan promoting the existence of the NCDENR, Division of Land Resources "Stop Mud" hotline to meet the requirements of this paragraph.

**SECTION F: POST-CONSTRUCTION SITE RUNOFF CONTROLS**

**1. Objectives for Post-Construction Site Runoff Controls**

- a. Implement and enforce a program to address storm water runoff from new development 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, that discharge into the small MS4. The program shall ensure that controls are in place that would prevent or minimize water quality impacts.
- b. Implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for the community;
- c. Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects; and
- d. Ensure adequate long-term operation and maintenance of BMPs.

**2. 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 this permit and the post-construction ordinances adopted by the permittee as approved by the N.C. Division of Water Quality, the post-construction ordinances shall apply with regard to permit compliance.

<p>a. Adequate legal authorities</p>	<p>Maintain through an ordinance, or other regulatory mechanism, adequate legal authorities 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, equipment, practices, or operations related to stormwater discharges to determine whether there is compliance the Post-Construction Stormwater Management Program.</p>
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<p>b. Strategies which include BMPs appropriate for the MS4</p>	<p>The permittee shall adopt the DWQ BMP Design Manual or certify that the local BMP Design Manual meets or exceeds the requirements in the DWQ BMP Design Manual.</p>
<p>c. Plan reviews</p>	<p>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.</p>
<p>d. Inventory of projects with post-construction structural stormwater control measures</p>	<p>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.</p>
<p>e. Deed Restrictions and Protective Covenants</p>	<p>The permittee shall provide mechanisms such as recorded deed restrictions and protective covenants that ensure development activities will maintain the project consistent with approved plans.</p>
<p>f. Provide a mechanism to require long-term operation and maintenance of structural BMPs.</p>	<p>The permittee shall implement or require an operation and maintenance plan for the long-term operation of the structural BMPs required by the program. The operation and maintenance plan shall require the owner of each structural BMP to perform and maintain a record of annual inspections of each structural BMP. Annual inspection of permitted structural BMPs shall be performed by a qualified professional.</p>
<p>g. Inspections</p>	<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> <p>The permittee shall document and maintain records of inspection findings and enforcement actions and make them available for review by the permitting authority.</p>

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

**3. Post-construction Stormwater Runoff Controls for New Development**

- a. In order to fulfill the post-construction minimum measure program requirement the permittee may use the Department's model ordinance, design its own post-construction practices that meet or exceed the Department's Stormwater Best Management Practices Manual on scientific and engineering standards, 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) (1 July 2003 Edition).
- b. Approval of the post-construction site runoff control for new development projects to be built within the permittee's corporate limits by entities with eminent domain authority, shall be referred to the Division of Water Quality.
- c. 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 Phase II 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.
- d. Adoption of the Universal Stormwater Management Program (USMP) meets the requirement to develop and implement a Post-Construction Program by the local government adopting an ordinance that complies with the requirements of 15A NCAC 02H .1020 and the requirements of 15A NCAC 02B .0104(f). Adoption of the USMP may not satisfy water quality requirements associated with the protection of threatened or endangered species or those requirements associated with a Total Maximum Daily Load (TMDL).



- e. Post-construction Stormwater Runoff Controls for Development in the Jordan Watershed. Compliance with the stormwater management and water quality protection promulgated in Rule 15A NCAC 02B .0265 Stormwater Management for New Development, and Rule 15A NCAC 02B.0266 Stormwater Management for Existing Development effectively meets the Post-construction Stormwater Runoff control requirements within the Jordan Lake Water Supply. New development undertaken by a local government solely as a public road project shall be deemed compliant with the purposes of the Rules if it meets the riparian buffer protection requirements of Rules 15A NCAC 02B.0267 and .0268".

**SECTION G: POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS**

**1. Objective 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 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.

**2. 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.

<b>BMP</b>	<b>Measurable Goals</b>
a. Inventory of municipally owned or operated facilities	The permittee shall maintain, a current inventory of facilities and operations owned and operated by the permittee with the potential for generating polluted stormwater runoff.
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 municipal 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.
c. Spill Response Procedures	The permittee shall have written spill response procedures for municipally owned or operated facilities.
d. Streets, roads, and public parking lots maintenance	The permittee shall evaluate BMPs to reduce polluted stormwater runoff from municipally-owned streets, roads, and public parking lots within the corporate limits. Within 12 months, the permittee must update its Stormwater Plan to include the BMPs selected.
e. Streets, roads, and public parking lots maintenance	Within 24 months, the permittee must implement BMPs selected to reduce polluted stormwater runoff from municipally-owned streets, roads, and public parking lots. The permittee must evaluate the effectiveness of these BMPs based on cost and the estimated quantity of pollutants removed.
f. Operation and Maintenance (O&M) for municipally - owned or maintained catch basins and conveyance systems	Within 12 months, the permittee shall develop and implement an O&M program for the stormwater sewer system including catch basins and conveyance systems that it owns and maintains.

<b>BMP</b>	<b>Measurable Goals</b>
g. 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.
h. O&M for municipally-owned or maintained structural stormwater controls	<p>The permittee shall maintain and implement an O&amp;M program for municipally-owned or maintained structural stormwater controls.</p> <p>The O&amp;M program shall specify the frequency of inspections and routine maintenance requirements installed for compliance with the permittee's post-construction ordinance.</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>
i. 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.
j. Staff training	The permittee shall implement an employee training program for employees involved in implementing pollution prevention and good housekeeping practices.
k. Prevent or Minimize Contamination of Stormwater Runoff from all areas used for Vehicle and Equipment Cleaning	The permittee shall describe and implement measures to prevent or minimize contamination of the stormwater runoff from all areas used for vehicle and equipment cleaning.

**SECTION H: TOTAL MAXIMUM DAILY LOADS (TMDLs)**

**1. Objective**

- a. Determine whether a TMDL has been developed and approved or established by EPA for the receiving water(s) of the MS4 stormwater discharge and/or downstream waters into which the receiving water directly flows.
- b. Develop and implement BMPs to reduce non-point source pollutant loading to the maximum extent practicable (MEP) if the Permittee is or becomes subject to an approved TMDL with an approved Waste Load Allocation (WLAs) assigned to stormwater.
- c. If subject to an approved TMDL, the Permittee is in compliance with the TMDL if the permittee complies with the conditions of this permit, including developing and implementing appropriate BMPs to reduce non-point source pollutant loading to the maximum extent practicable (MEP). While improved water quality is the expected outcome, the NPDES MS4 permit obligation is to reduce non-point source pollutant loading to the maximum extent practicable (MEP). The MS4 Permittee is not responsible for attaining water quality standards (WQS) at the ambient monitoring stations. The Division expects attaining WQS will only be achieved through reduction from the MS4, along with reductions from other nonpoint source contributors.

**2. Best Management Practices (BMPs)**

At any time during the effective dates of this permit, if the Permittee is or becomes subject to an approved TMDL with an approved Waste Load Allocation (WLAs) assigned to stormwater, the Permittee shall implement the following BMPs to reduce non-point source pollutant loading to the maximum extent practicable (MEP):

<b>BMP</b>	<b>Measurable Goals</b>
a. Identify, describe and map watershed, outfalls, and streams	Within 12 months the Permittee shall prepare a plan that: <ul style="list-style-type: none"> <li>• Identifies the watershed(s) subject to an approved TMDL with an approved Waste Load Allocation (WLAs) assigned to stormwater,</li> <li>• Includes a description of the watershed(s),</li> <li>• Includes a map of watershed(s) showing streams &amp; outfalls</li> <li>• Identifies the locations of currently known major outfalls within its corporate limits with the potential of contributing to the cause(s) of the impairment to the impaired segments, to their tributaries, and to segments and tributaries within the watershed contributing to the impaired segments and</li> <li>• Includes a schedule to discover and locate other major outfalls within its corporate limits that may be contributing to the cause of the impairment to the impaired stream segments, to their tributaries, and to segments and tributaries within the watershed contributing to the impaired segments.</li> </ul>
b. Existing measures	Within 24 months the Permittee's plan : <ul style="list-style-type: none"> <li>• Shall describe existing measures being implemented by the Permittee to enhance water quality in the watershed to which the TMDL applies: and</li> <li>• Provide an explanation as to how those measures are designed to enhance water quality.</li> </ul>

<b>BMP</b>	<b>Measurable Goals</b>
c. Assessment of available monitoring data	Within 24 months the Permittee's plan shall include an assessment of available monitoring data. Where long-term data is available, this assessment should include an analysis of the data to show trends.
d. Monitoring Plan	Within 36 months the Permittee shall develop and submit to the Division a Monitoring Plan for each pollutant of concern or cause of impairment as specified in the TMDL. The Permittee shall maintain and implement the Monitoring Plan as additional outfalls are identified and as accumulating data may suggest. Following any review and comment by the Division the Permittee shall incorporate any necessary changes to monitoring plan and initiate the plan within 6 months. Modifications to the monitoring plan shall be approved by the Division. Upon request, the requirement to develop a Monitoring Plan may be waived by the Division if the existing and proposed measures are determined to be adequate to enhance water quality and reduce non-point source pollutant loading to the maximum extent practicable (MEP).
e. Additional Measures	Within 36 months the Permittee's plan: <ul style="list-style-type: none"> <li>• Shall describe additional measures to be implemented by the Permittee to enhance water quality in the watershed to which the TMDL applies; and</li> <li>• Provide an explanation as to how those measures are designed to enhance water quality.</li> </ul>
f. Implementation Plan	Within 48 months the Permittee's plan shall: <ul style="list-style-type: none"> <li>• Describe the measures to be implemented within the remainder of the permit term to enhance water quality in the watershed to which the TMDL applies and</li> <li>• Identify a schedule for completing the activities.</li> </ul>
g. Incremental Success	The Permittee's plan must outline ways to track and report successes designed to reduce non-point source pollutant loading to MEP. Successes could include increased inspections, expanded and/or tailored BMPs within the scope of the six minimum measures, structural and non-structural BMP installed and/or implemented, including retrofits, and strategies developed and implemented for development and redevelopment that include green infrastructure and LID practices.
h. Reporting	The permittee shall conduct an annual assessment of the program to enhance water quality in the watershed to which the TMDL applies and submit a report of the assessment to the Division. Any monitoring data and information generated from the previous year are to be submitted with each annual report.

**3. If no storm water waste load allocation is specified in the TMDL**

If there was no storm water waste load allocation in the TMDL, in lieu of developing a Water Quality Recovery Plan, the permittee shall 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) to which the TMDL applies. The permittee shall describe the strategies and tailored and/or expanded BMPs in their Stormwater Management Plan and annual reports.

**4. Information regarding North Carolina TMDLs**

Information regarding North Carolina TMDLs is available at:

<http://portal.ncdenr.org/web/wq/ps/mtu/tmdl/tmdls>

### **PART III PROGRAM ASSESSMENT**

The Permittee's annual reporting and monitoring activities in support of this permit will be used to document and indicate progress in implementation, and evaluate the effectiveness and results of the Stormwater Plan and individual components of the program. The Division may request additional reporting and monitoring information as necessary to evaluate the progress and results of the Permittee's Stormwater Plan.

1. Implementation of the Stormwater Plan will include documentation of all program components that are being undertaken including, but not limited to, inspections, maintenance activities, educational programs, implementation of BMPs, enforcement actions, and other stormwater activities. Documentation will be kept on-file by the permittee for a period of five years and made available to the Director or his authorized representative upon request.
2. The permittee's Stormwater Plan will be reviewed and updated as necessary, but at least on an annual basis to identify modifications and improvements needed to maximize Stormwater Plan effectiveness to the maximum extent practicable. The permittee shall develop and implement a plan and schedule to address the identified modifications and improvements. The permittee must submit annual reports to the Department within twelve months from the effective date of this permit. Subsequent annual reports must be submitted every twelve months from the scheduled date of the first submittal. Annual reports that include appropriate information to accurately describe the progress, status, and results of the permittee's Stormwater Plan and will include, but is not limited to, the following components:
  - a. The permittee will give a detailed description of the status of implementation of the Stormwater Plan as a whole. This will include information on development and implementation of each major component of the Stormwater Plan for the past year and schedules and plans for the year following each report.
  - b. The permittee will adequately describe and justify any proposed changes to the Stormwater Plan. This will include descriptions and supporting information for the proposed changes and how these changes will impact the Stormwater Plan (results, effectiveness, implementation schedule, etc.).
  - c. The permittee will document any necessary changes to programs or practices for assessment of management measures implemented through the Stormwater Plan.
  - d. The permittee will include a summary of data accumulated as part of the Stormwater Plan throughout the year along with an assessment of what the data indicates in light of the Stormwater Plan.
  - e. The annual report shall include an assessment of compliance with the permit, information on the establishment of appropriate legal authorities, inspections, and enforcement actions .



3. The Director may notify the permittee when the Stormwater Plan does not meet one or more of the requirements of the permit. Within 90 days of such notice, the permittee will submit a plan and time schedule to the Director for modifying the Stormwater Plan to meet the requirements. The Director may approve the plan, approve a plan with modifications, or reject the proposed plan. The permittee will provide certification in writing in accordance with Part IV, Paragraph 7(c) to the Director that the changes have been made. Nothing in this paragraph shall be construed to limit the Director's ability to conduct enforcement actions for violations of this permit.
4. The Division may request additional reporting information as necessary to evaluate the progress and results of the permittee's Stormwater Plan.

## **PART IV REPORTING AND RECORD KEEPING REQUIREMENTS**

### **1. Records**

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and copies of all reports required by this permit, for a period of at least 5 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director.

### **2. Annual Reporting**

Completion and submittal of the reporting information contained within the online BIMS Stormwater Management Program Assessment (SMPA) meets the annual reporting requirements of this permit.

### **3. Twenty-four Hour Reporting**

The permittee shall report to the Division any noncompliance that may constitute an imminent threat to health or the environment. Any information shall be provided orally within 24 hours from the time the permittee became aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances.

The written submission shall contain a description of the noncompliance, and its causes, the period of noncompliance and if the noncompliance has not been corrected, the anticipated time compliance is expected to continue, and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

### **4. Additional Reporting**

In order to properly characterize the permittee's MS4 discharges or to assess compliance with this permit, the Director may request reporting information on a more frequent basis as deemed necessary either for specific portions of the permittee's Stormwater Plan, or for the entire Program.

### **5. Other Information**

Where the permittee becomes aware that it failed to submit any relevant facts or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

### **6. Planned Changes**

The permittee shall give advance notice to the Director of any planned modifications to the Stormwater Plan. Notice of any changes is required at least through the annual report. Notice shall be given as soon as possible when deleting a provision of the approved Stormwater Plan; or the modification could significantly change the timeframe for implementation of parts of the program or negatively influence the effectiveness of the approved program.

**7. Report Submittals**

- a. All reports required herein, not submitted electronically shall be submitted to the following address:

Department of Environment and Natural Resources  
Division of Water Quality  
Stormwater Permitting Unit  
1617 Mail Service Center  
Raleigh, North Carolina 27699-1617

- b. All applications, reports, or information, other than those submitted electronically, shall be signed by a principal executive officer, ranking elected official or duly authorized representative. A person is a duly authorized representative only if:
- i. The authorization is made in writing by a principal executive officer or ranking elected official;
  - ii. The authorization specified either an individual or a position having responsibility for the overall operation of a regulated facility or activity or an individual or position having overall responsibility for environmental/stormwater matters; and
  - iii. The written authorization is submitted to the Director.
- c. Any person signing a document under paragraphs (a) or (b) of this section shall make the following certification:

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

**PART V STANDARD CONDITIONS**

**SECTION A: COMPLIANCE AND LIABILITY**

**1. Duty to Comply**

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of permit coverage upon renewal application.

- a. The permittee shall comply with standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
- b. The Clean Water Act provides that any person who violates a permit condition is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. §2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. §3701 note) (currently \$37,500 per day for each violation). Any person who negligently violates any permit condition is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment for not more than 1 year, or both. Any person who knowingly violates permit conditions is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both. Also, any person who violates a permit condition may be assessed an administrative penalty not to exceed \$16,000 per violation with the maximum amount not to exceed \$177,500. [Ref: Section 309 of the Federal Act 33 USC 1319 and 40 CFR 122.41(a).]
- c. Under state law, a daily civil penalty of not more than twenty-five thousand dollars (\$25,000) per violation may be assessed against any person who violates or fails to act in accordance with the terms, conditions, or requirements of a permit. [Ref: North Carolina General Statutes 143-215.6A]
- d. Any person may be assessed an administrative penalty by the Administrator for violating sections 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Pursuant to 40 CFR Part 19 and the Act, administrative penalties for Class I violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. §2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. §3701 note) (currently \$11,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$27,500). Pursuant to 40 CFR Part 19 and the Act, penalties for Class II violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. §2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. §3701 note) (currently \$11,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$137,500).

**2. Duty to Mitigate**

The permittee shall take reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

**3. Civil and Criminal Liability**

Nothing in this permit shall be construed to relieve the permittee from any responsibilities, liabilities, or penalties for noncompliance pursuant to NCGS 143-215.3, 143-215.6A, 143-215.6B, 143-215.6C or Section 309 of the Federal Act, 33 USC 1319. Furthermore, the permittee is responsible for consequential damages, such as fish kills, even though the responsibility for effective compliance may be temporarily suspended.

**4. Oil and Hazardous Substance Liability**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under NCGS 143-215.75 et seq. or Section 311 of the Federal Act, 33 USC 1321. Furthermore, the permittee is responsible for consequential damages, such as fish kills, even though the responsibility for effective compliance may be temporarily suspended.

**5. Property Rights**

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

**6. Severability**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

**7. Duty to Provide Information**

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the coverage issued pursuant to this permit or to determine compliance with this permit. The permittee shall also furnish to the Director upon request, copies of records required by this permit.

**8. Penalties for Tampering**

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

**9. Penalties for Falsification of Reports**

The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both.

**10. Permit Actions**

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

**11. Duty to Reapply**

The permittee is not authorized to discharge after the expiration date. In order to receive automatic authorization to discharge beyond the expiration date, the permittee shall submit a permit renewal application and fees as are required no later than 180 days prior to the expiration date of this permit. Any permittee that has not requested renewal at least 180 days prior to expiration, or any discharge that does not have a permit after the expiration and has not requested renewal at least 180 days prior to expiration, will be subject to enforcement procedures as provided in NCGS 143-215.6 and 33 USC 1251 et seq. The renewal application shall include a review of the Stormwater Program development and implementation over the life of this permit, the status of programs and a description of further program development to be implemented over the future permitting time period.

**SECTION B: OPERATION AND MAINTENANCE of POLLUTION CONTROLS**

**1. Proper Operation and Maintenance**

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are owned and/or operated by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures, when necessary. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

**2. Need to Halt or Reduce not a Defense**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the condition of this permit.



## **SECTION C: INSPECTION, ENTRY AND AVAILABILITY OF REPORTS**

### **1. Inspection and Entry**

The permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Director), or in the case of a facility which discharges through a municipal separate storm sewer system, an authorized representative of a municipal operator or the separate storm sewer system receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records shall be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records of the permittee that shall be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations of the permittee regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location under the control of the permittee.

### **2. Availability of Reports**

Except for data determined to be confidential under NCGS 143-215.3(a)(2) or Section 308 of the Federal Act, 33 USC 1318, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Water Quality. As required by the Act, analytical data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in NCGS 143-215.6B or in Section 309 of the Federal Act.

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**PART VI      LIMITATIONS REOPENER**

The issuance of this permit does not prohibit the Director from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit as allowed by the laws, rules, and regulations contained in Title 40, Code of Federal Regulations, Parts 122 and 123; Title 15A of the North Carolina Administrative Code, Subchapter 2H .0100; and North Carolina General Statute 143-215.1 et. al.

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**PART VII ADMINISTERING AND COMPLIANCE MONITORING FEE REQUIREMENTS**

The permittee shall pay the administering and compliance monitoring fee within 30 (thirty) days after being billed by the Division. Failure to pay the fee in a timely manner in accordance with 15A NCAC 2H .0105(b)(4) may cause this Division to initiate action to revoke the permit.

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## PART VIII DEFINITIONS

1. Act

See Clean Water Act.

2. Best Management Practice (BMP)

Measures or practices used to reduce the amount of pollution entering surface waters. BMPs can be structural or non-structural and may take the form of a process, activity, physical structure or planning (see non-structural BMP).

3. Built-upon Area

That portion of a development project that is covered by impervious or partially impervious surface including, but not limited to, buildings; pavement and gravel areas such as roads, parking lots, and paths; and recreation facilities such as tennis courts. "Built-upon area" does not include a wooden slatted deck, the water area of a swimming pool, or pervious or partially pervious paving material to the extent that the paving material absorbs water or allows water to infiltrate through the paving material.

4. Clean Water Act

The Federal Water Pollution Control Act, also known as the Clean Water Act (CWA), as amended, 33 USC 1251, et. seq.

5. Common Plan of Development

A construction or land disturbing activity is part of a larger common plan of development if it is completed in one or more of the following ways:

- In separate stages
- In separate phases
- In combination with other construction activities

It is identified by the documentation (including but not limited to a sign, public notice or hearing, sales pitch, advertisement, loan application, drawing, plats, blueprints, marketing plans, contracts, permit application, zoning request, or computer design) or physical demarcation (including but not limited to boundary signs, lot stakes, or surveyor markings) indicating that construction activities may occur on a specific plot.

It can include one operator or many operators.

6. Department

Department means the North Carolina Department of Environment and Natural Resources

7. Division (DWQ)

The Division of Water Quality, Department of Environment and Natural Resources.

8. Director

The Director of the Division of Water Quality, the permit issuing authority.

9. EMC

The North Carolina Environmental Management Commission.

10. Illicit Discharge

Any discharge to a MS4 that is not composed entirely of stormwater except discharges pursuant to an NPDES permit (other than the NPDES MS4 permit), allowable non-stormwater discharges, and discharges resulting from fire-fighting activities.

11. Industrial Activity

For the purposes of this permit, industrial activities shall mean all industrial activities as defined in 40 CFR 122.26.

12. Large or Medium Municipal Separate Storm Sewer System

All municipal separate storm sewers that are either:

- (a) Located in an incorporated place with a population of 100,000 or more as determined by the Decennial Census by the Bureau of Census; or
- (b) Located in the counties with unincorporated urbanized populations of 100,000 or more, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or
- (c) Owned or operated by a municipality other than those described in paragraph (a) or (b) and that are designated by the Director as part of the large or medium separate storm sewer system.

13. Major municipal separate storm sewer outfall (or "major outfall")

Major municipal separate storm sewer outfall (or "major outfall") means a municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive storm water from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more).



14. Municipal Separate Storm Sewer System (MS4)

Pursuant to 40 CFR 122.26(b)(8) means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

- (a) Owned or operated by the United States, a State, city, town, county, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the Clean Water Act (CWA) that discharges to waters of the United States or waters of the State.
- (b) Designed or used for collecting or conveying stormwater;
- (c) Which is not a combined sewer; and
- (d) Which is not part of a Publicly Owned Treatment Works (POTW) as defined in 40 CFR 122.2

15. Non-stormwater Discharge Categories

The following are categories of non-stormwater discharges that the permittee shall address if it identifies them as significant contributors of pollutants to the storm sewer system: water line flushing, landscape irrigation, diverted stream flows, rising groundwater, uncontaminated groundwater infiltration, [as defined in 40 CFR 35.2005(20)], uncontaminated pumped groundwater, 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 definition of illicit discharge and only need to be addressed where they are identified as significant sources of pollutants to waters of the United States).

16. Non-structural BMP

Non-structural BMPs are preventive actions that involve management and source controls such as: (1) Policies and ordinances that provide requirements and standards to direct growth to identified areas, protect sensitive areas such as wetlands and riparian areas, maintain and/or increase open space, provide buffers along sensitive water bodies, minimize impervious surfaces, and/or minimize disturbance of soils and vegetation; (2) policies or ordinances that encourage infill development in higher density urban areas, and areas with existing storm sewer infrastructure; (3) education programs for developers and the public about minimizing water quality impacts; (4) other measures such as minimizing the percentage of impervious area after development, use of measures to minimize directly connected impervious areas, and source control measures often thought of as good housekeeping, preventive maintenance and spill prevention.

17. Outfall

Outfall means a point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States.

18. Permittee

The owner or operator issued this permit.

19. Point Source Discharge of Stormwater

Any discernible, confined and discrete conveyance including, but not specifically limited to, any pipe, ditch, channel, tunnel, conduit, well, or discrete fissure from which stormwater is or may be discharged to waters of the state.

20. Redevelopment

Means any rebuilding activity unless that rebuilding activity:

- (a) Results in no net increase in built-upon area, and
- (b) Provides equal or greater stormwater control than the previous development.

21. Representative Storm Event

A storm event that measures greater than 0.1 inches of rainfall and that is preceded by at least 72 hours in which no storm event measuring greater than 0.1 inches has occurred. A single storm event may contain up to 10 consecutive hours of no precipitation. For example, if it rains for 2 hours without producing any collectable discharge, and then stops, a sample may be collected if a rain producing a discharge begins again within the next 10 hours.

22. Storm Sewer System

Is a conveyance or system of conveyances which are designed or used to collect or convey stormwater runoff that is not part of a combined sewer system or treatment works. This can include, but is not limited to, streets, catch basins, curbs, gutters, ditches, man-made channels or storm drains that convey stormwater runoff.

23. Stormwater Associated with Industrial Activity

The discharge from any point source which is used for collecting and conveying stormwater and which is directly related to manufacturing, processing or raw material storage areas at an industrial site. Facilities considered to be engaged in "industrial activities" include those activities defined in 40 CFR 122.26(b)(14). The term does not include discharges from facilities or activities excluded from the NPDES program.

24. Stormwater Management Program (SWMP)

The term Stormwater Management Program (SWMP) refers to the stormwater management program that is required by the Phase I and Phase II regulations to be developed by MS4 permittees.

25. Stormwater Plan

The Stormwater Plan is the written plan that is used to describe the various control measures and activities the permittee will undertake to implement the stormwater management program. The Stormwater Plan is a consolidation of all of the permittee's relevant ordinances or other regulatory requirements, the description of all programs and procedures (including standard forms to be used for reports and inspections) that will be implemented and enforced to comply with the permit and to document the selection, design, and installation of all stormwater control measures.

26. Stormwater Runoff

The flow of water which results from precipitation and which occurs immediately following rainfall or as a result of snowmelt.

27. Total Maximum Daily Load (TMDL)

A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL is a detailed water quality assessment that provides the scientific foundation for an implementation plan. The implementation plan outlines the steps necessary to reduce pollutant loads in a certain body of water to restore and maintain water quality standards in all seasons. The Clean Water Act, Section 303, establishes the water quality standards and TMDL programs.

*APPENDIX C - JORDAN LAKE RULES*

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**15A NCAC 02B .0262 JORDAN WATER SUPPLY NUTRIENT STRATEGY: PURPOSE AND SCOPE**

**PURPOSE.** The purpose of this Rule, 15A NCAC 02B .0263 through .0273 and .0311(p) shall be to restore and maintain nutrient-related water quality standards in B. Everett Jordan Reservoir; protect its classified uses as set out in 15A NCAC 02B .0216, including use as a source of water supply for drinking water, culinary and food processing purposes; and maintain or enhance protections currently implemented by local governments in existing water supply watersheds. These Rules, as further enumerated in Item (3) of this Rule, together shall constitute the Jordan water supply nutrient strategy, or Jordan nutrient strategy. Additional provisions of this Rule include establishing the geographic and regulatory scope of the Jordan nutrient strategy, defining its relationship to existing water quality regulations, setting specific nutrient mass load goals for Jordan Reservoir, providing for the use of adaptive management to restore Jordan Reservoir, and citing general enforcement authorities. The following provisions further establish the framework of the Jordan water supply nutrient strategy:

- (1) **SCOPE.** B. Everett Jordan Reservoir is hereafter referred to as Jordan Reservoir. All lands and waters draining to Jordan Reservoir are hereafter referred to as the Jordan watershed. Jordan Reservoir and all waters draining to it have been supplementally classified as Nutrient Sensitive Waters (NSW) pursuant to 15A NCAC 02B .0101(e)(3) and 15A NCAC 02B .0223. Water supply waters designated WS-II, WS-III, and WS-IV within the Jordan watershed shall retain their classifications. The remaining waters in the Jordan watershed shall be classified WS-V. The requirements of all of these water supply classifications shall be retained and applied except as specifically noted in Item (6) of this Rule and elsewhere within the Jordan nutrient strategy. Pursuant to G.S. 143-214.5(b), the entire Jordan watershed shall be designated a critical water supply watershed and through the Jordan nutrient strategy given additional, more stringent requirements than the state minimum water supply watershed management requirements. These requirements supplement the water quality standards applicable to Class C waters, as described in Rule .0211 of this Section, which apply throughout the Jordan watershed.
- (2) **STRATEGY GOAL.** Pursuant to G.S. 143-215.1(c5), 143-215.8B, and 143B-282(c) and (d) of the Clean Water Responsibility Act of 1997, the Environmental Management Commission establishes the goal of reducing the average annual loads of nitrogen and phosphorus delivered to Jordan Reservoir from all point and nonpoint sources of these nutrients located within its watershed, as specified in Item (5) of this Rule, and provides for adaptive management of the strategy and goal, as specified in Item (8) of this Rule.
- (3) **RULES ENUMERATED.** The second rule in the following list provides definitions for terms that are used in more than one rule of the Jordan nutrient strategy. An individual rule may contain additional definitions that are specific to that rule. The rules of the Jordan nutrient strategy shall be titled as follows:
  - (a) Rule .0262 Purpose and Scope;
  - (b) Rule .0263 Definitions;
  - (c) Rule .0264 Agriculture;
  - (d) Rule .0265 Stormwater Management for New Development;
  - (e) Rule .0266 Stormwater Management for Existing Development;
  - (f) Rule .0267 Protection of Existing Riparian Buffers;
  - (g) Rule .0268 Mitigation for Riparian Buffers;
  - (h) Rule .0269 Riparian Buffer Mitigation Fees to the NC Ecosystem Enhancement Program;
  - (i) Rule .0270 Wastewater Discharge Requirements;
  - (j) Rule .0271 Stormwater Requirements for State and Federal Entities;
  - (k) Rule .0272 Fertilizer Management;
  - (l) Rule .0273 Options for Offsetting Nutrient Loads; and
  - (m) Rule .0311 Cape Fear River Basin.
- (4) **RESERVOIR ARMS AND SUBWATERSHEDS.** For the purpose of the Jordan nutrient strategy, Jordan Reservoir is divided into three arms and the Jordan watershed is divided into three tributary subwatersheds as follows:
  - (a) The Upper New Hope arm of the reservoir, identified by index numbers 16-41-1-(14), 16-41-2-(9.5), and 16-41-(0.5) in the Schedule of Classifications for the Cape Fear River Basin, 15A NCAC 02B .0311, encompasses the upper end of the reservoir upstream of SR 1008, and its subwatershed encompasses all lands and waters draining into it.

- (b) The Lower New Hope arm of the reservoir, identified by index number 16-41-(3.5) in the Schedule of Classifications for the Cape Fear River Basin, 15A NCAC 02B .0311, lies downstream of SR 1008 and upstream of the Jordan Lake Dam, excluding the Haw River arm of the reservoir, and its subwatershed encompasses all lands and waters draining into the Lower New Hope arm of the reservoir excluding those that drain to the Upper New Hope arm of the reservoir and the Haw River arm of the reservoir.
  - (c) The Haw River arm of the reservoir, identified by index number 16-(37.5) in the Schedule of Classifications for the Cape Fear River Basin, 15A NCAC 02B .0311, lies immediately upstream of Jordan Lake Dam, and its subwatershed includes all lands and waters draining into the Haw River arm of the reservoir excluding those draining into the Upper and Lower New Hope arms.
- (5) NUTRIENT REDUCTION GOALS. Each arm of the lake has reduction goals, total allowable loads, point source wasteload allocations, and nonpoint source load allocations for both nitrogen and phosphorus based on a field-calibrated nutrient response model developed pursuant to provisions of the Clean Water Responsibility Act of 1997, G.S. 143-215.1(c5). The reduction goals and allocations are to be met collectively by the sources regulated under the Jordan nutrient strategy. The reduction goals are expressed in terms of a percentage reduction in delivered loads from the baseline years, 1997-2001, while allocations are expressed in pounds per year of allowable delivered load. Each arm and subwatershed shall conform to its respective allocations for nitrogen and phosphorus as follows:
- (a) The at-lake nitrogen load reduction goals for the arms of Jordan Reservoir are as follows:
    - (i) The Upper New Hope arm has a 1997-2001 baseline nitrogen load of 986,186 pounds per year and a TMDL reduction goal of 35 percent. The resulting TMDL includes a total allowable load of 641,021 pounds of nitrogen per year: a point source mass wasteload allocation of 336,079 pounds of nitrogen per year, and a nonpoint source mass load allocation of 304,942 pounds of nitrogen per year.
    - (ii) The Lower New Hope arm has a 1997-2001 baseline nitrogen load of 221,929 pounds per year and a nitrogen TMDL capped at the baseline nitrogen load. The resulting TMDL includes a total allowable load of 221,929 pounds of nitrogen per year: a point source mass wasteload allocation of 6,836 pounds of nitrogen per year, and a nonpoint source mass load allocation of 215,093 pounds of nitrogen per year.
    - (iii) The Haw River arm has a 1997-2001 baseline nitrogen load of 2,790,217 pounds per year and a TMDL percentage reduction of 8 percent. The resulting TMDL includes a total allowable load of 2,567,000 pounds of nitrogen per year: a point source mass wasteload allocation of 895,127 pounds of nitrogen per year, and a nonpoint source mass load allocation of 1,671,873 pounds of nitrogen per year.
  - (b) The at-lake phosphorus load reduction goals for the arms of Jordan Reservoir are as follows:
    - (i) The Upper New Hope arm has a 1997-2001 baseline phosphorus load of 87,245 pounds per year and a TMDL percentage reduction of five percent. The resulting TMDL includes a total allowable load of 82,883 pounds of phosphorus per year: a point source mass wasteload allocation of 23,108 pounds of phosphorus per year, and a nonpoint source mass load allocation of 59,775 pounds of phosphorus per year.
    - (ii) The Lower New Hope arm has a 1997-2001 baseline phosphorus load of 26,574 pounds per year and a phosphorus TMDL capped at the baseline phosphorus load. The resulting TMDL includes a total allowable load of 26,574 pounds of phosphorus per year: a point source mass wasteload allocation of 498 pounds of phosphorus per year, and a nonpoint source mass load allocation of 26,078 pounds of phosphorus per year.
    - (iii) The Haw River arm has a 1997-2001 baseline phosphorus load of 378,569 pounds per year and a TMDL percentage reduction of five percent. The resulting TMDL includes a total allowable load of 359,641 pounds of phosphorus per year: a point source mass wasteload allocation of 106,001 pounds of phosphorus per year, and a nonpoint source mass load allocation of 253,640 pounds of phosphorus per year.
  - (c) The allocations established in this Item may change as a result of allocation transfer between point and nonpoint sources to the extent provided for in rules of the Jordan nutrient strategy



and pursuant to requirements on the sale and purchase of load reduction credit set out in 15A NCAC 02B .0273.

- (6) **RELATION TO WATER SUPPLY REQUIREMENTS.** For all waters designated as WS-II, WS-III, or WS-IV within the Jordan watershed, the requirements of water supply 15A NCAC 02B .0214 through .0216 shall remain in effect with the exception of Sub-Item (3)(b) of those rules addressing nonpoint sources. The nonpoint source requirements of Sub-Item (3)(b) of those rules are superseded by the requirements of this Rule and 15A NCAC 02B .0263 through .0269, and .0271 through .0273, except as specifically stated in any of these Rules. For the remaining waters of Jordan watershed, the requirements of water supply Rule .0218 and Rules .0263 through .0273 and .0311 shall be applied. For WS-II, WS-III, and WS-IV waters, the retained requirements of 15A NCAC 02B .0214 through .0216 are the following:
  - (a) Item (1) of 15A NCAC 02B .0214 through .0216 addressing best usages;
  - (b) Item (2) of 15A NCAC 02B .0214 through .0216 addressing predominant watershed development conditions, discharges expressly allowed watershed-wide, general prohibitions on and allowances for domestic and industrial discharges, Maximum Contaminant Levels following treatment, and the local option to seek more protective classifications for portions of existing water supply watersheds;
  - (c) Sub-Item (3)(a) of 15A NCAC 02B .0214 through .0216 addressing waste discharge limitations; and
  - (d) Sub-Items (3)(c) through (3)(h) of 15A NCAC 02B .0214 through .0216 addressing aesthetic and human health standards.
- (7) **APPLICABILITY.** Types of parties responsible for implementing rules within the Jordan nutrient strategy and, as applicable, their geographic scope of responsibility, are identified in each rule. The specific local governments responsible for implementing Rules .0265, .0266, .0267, .0268, and .0273 shall be as follows:
  - (a) Rules .0265, .0266, .0267, .0268, and .0273 shall be implemented by all incorporated municipalities, as identified by the Office of the Secretary of State, with planning jurisdiction within or partially within the Jordan watershed. Those municipalities currently are:
    - (i) Alamance;
    - (ii) Apex;
    - (iii) Burlington;
    - (iv) Carrboro;
    - (v) Cary;
    - (vi) Chapel Hill;
    - (vii) Durham;
    - (viii) Elon;
    - (ix) Gibsonville;
    - (x) Graham;
    - (xi) Green Level;
    - (xii) Greensboro;
    - (xiii) Haw River;
    - (xiv) Kernersville;
    - (xv) Mebane;
    - (xvi) Morrisville;
    - (xvii) Oak Ridge;
    - (xviii) Ossipee;
    - (xix) Pittsboro;
    - (xx) Pleasant Garden;
    - (xxi) Reidsville;
    - (xxii) Sedalia;
    - (xxiii) Stokesdale;
    - (xxiv) Summerfield;
    - (xxv) Wilsonville; and
    - (xxvi) Whitsett.

- (b) Rules .0265, .0266, .0267, .0268, and .0273 shall be implemented by the following counties for the portions of the counties where the municipalities listed in Sub-Item (7)(a) do not have an implementation requirement:
  - (i) Alamance;
  - (ii) Caswell;
  - (iii) Chatham;
  - (iv) Durham;
  - (v) Guilford;
  - (vi) Orange;
  - (vii) Rockingham; and
  - (viii) Wake.
- (c) A unit of government may arrange through interlocal agreement or other instrument of mutual agreement for another unit of government to implement portions or the entirety of a program required or allowed under any of the rules listed in Item (3) of this Rule to the extent that such an arrangement is otherwise allowed by statute. The governments involved shall submit documentation of any such agreement to the Division. No such agreement shall relieve a unit of government from its responsibilities under these Rules.
- (8) ADAPTIVE MANAGEMENT. The Division shall evaluate the effectiveness of the Jordan nutrient strategy after at least ten years following the effective date and periodically thereafter as part of the review of the *Cape Fear River Basinwide Water Quality Plan*. The Division shall base its evaluation on, at a minimum, trend analyses as described in the monitoring section of the *B. Everett Jordan Reservoir, North Carolina Nutrient Management Strategy and Total Maximum Daily Load*, and lake use support assessments. The Division may also develop additional watershed modeling or other source characterization work. Any nutrient response modeling and monitoring on which any recommendation for adjustment to strategy goals may be based shall meet the criteria set forth in the Clean Water Act, G.S. 143-215.1(c5), and meet or exceed criteria used by the Division for the monitoring and modeling used to establish the goals in Item (5) of this Rule. Any modification to these rules as a result of such evaluations would require additional rulemaking.
- (9) LIMITATION. The Jordan nutrient strategy may not fully address significant nutrient sources in the Jordan watershed in that the rules do not directly address atmospheric sources of nitrogen to the watershed from sources located both within and outside of the watershed. As better information becomes available from ongoing research on atmospheric nitrogen loading to the watershed from these sources, and on measures to control this loading, the Commission may undertake separate rule making to require such measures it deems necessary from these sources to support the goals of the Jordan nutrient strategy.
- (10) ENFORCEMENT. Failure to meet requirements of Rules .0262, .0264, .0265, .0266, .0267, .0268, .0269, .0270, .0271, .0272 and .0273 of this Section may result in imposition of enforcement measures as authorized by G. S. 143-215.6A (civil penalties), G.S. 143-215.6B (criminal penalties), and G.S. 143-215.6C (injunctive relief).

*History Note: Authority G.S. 143-214.1; 143-214.5; 143-214.7; 143-215.1; 143-215.3(a)(1); 143-215.6A; 143-215.6A; 143-215.6B; 143-215.6C; 143-215.8B; 143B-282(c); 143B-282(d); S.L. 2005-190; S.L. 2006-259; Eff. August 11, 2009.*

**15A NCAC 02B .0263 JORDAN WATER SUPPLY NUTRIENT STRATEGY: DEFINITIONS**

The following words and phrases, which are not defined in G.S. 143, Article 21, shall be interpreted as follows for the purposes of the Jordan nutrient strategy:

- (1) "Allocation" means the mass quantity of nitrogen or phosphorus that a discharger, group of dischargers, nonpoint source, or collection of nonpoint sources is assigned as part of a TMDL. For point sources, possession of allocation does not authorize the discharge of nutrients but is prerequisite to such authorization through a NPDES permit.
- (2) "Applicator" means the same as defined in 15A NCAC 02B .0202(4).
- (3) "Channel" means a natural water-carrying trough cut vertically into low areas of the land surface by erosive action of concentrated flowing water or a ditch or canal excavated for the flow of water.
- (4) "DBH" means diameter at breast height of a tree measured at 4.5 feet above ground surface level.
- (5) "Delivered," as in delivered allocation, load, or limit, means the allocation, load, or limit that is measured or predicted at Jordan Reservoir. A delivered value is equivalent to a discharge value multiplied by the transport factor for that discharge location.
- (6) "Development" means the same as defined in 15A NCAC 02B .0202(23).
- (7) "Discharge," as in discharge allocation, load, or limit means the allocation, load, or limit that is measured at the point of discharge into surface waters in the Jordan watershed. A discharge value is equivalent to a delivered value divided by the transport factor for that discharge location.
- (8) "Ditch or canal" means a man-made channel other than a modified natural stream constructed for drainage purposes that is typically dug through inter-stream divide areas. A ditch or canal may have flows that are perennial, intermittent, or ephemeral and may exhibit hydrological and biological characteristics similar to perennial or intermittent streams.
- (9) "Ephemeral stream" means a feature that carries only stormwater in direct response to precipitation with water flowing only during and shortly after large precipitation events. An ephemeral stream may or may not have a well-defined channel, the aquatic bed is always above the water table, and stormwater runoff is the primary source of water. An ephemeral stream typically lacks the biological, hydrological, and physical characteristics commonly associated with the continuous or intermittent conveyance of water.
- (10) "Existing development" means development, other than that associated with agricultural or forest management activities, that meets one of the following criteria:
  - (a) It either is built or has established a vested right based on statutory or common law as interpreted by the courts, for projects that do not require a state permit, as of the effective date of either local new development stormwater programs implemented under 15A NCAC 02B .0265 or, for projects requiring a state permit, as of the applicable compliance date established in 15A NCAC 02B .0271(5) and (6); or
  - (b) It occurs after the compliance date set out in Sub-Item (4)(d) of Rule .0265 but does not result in a net increase in built-upon area.
- (13) "Intermittent stream" means a well-defined channel that contains water for only part of the year, typically during winter and spring when the aquatic bed is below the water table. The flow may be heavily supplemented by stormwater runoff. An intermittent stream often lacks the biological and hydrological characteristics commonly associated with the continuous conveyance of water.
- (14) "Jordan nutrient strategy," or "Jordan water supply nutrient strategy" means the set of 15A NCAC 02B .0262 through .0273 and .0311(p).
- (15) "Jordan Reservoir" means the surface water impoundment operated by the US Army Corps of Engineers and named B. Everett Jordan Reservoir, as further delineated for purposes of the Jordan nutrient strategy in 15A NCAC 02B .0262(4).
- (16) "Jordan watershed" means all lands and waters draining to B. Everett Jordan Reservoir.
- (17) "Load" means the mass quantity of a nutrient or pollutant released into surface waters over a given time period. Loads may be expressed in terms of pounds per year and may be expressed as "delivered load" or an equivalent "discharge load."
- (18) "Load allocation" means the same as set forth in federal regulations 40 CFR 130.2(g), which is incorporated herein by reference, including subsequent amendments and editions. These regulations may be obtained at no cost from <http://www.epa.gov/lawsregs/search/40cfr.html> or from the U.S. Government Printing Office, 732 North Capitol St. NW, Washington D.C., 20401.

- (19) "Modified natural stream" means an on-site channelization or relocation of a stream channel and subsequent relocation of the intermittent or perennial flow as evidenced by topographic alterations in the immediate watershed. A modified natural stream must have the typical biological, hydrological, and physical characteristics commonly associated with the continuous conveyance of water.
- (20) "New development" means any development project that does not meet the definition of existing development set out in this Rule.
- (21) "Nitrogen" or "total nitrogen" means the sum of the organic, nitrate, nitrite, and ammonia forms of nitrogen in a water or wastewater.
- (22) "NPDES" means National Pollutant Discharge Elimination System, and connotes the permitting process required for the operation of point source discharges in accordance with the requirements of Section 402 of the Federal Water Pollution Control Act, 33 U.S.C. Section 1251 et seq.
- (23) "Nutrients" means total nitrogen and total phosphorus.
- (24) "Perennial stream" means a well-defined channel that contains water year round during a year of normal rainfall with the aquatic bed located below the water table for most of the year. Groundwater is the primary source of water for a perennial stream, but it also carries stormwater runoff. A perennial stream exhibits the typical biological, hydrological, and physical characteristics commonly associated with the continuous conveyance of water.
- (25) "Perennial waterbody" means a natural or man-made basin, including lakes, ponds, and reservoirs, that stores surface water permanently at depths sufficient to preclude growth of rooted plants. For the purpose of the State's riparian buffer protection program, the waterbody must be part of a natural drainage way (i.e., connected by surface flow to a stream).
- (26) "Phosphorus" or "total phosphorus" means the sum of the orthophosphate, polyphosphate, and organic forms of phosphorus in a water or wastewater.
- (27) "Stream" means a body of concentrated flowing water in a natural low area or natural channel on the land surface.
- (28) "Surface waters" means all waters of the state as defined in G.S. 143-212 except underground waters.
- (29) "Technical specialist" means the same as defined in 15A NCAC 06H .0102(9).
- (30) "Total Maximum Daily Load," or "TMDL," means the same as set forth in federal regulations 40 CFR 130.2(i) and 130.7(c)(1), which are incorporated herein by reference, including subsequent amendments and editions. These regulations may be obtained at no cost from <http://www.epa.gov/lawsregs/search/40cfr.html> or from the U.S. Government Printing Office, 732 North Capitol St. NW, Washington D.C., 20401.
- (31) "Total nitrogen" or "nitrogen" means the sum of the organic, nitrate, nitrite, and ammonia forms of nitrogen in a water or wastewater.
- (32) "Total phosphorus" or "phosphorus" means the sum of the orthophosphate, polyphosphate, and organic forms of phosphorus in a water or wastewater.
- (33) "Transport factor" means the fraction of a discharged nitrogen or phosphorus load that is delivered from the discharge point to Jordan Reservoir, as determined in an approved TMDL.
- (34) "Tree" means a woody plant with a DBH equal to or exceeding five inches or a stump diameter exceeding six inches.
- (35) "Wasteload" means the mass quantity of a nutrient or pollutant released into surface waters by a wastewater discharge over a given time period. Wasteloads may be expressed in terms of pounds per year and may be expressed as "delivered wasteload" or an equivalent "discharge wasteload."
- (36) "Wasteload allocation" means the same as set forth in federal regulations 40 CFR 130.2(h), which is incorporated herein by reference, including subsequent amendments and editions. These regulations may be obtained at no cost from <http://www.epa.gov/lawsregs/search/40cfr.html> or from the U.S. Government Printing Office, 732 North Capitol St. NW, Washington D.C., 20401.

*History Note:* Authority G.S. 143-214.1; 143-214.5; 143-214.7; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C; 143 215.8B; 143B-282(c); 143B-282(d); S.L. 2001-355; S.L. 2005-190; S.L. 2006-259; Eff. August 11, 2009.

**15A NCAC 02B .0264 JORDAN WATER SUPPLY NUTRIENT STRATEGY: AGRICULTURE**

This Rule sets forth a process by which agricultural operations in the Jordan watershed will collectively limit their nitrogen and phosphorus loading to the Jordan Reservoir, as prefaced in Rule 15A NCAC 02B .0262. This process is as follows:

- (1) **PURPOSE.** The purposes of this Rule are to achieve and maintain the percentage reduction goals defined in Rule 15A NCAC 02B .0262 for the collective agricultural loading of nitrogen and phosphorus from their respective 1997-2001 baseline levels, to the extent that best available accounting practices will allow. This Rule aims to achieve the goals set out in 15A NCAC 02B .0262 within six to nine years, as set out in Sub-Item (5)(b) of this Rule. Additionally this Rule will protect the water supply uses of Jordan Reservoir and of designated water supplies throughout the Jordan watershed.
- (2) **PROCESS.** This Rule requires accounting for agricultural land management practices at the county and subwatershed levels in the Jordan watershed, and implementation of practices by farmers in these areas to collectively achieve the nutrient reduction goals on a county and subwatershed basis. Producers may be eligible to obtain cost share and technical assistance from the NC Agriculture Cost Share Program and similar federal programs to contribute to their counties' nutrient reductions. A Watershed Oversight Committee, and if needed Local Advisory Committees, will develop strategies, coordinate activities, and account for progress.
- (3) **LIMITATION.** This Rule may not fully address significant nutrient sources relative to agriculture in that it does not directly address atmospheric sources of nitrogen to the Jordan watershed from agricultural operations located both within and outside of the Jordan watershed. As better information becomes available from ongoing research on atmospheric nitrogen loading to the Jordan watershed from these sources, and on measures to control this loading, the Commission may undertake separate rule-making to require such measures it deems necessary from these sources to support the goals of the Jordan Reservoir Nutrient Sensitive Waters Strategy.
- (4) **APPLICABILITY.** This Rule shall apply to all persons engaging in agricultural operations in the Jordan watershed, including those related to crops, horticulture, livestock, and poultry. This Rule applies to livestock and poultry operations above the size thresholds in this Item in addition to requirements for animal operations set forth in general permits issued pursuant to G.S. 143-215.10C. Nothing in this Rule shall be deemed to allow the violation of any assigned surface water, groundwater, or air quality standard by any agricultural operation, including any livestock or poultry operation below the size thresholds in this Item. This Rule does not require specific actions by any individual person or operation if the county or counties in which they conduct operations can collectively achieve their nutrient reduction targets, in the manner described in Item (5) of this Rule, within six years of the effective date of this Rule. For the purposes of this Rule, agricultural operations are activities that relate to any of the following pursuits:
  - (a) The commercial production of crops or horticultural products other than trees. As used in this Rule, commercial shall mean activities conducted primarily for financial profit.
  - (b) Research activities in support of such commercial production.
  - (c) The production or management of any of the following number of livestock or poultry at any time, excluding nursing young:
    - (i) 5 or more horses;
    - (ii) 20 or more cattle;
    - (iii) 20 or more swine not kept in a feedlot, or 150 or more swine kept in a feedlot;
    - (iv) 120 or more sheep;
    - (v) 130 or more goats;
    - (vi) 650 or more turkeys;
    - (vii) 3,500 or more chickens; or
    - (viii) Any single species of any other livestock or poultry, or any combination of species of livestock or poultry, that exceeds 20,000 pounds of live weight at any time.
- (5) **METHOD FOR RULE IMPLEMENTATION.** This Rule shall be implemented initially by a Watershed Oversight Committee and, if needed, through a cooperative effort between the Watershed Oversight Committee and Local Advisory Committees in each county. The membership, roles and responsibilities of these committees are set forth in Items (7) and (8) of this Rule. Committees' activities shall be guided by the following constraints:

- (a) Within three years after the effective date of this Rule, the Watershed Oversight Committee shall provide the Commission with an initial assessment of the extent to which agricultural operations in each subwatershed have achieved the nitrogen goals identified in Item (1) of this Rule through activities conducted since the baseline period. The Watershed Oversight Committee shall use the accounting process described in Items (7) and (8) of this Rule to make its assessment. Should the Commission determine at that time that a subwatershed nitrogen goal has not been achieved, then Local Advisory Committees shall be formed in that subwatershed according to Item (8) of this Rule to further progress toward the goal by developing local strategies to guide implementation.
  - (b) For any subwatershed identified in Sub-Item (5)(a) of this Rule as not having achieved its nitrogen goal within three years, the Commission shall within six years after the effective date of this Rule again determine, with input from the Watershed Oversight Committee, whether the subwatershed has achieved its nitrogen goal. Should the Commission determine at that time that a subwatershed has not achieved its goal, then it shall require additional best management practice (BMP) implementation as needed to ensure that the goal is met within nine years after the effective date of this Rule. The Commission may also consider alternative recommendations from the Watershed Oversight Committee based on its assessment of the practicability of agricultural operations meeting the subwatershed goal. Should the Commission require some form of individual compliance, then it shall also subsequently approve a framework proposed by the Watershed Oversight Committee for allowing producers to obtain credit through offsite measures. Such offsite measures shall meet the requirements of 15A NCAC 02B .0273(2) – (4). The Commission shall review compliance with the phosphorus goals within six years of the effective date and shall require additional BMP implementation within any subwatershed as needed to meet its goal within an additional three years from that date.
  - (c) Should a committee called for under Sub-Item (5)(a) of this Rule not form nor follow through on its responsibilities such that a local strategy is not implemented in keeping with Item (8) of this Rule, the Commission shall require all persons subject to this Rule in the affected area to implement BMPs as needed to meet the goals of this Rule.
- (6) **RULE REQUIREMENTS FOR INDIVIDUAL OPERATIONS.** Persons subject to this Rule shall adhere to the following requirements:
- (a) If the initial accounting required under Sub-Item (5)(a) of this Rule determines that agricultural operations have not already collectively met the nitrogen reduction goals, persons subject to this Rule shall register their operations with their Local Advisory Committee according to the requirements of Item (8) of this Rule within four years after the effective date of this Rule. Within six years after the effective date of this Rule, such persons are not required to implement any specific BMPs but may elect to contribute to the collective local nutrient strategy by implementing any BMPs they choose that are recognized by the Watershed Oversight Committee as nitrogen-reducing or phosphorus-reducing BMPs.
  - (b) Should a local strategy not achieve its goal after six years, operations within that local area may face specific implementation requirements, as described under Sub-Item (5)(b) of this Rule.
  - (c) Producers may generate nitrogen loading reduction credit for sale to parties subject to or operating under other nutrient strategy rules in the Jordan watershed under either of the following circumstances and only pursuant to the conditions of Sub-Item (7)(b)(vii) of this Rule and 15A NCAC 02B .0273:
    - (ii) If the subwatershed in which they implement nitrogen-reducing practices has achieved its nitrogen goal.
    - (ii) At any point during the implementation of this Rule, a pasture-based livestock operation that implements an excluded buffer BMP on part or all of its operation may sell that portion of the nitrogen reduction credit attributed to the buffer restoration aspect of the practice, while the credit attributed to the exclusion aspect shall accrue to the achievement or maintenance of the goals of this Rule.
- (7) **WATERSHED OVERSIGHT COMMITTEE.** The Watershed Oversight Committee shall have the following membership, role and responsibilities:

- (a) MEMBERSHIP. The Director shall be responsible for forming a Watershed Oversight Committee within two months of the effective date of this Rule. Until such time as the Commission determines that long-term maintenance of the nutrient loads is assured, the Director shall either reappoint members or replace members at least every six years. The Director shall solicit nominations for membership on this Committee to represent each of the following interests, and shall appoint one nominee to represent each interest except where a greater number is noted. The Director may appoint a replacement at any time for an interest in Sub-Items (7)(a)(vi) through (7)(a)(x) of this Rule upon request of representatives of that interest:
  - (i) Division of Soil and Water Conservation;
  - (ii) United States Department of Agriculture-Natural Resources Conservation Service (shall serve in an "ex-officio" non-voting capacity and shall function as a technical program advisor to the Committee);
  - (iii) North Carolina Department of Agriculture and Consumer Services;
  - (iv) North Carolina Cooperative Extension Service;
  - (v) Division of Water Quality;
  - (vi) Three environmental interests, at least two of which are residents of the Jordan watershed;
  - (vii) General farming interests;
  - (viii) Pasture-based livestock interests;
  - (ix) Equine livestock interests;
  - (x) Cropland farming interests; and
  - (xi) The scientific community with experience related to water quality problems in the Jordan watershed.
- (b) ROLE. The Watershed Oversight Committee shall:
  - (i) Develop tracking and accounting methods for nitrogen and phosphorus loss. Submit methods to the Water Quality Committee of the Commission for approval based on the standards set out in Sub-Item (7)(c) of this Rule within two years after the effective date of this Rule;
  - (ii) Identify and implement future refinements to the accounting methods as needed to reflect advances in scientific understanding, including establishment or refinement of nutrient reduction efficiencies for BMPs;
  - (iii) Within three years after the effective date of this Rule, collect data needed to conduct initial nutrient loss accounting for the baseline period and the most current year feasible, perform this accounting, and determine the extent to which agricultural operations have achieved the nitrogen loss goal and phosphorus loss trend indicators for each subwatershed. Present findings to the Water Quality Committee of the Commission;
  - (iv) Review, approve, and summarize local nutrient strategies if required pursuant to Sub-Item (5)(a) of this Rule and according to the timeframe identified in Sub-Item (8)(c)(ii) of this Rule. Provide these strategies to the Division;
  - (v) Establish requirements for, review, approve and summarize local nitrogen and phosphorus loss annual reports as described under Sub-Item (8)(e) of this Rule, and present these reports to the Division annually, until such time as the Commission determines that annual reports are no longer needed to fulfill the purposes of this Rule. Present the annual report six years after the effective date to the Commission. Should that annual report find that a subwatershed has not met its nitrogen goal, include an assessment in that report of the practicability of producers achieving the goal within nine years after the effective date, and recommendations to the Commission as deemed appropriate;
  - (vi) Obtain nutrient reduction efficiencies for BMPs from the scientific community associated with design criteria identified in rules adopted by the Soil and Water Conservation Commission, including 15A NCAC 06E .0104 and 15A NCAC 06F .0104; and

- (vii) Investigate and, if feasible, develop an accounting method to equate implementation of specific nitrogen-reducing practices on cropland or pastureland to reductions in nitrogen loading delivered to streams. Quantify the nitrogen credit generated by such practices for purposes of selling or buying credits. Establish criteria and a process as needed for the exchange of nitrogen credits between parties meeting the criteria of either Sub-Item (5)(b) or Sub-Item (6)(c) of this Rule with parties subject to or operating under other nutrient strategy rules in the Jordan watershed pursuant to the requirements of 15A NCAC 02B .0273. Approve eligible trades, and ensure that such practices are accounted for and tracked separately from those contributing to the goals of this Rule.
- (c) ACCOUNTING METHODS. Success in meeting this Rule's purpose will be gauged by estimating percentage changes in nitrogen loss from agricultural lands in the Jordan watershed and by evaluating broader trends in indicators of phosphorus loss from agricultural lands in the Jordan watershed. The Watershed Oversight Committee shall develop accounting methods that meet the following requirements:
  - (i) The nitrogen method shall quantify baseline and annual total nitrogen losses from agricultural operations in each county, each subwatershed, and for the entire Jordan watershed;
  - (ii) The nitrogen and phosphorus methods shall include a means of tracking implementation of BMPs, including number, type, and area affected;
  - (iii) The nitrogen method shall include a means of estimating incremental nitrogen loss reductions from actual BMP implementation and of evaluating progress toward and maintenance of the nutrient goals from changes in BMP implementation, fertilization, individual crop acres, and agricultural land use acres;
  - (iv) The nitrogen and phosphorus methods shall be refined as research and technical advances allow;
  - (v) The phosphorus method shall quantify baseline values for and annual changes in factors affecting agricultural phosphorus loss as identified by the phosphorus technical advisory committee established under 15A NCAC 02B .0256(f)(2)(C). The method shall provide for periodic qualitative assessment of likely trends in agricultural phosphorus loss from the Jordan watershed relative to baseline conditions;
  - (vi) Phosphorus accounting may also include a scientifically valid, survey-based sampling of farms in the Jordan watershed for the purpose of conducting field-scale phosphorus loss assessments and extrapolating phosphorus losses for the Jordan watershed for the baseline period and at periodic intervals; and
  - (vii) Aspects of pasture-based livestock operations that potentially affect nutrient loss and are not captured by the accounting methods described above shall be accounted for in annual reporting by quantifying changes in the extent of livestock-related nutrient controlling BMPs. Progress may be judged based on percent change in the extent of implementation relative to subwatershed percentage goals identified in Rule .0262 of this Section.
- (8) LOCAL ADVISORY COMMITTEES. Local Advisory Committees required by Sub-Item (5)(a) of this Rule shall be formed for each county within the applicable subwatershed within three years and three months after the effective date of this Rule, and shall have the following membership, roles, and responsibilities:
  - (a) MEMBERSHIP. A Local Advisory Committee shall be appointed as provided for in this Item. It shall terminate upon a finding by the Commission that it is no longer needed to fulfill the purposes of this Rule. Each Local Advisory Committee shall consist of:
    - (i) One representative of the county Soil and Water Conservation District;
    - (ii) One representative of the county office of the United States Department of Agriculture Natural Resources Conservation Service;
    - (iii) One representative of the North Carolina Department of Agriculture and Consumer Services whose regional assignment includes the county;



- (iv) One representative of the county office of the North Carolina Cooperative Extension Service;
  - (v) One representative of the North Carolina Division of Soil and Water Conservation whose regional assignment includes the county; and
  - (vi) At least two farmers who reside in the county.
- (b) APPOINTMENT OF MEMBERS. The Director of the Division of Water Quality and the Director of the Division of Soil and Water Conservation of the Department of Environment and Natural Resources shall appoint members described in Sub-Items (8)(a)(i), (8)(a)(ii), (8)(a)(iv), and (8)(a)(v) of this Rule. The Director of the Division of Water Quality, with recommendations from the Director of the Division of Soil and Water Conservation and the Commissioner of Agriculture, shall appoint the members described in Sub-Items (8)(a)(iii) and (8)(a)(vi) of this Rule from persons nominated by nongovernmental organizations whose members produce or manage agricultural commodities in each county. Members of the Local Advisory Committees shall serve at the pleasure of their appointing authority.
- (c) ROLE. The Local Advisory Committees shall:
- (i) Conduct a registration process for persons subject to this Rule. This registration process shall be completed within 48 months after the effective date of this Rule. The registration process shall request the type and acreage of agricultural operations. It shall provide persons with information on requirements and options under this Rule, and on available technical assistance and cost share options;
  - (ii) Develop local nutrient control strategies for agricultural operations, pursuant to Sub-Item (8)(d) of this Rule, to meet the nitrogen and phosphorus goals of this Rule. Strategies shall be submitted to the Watershed Oversight Committee no later than 46 months after the effective date of this Rule;
  - (iii) Ensure that any changes to the design of the local strategy will continue to meet the nutrient goals of this Rule; and
  - (iv) Submit reports to the Watershed Oversight Committee, pursuant to Sub-Item (8)(e) of this Rule, annually until such time as the Commission determines that annual reports are no longer needed to fulfill the purposes of this Rule.
- (d) LOCAL NUTRIENT CONTROL STRATEGIES. Local Advisory Committees shall develop county nutrient control strategies that meet the following requirements. If a Local Advisory Committee fails to submit a nutrient control strategy required in Sub-Item (8)(c)(ii) of this Rule, the Commission may develop one based on the accounting methods that it approves pursuant to Sub-Item (7)(b)(i) of this Rule. Local strategies shall meet the following requirements:
- (i) Local nutrient control strategies shall be designed to achieve the required nitrogen loss reduction goals and qualitative trends in indicators of agricultural phosphorus loss within six years after the effective date of this Rule, and to maintain those reductions in perpetuity or until such time as this Rule is revised to modify this requirement.
  - (ii) Local nutrient control strategies shall specify the numbers, acres, and types of all agricultural operations within their areas, numbers of BMPs that will be implemented by enrolled operations and acres to be affected by those BMPs, estimated nitrogen and phosphorus loss reductions, schedule for BMP implementation, and operation and maintenance requirements.
- (e) ANNUAL REPORTS. The Local Advisory Committees shall be responsible for submitting annual reports for their counties to the Watershed Oversight Committee until such time as the Commission determines that annual reports are no longer needed to fulfill the purposes of this Rule. The Watershed Oversight Committee shall determine reporting requirements to meet these objectives. Those requirements may include information on BMPs implemented by individual farms, proper BMP operation and maintenance, BMPs discontinued, changes in agricultural land use or activity, and resultant net nitrogen loss and phosphorus trend indicator changes.

*History Note:* Authority G.S. 143-214.1; 143-214.5; 143-214.7; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C; 143 215.8B; 143B-282(c); 143B-282(d); S.L. 2001-355; S.L. 2005-190; S.L. 2006-259; Eff. August 11, 2009.

**15A NCAC 02B .0265 JORDAN WATER SUPPLY NUTRIENT STRATEGY: STORMWATER MANAGEMENT FOR NEW DEVELOPMENT**  
 (See S.L. 2009-216 and S.L. 2009-484)

The following is the stormwater strategy for new development activities within the Jordan watershed, as prefaced in 15A NCAC 02B .0262:

- (1) **PURPOSE.** The purposes of this Rule are as follows:
  - (a) To achieve and maintain the nitrogen and phosphorus loading goals established for Jordan Reservoir in 15A NCAC 02B .0262 from lands in the Jordan watershed on which new development occurs;
  - (b) To provide control for stormwater runoff from new development in Jordan watershed to ensure that the integrity and nutrient processing functions of receiving waters and associated riparian buffers are not compromised by erosive flows; and
  - (c) To protect the water supply uses of Jordan Reservoir and of designated water supplies throughout the Jordan watershed from the potential impacts of new development.
- (2) **APPLICABILITY.** This Rule shall apply to those areas of new development, as defined in 15A NCAC 02B .0263, that lie within the Jordan watershed and the planning jurisdiction of a municipality or county that is identified in 15A NCAC 02B .0262.
- (3) **REQUIREMENTS.** All local governments subject to this Rule shall develop stormwater management programs for submission to and approval by the Commission, to be implemented in areas described in Item (2) of this Rule, based on the standards in this Item:
  - (a) An approved stormwater management plan shall be required for all proposed new development disturbing one acre or more for single family and duplex residential property and recreational facilities, and one-half acre or more for commercial, industrial, institutional, multifamily residential, or local government property. These stormwater plans shall not be approved by the subject local governments unless the following criteria are met:
    - (i) Nitrogen and phosphorus loads contributed by the proposed new development activity in a given subwatershed shall not exceed the unit-area mass loading rates applicable to that subwatershed as follows for nitrogen and phosphorus, respectively, expressed in units of pounds per acre per year: 2.2 and 0.82 in the Upper New Hope; 4.4 and 0.78 in the Lower New Hope; and 3.8 and 1.43 in the Haw. The developer shall determine the need for engineered stormwater controls to meet these loading rate targets by using the loading calculation method called for in Sub-Item (4)(a) or other equivalent method acceptable to the Division.
    - (ii) Proposed new development undertaken by a local government solely as a public road project shall be deemed compliant with the purposes of this Rule if it meets the riparian buffer protection requirements of 15A NCAC 02B .0267 and .0268.
    - (iii) Proposed new development subject to NPDES, water supply, and other state-mandated stormwater regulations shall comply with those regulations in addition to the other requirements of this Sub-Item. Proposed new development in any water supply watershed in the Jordan watershed designated WS-II, WS-III, or WS-IV shall comply with the density-based restrictions, obligations, and requirements for engineered stormwater controls, clustering options, and 10/70 provisions described in Sub-Items (3)(b)(i) and (3)(b)(ii) of the applicable Rule among 15A NCAC 02B .0214 through .0216;
    - (iv) Stormwater systems shall be designed to control and treat the runoff generated from all surfaces by one inch of rainfall. The treatment volume shall be drawn down pursuant to standards specific to each practice as provided in the July 2007 version of the *Stormwater Best Management Practices Manual* published by the Division, or other at least technically equivalent standards acceptable to the Division. To ensure that the integrity and nutrient processing functions of receiving waters and associated riparian buffers are not compromised by erosive flows, stormwater flows from the new development shall not contribute to degradation of waters of the State. At a minimum, the new development shall not result in a net increase in peak flow leaving the site from pre-development conditions for the one-year, 24-hour storm event;

- (v) Proposed new development that would replace or expand structures or improvements that existed as of December 2001, the end of the baseline period, and that would not result in a net increase in built-upon area shall not be required to meet the nutrient loading targets or high-density requirements except to the extent that it shall provide stormwater control at least equal to the previous development. Proposed new development that would replace or expand existing structures or improvements and would result in a net increase in built-upon area shall have the option either to achieve at least the percentage loading reduction goals stated in 15A NCAC 02B .0262 as applied to nitrogen and phosphorus loading from the previous development for the entire project site, or to meet the loading rate targets described in Sub-Item (3)(a)(i). These requirements shall supersede those identified in 15A NCAC 02B .0104(q);
- (vi) Proposed new development shall comply with the riparian buffer protection requirements of 15A NCAC 02B .0267 and .0268; and
- (vii) Developers shall have the option of offsetting part of their nitrogen and phosphorus loads by implementing or funding offsite management measures as follows: Before using offsite offset options, a development shall attain a maximum nitrogen loading rate on-site of four pounds per acre per year for single-family, detached and duplex residential development and eight pounds per acre per year for other development, including multi-family residential, commercial and industrial and shall meet any requirements for engineered stormwater controls described in Sub-Item (3)(a)(iii) of this Rule. Offsite offsetting measures shall achieve at least equivalent reductions in nitrogen and phosphorus loading to the remaining reduction needed onsite to comply with the loading rate targets set out in Sub-Item (3)(a)(i) of this Rule. A developer may make offset payments to the NC Ecosystem Enhancement Program contingent upon acceptance of payments by that Program. A developer may use an offset option provided by the local government in which the development activity occurs. A developer may propose other offset measures to the local government, including providing his or her own offsite offset or utilizing a private seller. All offset measures identified in this Sub-Item shall meet the requirements of 15A NCAC 02B .0273 (2) through (4).
- (b) A plan to ensure maintenance of best management practices (BMPs) implemented as a result of the provisions in Sub-Item (3)(a) of this Rule for the life of the development;
- (c) A plan to ensure enforcement and compliance with the provisions in Sub-Item (3)(a) of this Rule for the life of the new development; and
- (d) The following requirements in water supply 15A NCAC 02B .0104 shall apply to new development throughout the Jordan watershed:
  - (i) Requirements in Paragraph (f) for local governments to assume ultimate responsibility for operation and maintenance of high-density stormwater controls, to enforce compliance, to collect fees, and other measures;
  - (ii) Variance procedures in Paragraph (r);
  - (iii) Assumption of local programs by the Commission in Paragraph (x); and
  - (iv) Delegation of Commission authorities to the Director in Paragraph (aa).
- (4) RULE IMPLEMENTATION. This Rule shall be implemented as follows:
  - (a) Within 18 months after the effective date of this Rule, the Division shall submit a model local stormwater program, including a model local ordinance, in conjunction with similar requirements in 15A NCAC 02B .0266, that embodies the criteria described in Item (3) of this Rule to the Commission for approval. The model program shall include a tool that will allow developers to account for nutrient loading from development lands and loading changes due to BMP implementation to meet the requirements of Item (3) of this Rule. The accounting tool shall utilize nutrient efficiencies and associated design criteria established for individual BMPs in the July 2007 version of the *Stormwater Best Management Practices Manual* published by the Division, or other at least technically equivalent standards acceptable to the Division. The Division shall work in cooperation with subject local governments and other watershed interests in developing this model program;

- (b) Within six months after the Commission's approval of the model local stormwater program and model ordinance, subject local governments shall submit stormwater management programs, in conjunction with similar requirements in 15A NCAC 02B .0266, to the Division for preliminary approval. These local programs shall meet or exceed the requirements in Item (3) of this Rule;
  - (c) Within 15 months after the Commission's approval of the model local stormwater program, the Division shall provide recommendations to the Commission on local stormwater programs. The Commission shall either approve the programs or require changes based on the standards set out in Item (3) of this Rule. Should the Commission require changes, the applicable local government shall have two months to submit revisions, and the Division shall provide follow-up recommendations to the Commission within two months after receiving revisions;
  - (d) Within three months after the Commission's approval of a local program, or upon the Division's first renewal of a local government's NPDES stormwater permit, whichever occurs later, the affected local government shall complete adoption of and implement its local stormwater management program; and
  - (e) Upon implementation, subject local governments shall submit annual reports to the Division summarizing their activities in implementing each of the requirements in Item (3) of this Rule, including changes to nutrient loading due to implementation of Sub-Item (3)(a) of this Rule.
- (5) RELATIONSHIP TO OTHER REQUIREMENTS. Local governments shall have the following options with regard to satisfying the requirements of other rules in conjunction with this Rule:
- (a) A local government may in its program submittal under Sub-Item (4)(b) of this Rule request that the Division accept the local government's implementation of another stormwater program or programs, such as NPDES municipal stormwater requirements, as satisfying one or more of the requirements set forth in Item (3) of this Rule. The Division will provide determination on acceptability of any such alternatives prior to requesting Commission approval of local programs as required in Sub-Item (4)(c) of this Rule. The local government shall include in its program submittal technical information demonstrating the adequacy of the alternative requirements.

*History Note: Authority G.S. 143-214.1; 143-214.5; 143-214.7; 143-214.12; 143-214.21; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C; 143 215.8B; 143B-282(c); 143B-282(d); S.L. 2005-190; S.L. 2006-259; Eff. August 11, 2009; See S.L. 2009-216 and S.L. 2009-484.*

**15A NCAC 02B .0266 JORDAN WATER SUPPLY NUTRIENT STRATEGY: STORMWATER  
MANAGEMENT FOR EXISTING DEVELOPMENT**

Note: This rule was disapproved by SL 2009-216. See Session Law for replacement language.

**15A NCAC 02B .0267 JORDAN WATER SUPPLY NUTRIENT STRATEGY: PROTECTION OF EXISTING RIPARIAN BUFFERS**

(See S.L. 2009-216 and S.L. 2009-484)

Protection of the nutrient removal and other water quality benefits provided by riparian buffers throughout the watershed is an important element of the overall Jordan water supply nutrient strategy. The following is the strategy for riparian buffer protection and maintenance in the Jordan watershed, as prefaced in 15A NCAC 02B .0262:

- (1) **PURPOSE.** The purposes of this Rule shall be to protect and preserve existing riparian buffers throughout the Jordan watershed as generally described in 15A NCAC 02B .0262, in order to maintain their nutrient removal and stream protection functions. Additionally this Rule will help protect the water supply uses of Jordan Reservoir and of designated water supplies throughout the Jordan watershed. Local governments shall establish programs to meet or exceed the minimum requirements of this Rule. The requirements of this Rule shall supersede all locally implemented buffer requirements stated in 15A NCAC 02B .0214 through .0216 as applied to WS-II, WS-III, and WS-IV waters in the Jordan watershed. Local governments subject to this Rule may choose to implement more stringent requirements, including requiring additional buffer width.
- (2) **DEFINITIONS.** For the purpose of this Rule, these terms shall be defined as follows:
  - (a) 'Access Trails' means pedestrian trails constructed of pervious or impervious surfaces and related structures to access a surface water, including boardwalks, steps, rails, and signage.
  - (b) 'Airport Facilities' means all properties, facilities, buildings, structures, and activities that satisfy or otherwise fall within the scope of one or more of the definitions or uses of the words or phrases 'air navigation facility', 'airport', or 'airport protection privileges' under G.S. 63-1; the definition of 'aeronautical facilities' in G.S. 63-79(1); the phrase 'airport facilities' as used in G.S. 159-48(b)(1); the phrase 'aeronautical facilities' as defined in G.S. 159-81 and G.S. 159-97; and the phrase 'airport facilities and improvements' as used in Article V, Section 13, of the North Carolina Constitution, which shall include, without limitation, any and all of the following: airports, airport maintenance facilities, clear zones, drainage ditches, fields, hangars, landing lighting, airport and airport-related offices, parking facilities, related navigational and signal systems, runways, stormwater outfalls, terminals, terminal shops, and all appurtenant areas used or suitable for airport buildings or other airport facilities, and all appurtenant rights-of-way; restricted landing areas; any structures, mechanisms, lights, beacons, marks, communicating systems, or other instrumentalities or devices used or useful as an aid, or constituting an advantage or convenience to the safe taking off, navigation, and landing of aircraft, or the safe and efficient operation or maintenance of an airport or restricted landing area; easements through, or interests in, air space over land or water, interests in airport hazards outside the boundaries of airports or restricted landing areas, and other protection privileges, the acquisition or control of which is necessary to ensure safe approaches to the landing areas of airports and restricted landing areas, and the safe and efficient operation thereof and any combination of any or all of such facilities. Notwithstanding the foregoing, the following shall not be included in the definition of 'airport facilities':
    - (i) Satellite parking facilities;
    - (ii) Retail and commercial development outside of the terminal area, such as rental car facilities; and
    - (iii) Other secondary development, such as hotels, industrial facilities, free-standing offices and other similar buildings, so long as these facilities are not directly associated with the operation of the airport, and are not operated by a unit of government or special governmental entity such as an airport authority, in which case they are included in the definition of 'airport facilities'.
  - (c) 'Forest management plan' means as defined in Chapter 160A-458.5(4).
  - (d) 'Forest plantation' means an area of planted trees that may be conifers (pines) or hardwoods. On a plantation, the intended crop trees are planted rather than naturally regenerated from seed on the site, coppice (sprouting), or seed that is blown or carried into the site.
  - (e) 'Greenway / Hiking Trails' means pedestrian trails constructed of pervious or impervious surfaces and related structures including but not limited to boardwalks, steps, rails, and signage, and that generally run parallel to the shoreline.

- (f) 'High Value Tree' means a tree that meets or exceeds the following standards: for pine species, 14-inch DBH or greater or 18-inch or greater stump diameter; or for hardwoods and wetland species, 16-inch DBH or greater or 24-inch or greater stump diameter.
  - (g) 'Shoreline stabilization' is the in-place stabilization of an eroding shoreline. Stabilization techniques which include "soft" methods or natural materials (such as root wads, or rock vanes) may be considered as part of a restoration design. However, stabilization techniques that consist primarily of "hard" engineering, such as concrete lined channels, riprap, or gabions, while providing bank stabilization, shall not be considered stream restoration.
  - (h) 'Stream restoration' is defined as the process of converting an unstable, altered or degraded stream corridor, including adjacent riparian zone and flood-prone areas to its natural or referenced, stable conditions considering recent and future watershed conditions. This process also includes restoring the geomorphic dimension, pattern, and profile as well as biological and chemical integrity, including transport of water and sediment produced by the stream's watershed in order to achieve dynamic equilibrium. 'Referenced' or 'referenced reach' means a stable stream that is in dynamic equilibrium with its valley and contributing watershed. A reference reach can be used to develop natural channel design criteria for stream restoration projects.
  - (i) 'Stump diameter' means the diameter of a tree measured at six inches above the ground surface level.
  - (j) 'Temporary road' means a road constructed temporarily for equipment access to build or replace hydraulic conveyance structures such as bridges, culverts, pipes or water dependent structures, or to maintain public traffic during construction.
- (3) **APPLICABILITY.** This Rule applies to all landowners and other persons conducting activities in the Jordan watershed, including state and federal entities, and to all local governments in the Jordan watershed, as described in 15A NCAC 02B .0262. Local governments shall develop riparian buffer protection programs for approval by the Commission, incorporating the minimum standards set out throughout this Rule and shall apply the requirements of this Rule throughout their jurisdictions within the Jordan watershed except where The Division shall exercise jurisdiction. For the following types of buffer activities in the Jordan watershed, wherever local governments are referenced in this Rule, the Division shall implement applicable requirements to the exclusion of local governments:
- (a) Activities conducted under the authority of the State.
  - (b) Activities conducted under the authority of the United States.
  - (c) Activities conducted under the authority of multiple jurisdictions.
  - (d) Activities conducted under the authority of local units of government.
  - (e) Forest harvesting activities described in Item (14) of this Rule.
  - (f) Agricultural activities.
  - (g) Activities conducted in a location where there is no local government program implementing NPDES stormwater requirements, Water Supply Watershed requirements, or a voluntary local stormwater or buffer initiative at the time of the activity.
- (4) **BUFFERS PROTECTED.** The following minimum criteria shall be used for identifying regulated buffers:
- (a) This Rule shall apply to activities conducted within, or outside of with impacts upon, 50-foot wide riparian buffers directly adjacent to surface waters in the Jordan watershed (intermittent streams, perennial streams, lakes, reservoirs and ponds), excluding wetlands.
  - (b) Wetlands adjacent to surface waters or within 50 feet of surface waters shall be considered as part of the riparian buffer but are regulated pursuant to 15A NCAC 02H .0506.
  - (c) A surface water shall be subject to this Rule if the feature is approximately shown on any of the following references, and shall not be subject if it does not appear on any of these references:
    - (i) The most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture.
    - (ii) The most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geologic Survey (USGS).
    - (iii) The maps approved by the Commission as more accurate than those identified in Sub-Item (4)(c)(i) and (4)(c)(ii) of this Rule.



- (d) Where the specific origination point of a stream regulated under this Item is in question, upon request of the Division or another party, the local government shall make an on-site determination. A local government representative who has successfully completed the Division's *Surface Water Identification Training Certification* course, its successor, or other equivalent training curriculum approved by the Division, shall establish that point using the latest version of the Division publication, *Identification Methods for the Origins of Intermittent and Perennial Streams*, available at [http://h2o.enr.state.nc.us/ncwetlands/documents/NC\\_Stream\\_ID\\_Manual.pdf](http://h2o.enr.state.nc.us/ncwetlands/documents/NC_Stream_ID_Manual.pdf) or from the Division of Water Quality, 401/Wetlands Unit, 1650 Mail Service Center, Raleigh, NC, 27699-1650. A local government may accept the results of a site assessment made by another party who meets these criteria. Any disputes over on-site determinations made according to this Sub-Item shall be referred to the Director in writing. The Director's determination is subject to review as provided in Articles 3 and 4 of G.S. 150B.
  - (e) Riparian buffers protected by this Rule shall be measured pursuant to Item (7) of this Rule.
  - (f) Parties subject to this rule shall abide by all State rules and laws regarding waters of the state including but not limited to 15A NCAC 02H .0500, 15A NCAC 02H .1300, and Sections 401 and 404 of the Federal Water Pollution Control Act.
  - (g) A riparian buffer may be exempt from this Rule as described in Item (5) or (6) of this Rule.
  - (h) No new clearing, grading, or development shall take place nor shall any new building permits be issued in violation of this Rule.
- (5) EXEMPTION BASED ON ON-SITE DETERMINATION. When a landowner or other affected party including the Division believes that the maps have inaccurately depicted surface waters, he or she shall consult the appropriate local government. Upon request, a local government representative who has successfully completed the Division's *Surface Water Identification Training Certification* course, its successor, or other equivalent training curriculum approved by the Division, shall make an on-site determination. Local governments may also accept the results of site assessments made by other parties who have successfully completed such training. Any disputes over on-site determinations shall be referred to the Director in writing. A determination of the Director as to the accuracy or application of the maps is subject to review as provided in Articles 3 and 4 of G.S. 150B. Surface waters that appear on the maps shall not be subject to this Rule if a site evaluation reveals any of the following cases:
- (a) Man-made ponds and lakes that are not part of a natural drainage way that is classified in accordance with 15A NCAC 02B .0100, including ponds and lakes created for animal watering, irrigation, or other agricultural uses. A pond or lake is part of a natural drainage way when it is fed by an intermittent or perennial stream or when it has a direct discharge point to an intermittent or perennial stream.
  - (b) Ephemeral streams.
  - (c) The absence on the ground of a corresponding intermittent or perennial stream, lake, reservoir, or pond.
  - (d) Ditches or other man-made water conveyances, other than modified natural streams.
- (6) EXEMPTION WHEN EXISTING USES ARE PRESENT AND ONGOING. This Rule shall not apply to uses that are existing and ongoing; however, this Rule shall apply at the time an existing, ongoing use is changed to another use. Change of use shall involve the initiation of any activity that does not meet either of the following criteria for existing, ongoing activity:
- (a) It was present within the riparian buffer as of the effective date of a local program enforcing this Rule and has continued to exist since that time. For any Division-administered activities listed in Item (3) of this Rule, a use shall be considered existing and ongoing if it was present within the riparian buffer as of the effective date of this Rule and has continued to exist since that time. Existing uses shall include agriculture, buildings, industrial facilities, commercial areas, transportation facilities, maintained lawns, utility lines and on-site sanitary sewage systems, any of which involve either specific, periodic management of vegetation or displacement of vegetation by structures or regular activity. Only the portion of the riparian buffer occupied by the footprint of the existing use is exempt from this Rule. Change of ownership through purchase or inheritance is not a change of use. Activities necessary to maintain uses are allowed provided that the site remains similarly vegetated, no impervious

surface is added within 50 feet of the surface water where it did not previously exist as of the effective date of a local program enforcing this Rule, or for Division-administered activities listed in Item (3) of this Rule as of the effective date of this Rule, and existing diffuse flow is maintained. Grading and revegetating Zone Two is allowed provided that the health of the vegetation in Zone One is not compromised, the ground is stabilized and existing diffuse flow is maintained.

- (b) Projects or proposed development that are determined by the local government to meet at least one of the following criteria:
  - (i) Project requires a 401 Certification/404 Permit and these were issued prior to the effective date of the local program enforcing this Rule, and prior to the effective date of this Rule for Division-administered activities listed in Item (3) of this Rule;
  - (ii) Projects that require a state permit, such as landfills, NPDES wastewater discharges, land application of residuals and road construction activities, have begun construction or are under contract to begin construction and had received all required state permits and certifications prior to the effective date of the local program implementing this Rule, and prior to the effective date of this Rule for Division-administered activities listed in Item (3) of this Rule;
  - (iii) Projects that are being reviewed through the Clean Water Act Section 404/National Environmental Policy Act Merger 01 Process (published by the US Army Corps of Engineers and Federal Highway Administration, 2003) or its immediate successor and that have reached agreement with DENR on avoidance and minimization by the effective date of the local program enforcing this Rule, and prior to the effective date of this Rule for state and federal entities; or
  - (iv) Projects that are not required to be reviewed by the Clean Water Act Section 404/National Environmental Policy Act Merger 01 Process (published by the US Army Corps of Engineers and Federal Highway Administration, 2003) or its immediate successor if a Finding of No Significant Impact has been issued for the project and the project has the written approval of the local government prior to the effective date of the local program enforcing this Rule, or the written approval of the Division prior to the effective date of this Rule for state and federal entities.
  
- (7) ZONES OF THE RIPARIAN BUFFER. The protected riparian buffer shall have two zones as follows:
  - (a) Zone One shall consist of a vegetated area that is undisturbed except for uses provided for in Item (9) of this Rule. The location of Zone One shall be as follows:
    - (i) For intermittent and perennial streams, Zone One shall begin at the top of the bank and extend landward a distance of 30 feet on all sides of the surface water, measured horizontally on a line perpendicular to a vertical line marking the top of the bank.
    - (ii) For ponds, lakes and reservoirs located within a natural drainage way, Zone One shall begin at the normal water level and extend landward a distance of 30 feet, measured horizontally on a line perpendicular to a vertical line marking the normal water level.
  - (b) Zone Two shall consist of a stable, vegetated area that is undisturbed except for uses provided for in Item (9) of this Rule. Grading and revegetating in Zone Two is allowed provided that the health of the vegetation in Zone One is not compromised. Zone Two shall begin at the outer edge of Zone One and extend landward 20 feet as measured horizontally on a line perpendicular to the surface water. The combined width of Zones One and Two shall be 50 feet on all sides of the surface water.
  
- (8) DIFFUSE FLOW REQUIREMENT. Diffuse flow of runoff shall be maintained in the riparian buffer by dispersing concentrated flow prior to its entry into the buffer and reestablishing vegetation as follows:
  - (a) Concentrated runoff from new ditches or manmade conveyances shall be converted to diffuse flow at non-erosive velocities before the runoff enters Zone Two of the riparian buffer;
  - (b) Periodic corrective action to restore diffuse flow shall be taken as necessary and shall be designed to impede the formation of erosion gullies; and

(c) As set out in Items (7) and (9) of this Rule, no new stormwater conveyances are allowed through the buffers except for those specified in Item (9) of this Rule addressing stormwater management ponds, drainage ditches, roadside ditches, and stormwater conveyances.

(9) **TABLE OF USES.** The following chart sets out potential new uses within the buffer, or outside the buffer with impacts on the buffer, and categorizes them as exempt, allowable, or allowable with mitigation. All uses not categorized as exempt, allowable, or allowable with mitigation are considered prohibited and may not proceed within the riparian buffer or outside the buffer if the use would impact the buffer, unless a variance is granted pursuant to Item (12) of this Rule. The requirements for each category are given in Item (10) of this Rule.

Use	Exempt *	Allowabl e*	Allowable with Mitigation *
Access trails: Pedestrian access trails leading to the surface water, docks, fishing piers, boat ramps and other water dependent activities: <ul style="list-style-type: none"> <li>• Pedestrian access trails that are restricted to the minimum width practicable and do not exceed 4 feet in width of buffer disturbance, and provided that installation and use does not result in removal of trees as defined in this Rule and no impervious surface is added to the riparian buffer</li> <li>• Pedestrian access trails that exceed 4 feet in width of buffer disturbance, the installation or use results in removal of trees as defined in this Rule or impervious surface is added to the riparian buffer</li> </ul>	X	X	
Airport facilities: <ul style="list-style-type: none"> <li>• Airport facilities that impact equal to or less than 150 linear feet or one-third of an acre of riparian buffer</li> <li>• Airport facilities that impact greater than 150 linear feet or one-third of an acre of riparian buffer</li> <li>• Activities necessary to comply with FAA requirements (e.g. radar uses or landing strips)<sup>1</sup></li> </ul>		X	X
Archaeological activities	X		
Bridges		X	
Canoe Access provided that installation and use does not result in removal of trees as defined in this Rule and no impervious surface is added to the buffer.	X		

\* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Item (10) of this Rule.

Use	Exempt *	Allowabl e*	Allowable with Mitigation *
Dam maintenance activities: <ul style="list-style-type: none"> <li>• Dam maintenance activities that do not cause additional buffer disturbance beyond the footprint of the existing dam or those covered under the U.S. Army Corps of Engineers Nationwide Permit No. 3</li> <li>• Dam maintenance activities that do cause additional buffer disturbance beyond the footprint of the existing dam or those not covered under the U.S. Army Corps of Engineers Nationwide Permit No.3</li> </ul>	X	X	

\* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Item (10) of this Rule.

Drainage ditches, roadside ditches and stormwater conveyances through riparian buffers: <ul style="list-style-type: none"> <li>• New stormwater flows to existing drainage ditches, roadside ditches, and stormwater conveyances provided flows do not alter or result in the need to alter the conveyance and are managed to minimize the sediment, nutrients and other pollution that convey to waterbodies.</li> <li>• Realignment of existing roadside drainage ditches retaining the design dimensions, provided that no additional travel lanes are added and the minimum required roadway typical section is used based on traffic and safety considerations.</li> <li>• New or altered drainage ditches, roadside ditches and stormwater outfalls provided that a stormwater management facility is installed to control nutrients and attenuate flow before the conveyance discharges through the riparian buffer</li> <li>• New drainage ditches, roadside ditches and stormwater conveyances applicable to linear projects that do not provide a stormwater management facility due to topography constraints provided that other practicable BMPs are employed.</li> </ul>	X	X  X	X
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Use	Exempt *	Allowabl e*	Allowable with Mitigation *
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\* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Item (10) of this Rule.

Driveway crossings of streams and other surface waters subject to this Rule: <ul style="list-style-type: none"> <li>• Driveway crossings on single family residential lots that disturb equal to or less than 25 linear feet or 2,500 square feet of riparian buffer</li> <li>• Driveway crossings on single family residential lots that disturb greater than 25 linear feet or 2,500 square feet of riparian buffer</li> <li>• In a subdivision that cumulatively disturb equal to or less than 150 linear feet or one-third of an acre of riparian buffer</li> <li>• In a subdivision that cumulatively disturb greater than 150 linear feet or one-third of an acre of riparian buffer</li> </ul>	X	X  X	X
Driveway impacts other than crossing of a stream or other surface waters subject to this Rule			X
Fences: <ul style="list-style-type: none"> <li>• Fences provided that disturbance is minimized and installation does not result in removal of trees as defined in this Rule</li> <li>• Fences provided that disturbance is minimized and installation results in removal of trees as defined in this Rule</li> </ul>	X	X	
Forest harvesting - see Item (14) of this Rule			
Fertilizer application: one-time application to establish vegetation	X		
Grading and revegetation in Zone Two provided that diffuse flow and the health of existing vegetation in Zone One is not compromised and disturbed areas are stabilized until they are revegetated.	X		

Use	Exempt *	Allowabl e*	Allowable with Mitigation *
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\* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Item (10) of this Rule.

Greenway / hiking trails designed, constructed and maintained to maximize nutrient removal and erosion protection, minimize adverse effects on aquatic life and habitat, and protect water quality to the maximum extent practical.		X	
Historic preservation	X		
Maintenance access on modified natural streams: a grassed travel way on one side of the water body when less impacting alternatives are not practical. The width and specifications of the travel way shall be only that needed for equipment access and operation. The travel way shall be located to maximize stream shading.		X	
Mining activities: <ul style="list-style-type: none"> <li>• Mining activities that are covered by the Mining Act provided that new riparian buffers that meet the requirements of Items (7) and (8) of this Rule are established adjacent to the relocated channels</li> <li>• Mining activities that are not covered by the Mining Act OR where new riparian buffers that meet the requirements or Items (7) and (8) of this Rule are not established adjacent to the relocated channels</li> <li>• Wastewater or mining dewatering wells with approved NPDES permit</li> </ul>	X	X	X
Playground equipment: <ul style="list-style-type: none"> <li>• Playground equipment on single family lots provided that installation and use does not result in removal of vegetation</li> <li>• Playground equipment installed on lands other than single-family lots or that requires removal of vegetation</li> </ul>	X	X	

Use	Exempt *	Allowabl e*	Allowable with Mitigation *
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\* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Item (10) of this Rule.

Ponds created by impounding streams and not used as stormwater BMPs: <ul style="list-style-type: none"> <li>• New ponds provided that a riparian buffer that meets the requirements of Items (7) and (8) of this Rule is established adjacent to the pond</li> <li>• New ponds where a riparian buffer that meets the requirements of Items (7) and (8) of this Rule is NOT established adjacent to the pond</li> </ul>		X	X
Protection of existing structures, facilities and stream banks when this requires additional disturbance of the riparian buffer or the stream channel		X	
Railroad impacts other than crossings of streams and other surface waters subject to this Rule.			X
Railroad crossings of streams and other surface waters subject to this Rule: <ul style="list-style-type: none"> <li>• Railroad crossings that impact equal to or less than 40 linear feet of riparian buffer</li> <li>• Railroad crossings that impact greater than 40 linear feet but equal to or less than 150 linear feet or one-third of an acre of riparian buffer</li> <li>• Railroad crossings that impact greater than 150 linear feet or one-third of an acre of riparian buffer</li> </ul>	X	X	X

\* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Item (10) of this Rule.





Use	Exempt *	Allowabl e*	Allowable with Mitigation *
Road relocation: Relocation of existing private access roads associated with public road projects where necessary for public safety: <ul style="list-style-type: none"> <li>• Less than or equal to 2,500 square feet of buffer impact</li> <li>• Greater than 2,500 square feet of buffer impact</li> </ul>		X	X
Stormwater BMPs: <ul style="list-style-type: none"> <li>• Wet detention, bioretention, and constructed wetlands in Zone Two if diffuse flow of discharge is provided into Zone One</li> <li>• Wet detention, bioretention, and constructed wetlands in Zone One</li> </ul>		X	X
Scientific studies and stream gauging	X		
Streambank or shoreline stabilization		X	
Temporary roads, provided that the disturbed area is restored to pre-construction topographic and hydrologic conditions immediately after construction is complete and replanted immediately with comparable vegetation, except that tree planting may occur during the dormant season. A one-time application of fertilizer may be used to establish vegetation: At the end of five years the restored buffer shall comply with the restoration criteria in Item (8) of 15A NCAC 02B.0268: <ul style="list-style-type: none"> <li>• Less than or equal to 2,500 square feet of buffer disturbance</li> <li>• Greater than 2,500 square feet of buffer disturbance</li> <li>• Associated with culvert installation or bridge construction or replacement.</li> </ul>	X	X  X	

\* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Item (10) of this Rule.



Use	Exempt *	Allowabl e*	Allowable with Mitigation *
Utility, electric, underground, perpendicular crossings <sup>3,4,5</sup> : <ul style="list-style-type: none"> <li>• Disturb less than or equal to 40 linear feet of riparian buffer</li> <li>• Disturb greater than 40 linear feet of riparian buffer</li> </ul>	X	X	
Utility, electric, underground, other than perpendicular crossings <sup>4</sup> : <ul style="list-style-type: none"> <li>• Impacts in Zone Two</li> <li>• Impacts in Zone One<sup>1</sup></li> </ul>	X X		
Utility, non-electric, perpendicular crossings of streams and other surface waters subject to this Rule <sup>3,5</sup> : <ul style="list-style-type: none"> <li>• Disturb equal to or less than 40 linear feet of riparian buffer with a maintenance corridor equal to or less than 10 feet in width</li> <li>• Disturb equal to or less than 40 linear feet of riparian buffer with a maintenance corridor greater than 10 feet in width</li> <li>• Disturb greater than 40 linear feet but equal to or less than 150 linear feet of riparian buffer with a maintenance corridor equal to or less than 10 feet in width</li> <li>• Disturb greater than 40 linear feet but equal to or less than 150 linear feet of riparian buffer with a maintenance corridor greater than 10 feet in width</li> <li>• Disturb greater than 150 linear feet of riparian buffer</li> </ul>	X	X  X	X  X

\* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Item (10) of this Rule.

Utility, non-electric, other than perpendicular crossings <sup>4,5</sup> : <ul style="list-style-type: none"> <li>• Impacts in Zone Two</li> <li>• Impacts in Zone One<sup>1</sup></li> </ul>		X	X
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Use	Exempt *	Allowabl e*	Allowable with Mitigation *
Vegetation management: <ul style="list-style-type: none"> <li>• Emergency fire control measures provided that topography is restored</li> <li>• Mowing or harvesting of plant products in Zone Two</li> <li>• Planting vegetation to enhance the riparian buffer</li> <li>• Pruning forest vegetation provided that the health and function of the forest vegetation is not compromised</li> <li>• Removal of individual trees that are in danger of causing damage to dwellings, other structures or human life, or are imminently endangering stability of the streambank.</li> <li>• Removal of individual trees which are dead, diseased or damaged.</li> <li>• Removal of poison ivy</li> <li>• Removal of invasive exotic vegetation as defined in: <i>Smith, Cherri L. 1998. Exotic Plant Guidelines. Dept. of Environment and Natural Resources. Division of Parks and Recreation. Raleigh, NC. Guideline #30</i></li> </ul>	X  X  X  X  X  X  X		
Vehicular access roads leading to water-dependent structures as defined in 15A NCAC 02B .0202, provided they do not cross the surface water and have minimum practicable width not exceeding ten feet.		X	
Water dependent structures as defined in 15A NCAC 02B .0202 where installation and use result in disturbance to riparian buffers.		X	

\* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Item (10) of this Rule.

Water supply reservoirs: <ul style="list-style-type: none"> <li>• New reservoirs where a riparian buffer that meets the requirements of Items (7) and (8) of this Rule is established adjacent to the reservoir</li> <li>• New reservoirs where a riparian buffer that meets the requirements of Items (7) and (8) of this Rule is not established adjacent to the reservoir</li> </ul>		X	X
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Use	Exempt *	Allowabl e*	Allowable with Mitigation *
Water wells <ul style="list-style-type: none"> <li>• Single family residential water wells</li> <li>• All other water wells</li> </ul>	X	X	
Wetland, stream and buffer restoration that results in impacts to the riparian buffers: <ul style="list-style-type: none"> <li>• Wetland, stream and buffer restoration that requires Division approval for the use of a 401 Water Quality Certification</li> <li>• Wetland, stream and buffer restoration that does not require Division approval for the use of a 401 Water Quality Certification</li> </ul>	X	X	
Wildlife passage structures		X	

\* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Item (10) of this Rule.

- 1 Provided that:
  - No heavy equipment is used in Zone One.
  - Vegetation in undisturbed portions of the buffer is not compromised.
  - Felled trees are removed by chain.
  - No permanent felling of trees occurs in protected buffers or streams.
  - Stumps are removed only by grinding.
  - At the completion of the project the disturbed area is stabilized with native vegetation.
- 2 Provided that, in Zone One, all of the following BMPs for overhead utility lines are used. If all of these BMPs are not used, then the overhead utility lines shall require a no practical alternative evaluation by the local government, as defined in Item (11) of this Rule.
  - A minimum zone of 10 feet wide immediately adjacent to the water body shall be managed such that only vegetation that poses a hazard or has the potential to grow tall enough to interfere with the line is removed.
  - Woody vegetation shall be cleared by hand. No land grubbing or grading is allowed.
  - Vegetative root systems shall be left intact to maintain the integrity of the soil. Stumps shall remain where trees are cut.
  - Riprap shall not be used unless it is necessary to stabilize a tower.
  - No fertilizer shall be used other than a one-time application to re-establish vegetation.
  - Construction activities shall minimize the removal of woody vegetation, the extent of the disturbed area, and the time in which areas remain in a disturbed state.
  - Active measures shall be taken after construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer.
  - In wetlands, mats shall be utilized to minimize soil disturbance.
- 3 Provided that poles or aerial infrastructure shall not be installed within 10 feet of a water body unless the local government completes a no practical alternative evaluation as defined in Item (11) of this Rule.
- 4 Provided that, in Zone One, all of the following BMPs for underground utility lines are used. If all of these BMPs are not used, then the underground utility line shall require a no practical alternative evaluation by the local government, as defined in Item (11) of this Rule.
  - Woody vegetation shall be cleared by hand. No land grubbing or grading is allowed.
  - Vegetative root systems shall be left intact to maintain the integrity of the soil. Stumps shall remain, except in the trench where trees are cut.

- Underground cables shall be installed by vibratory plow or trenching.
  - The trench shall be backfilled with the excavated soil material immediately following cable installation.
  - No fertilizer shall be used other than a one-time application to re-establish vegetation.
  - Construction activities shall minimize the removal of woody vegetation, the extent of the disturbed area, and the time in which areas remain in a disturbed state.
  - Measures shall be taken upon completion of construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer.
  - In wetlands, mats shall be utilized to minimize soil disturbance.
- 5 Perpendicular crossings are those that intersect the surface water at an angle between 75 degrees and 105 degrees.
- (10) REQUIREMENTS FOR CATEGORIES OF USES. Uses designated in Item (9) of this Rule as exempt, allowable, and allowable with mitigation within a riparian buffer shall have the following requirements:
- (a) EXEMPT. Uses designated as exempt are permissible without local government authorization provided that they adhere to the limitations of the activity as defined in Item (9). In addition, exempt uses shall be designed, constructed and maintained to minimize soil disturbance and to provide the maximum water quality protection practicable, including construction, monitoring, and maintenance activities.
  - (b) ALLOWABLE. Uses designated as allowable may proceed provided that there are no practical alternatives to the requested use pursuant to Item (11) of this Rule. This includes construction, monitoring, and maintenance activities. These uses require written authorization from the local government.
  - (c) ALLOWABLE WITH MITIGATION. Uses designated as allowable with mitigation may proceed provided that there are no practical alternatives to the requested use pursuant to Item (11) of this Rule and an appropriate mitigation strategy has been approved pursuant to Item (13) of this Rule. These uses require written authorization from the local government.
- (11) DETERMINATION OF "NO PRACTICAL ALTERNATIVES."
- (a) Persons who wish to undertake uses designated as allowable or allowable with mitigation shall submit a request for a "no practical alternatives" determination to the local government. The applicant shall certify that the project meets all the following criteria for finding "no practical alternatives":
    - (i) The basic project purpose cannot be practically accomplished in a manner that would better minimize disturbance, preserve aquatic life and habitat, and protect water quality;
    - (ii) The use cannot practically be reduced in size or density, reconfigured or redesigned to better minimize disturbance, preserve aquatic life and habitat, and protect water quality; and
    - (iii) Best management practices shall be used if necessary to minimize disturbance, preserve aquatic life and habitat, and protect water quality;
  - (b) The applicant shall also submit at least the following information in support of their assertion of "no practical alternatives":
    - (i) The name, address and phone number of the applicant;
    - (ii) The nature of the activity to be conducted by the applicant;
    - (iii) The location of the activity, including the jurisdiction;
    - (iv) A map of sufficient detail to accurately delineate the boundaries of the land to be utilized in carrying out the activity, the location and dimensions of any disturbance in riparian buffers associated with the activity, and the extent of riparian buffers on the land;
    - (v) An explanation of why this plan for the activity cannot be practically accomplished, reduced or reconfigured to better minimize disturbance to the riparian buffer, preserve aquatic life and habitat and protect water quality; and
    - (vi) Plans for any best management practices proposed to be used to control the impacts associated with the activity.

- (c) Within 60 days of a submission that addresses Sub-Item (11)(b) of this Rule, the local government shall review the entire project and make a finding of fact as to whether the criteria in Sub-Item (11)(a) have been met. A finding of "no practical alternatives" shall result in issuance of an Authorization Certificate. Failure to act within 60 days shall be construed as a finding of "no practical alternatives" and an Authorization Certificate shall be issued to the applicant unless one of the following occurs:
    - (i) The applicant agrees, in writing, to a longer period;
    - (ii) The local government determines that the applicant has failed to furnish requested information necessary to the local government's decision;
    - (iii) The final decision is to be made pursuant to a public hearing; or
    - (iv) The applicant refuses access to its records or premises for the purpose of gathering information necessary to the local government's decision.
  - (d) The local government may attach conditions to the Authorization Certificate that support the purpose, spirit and intent of the riparian buffer protection program.
  - (e) Any appeals of determinations regarding Authorization Certificates shall be referred to the Director. The Director's decision is subject to review as provided in G.S. 150B Articles 3 and 4.
- (12) **VARIANCES.** Persons who wish to undertake prohibited uses may pursue a variance. The local government may grant minor variances. For major variances, local governments shall prepare preliminary findings and submit them to the Commission for approval. The variance request procedure shall be as follows:
- (a) For any variance request, the local government shall make a finding of fact as to whether there are practical difficulties or unnecessary hardships that prevent compliance with the riparian buffer protection requirements. A finding of practical difficulties or unnecessary hardships shall require that the following conditions are met:
    - (i) If the applicant complies with the provisions of this Rule, he/she can secure no reasonable return from, nor make reasonable use of, his/her property. Merely proving that the variance would permit a greater profit from the property shall not be considered adequate justification for a variance. Moreover, the local government shall consider whether the variance is the minimum possible deviation from the terms of this Rule that shall make reasonable use of the property possible;
    - (ii) The hardship results from application of this Rule to the property rather than from other factors such as deed restrictions or other hardship;
    - (iii) The hardship is due to the physical nature of the applicant's property, such as its size, shape, or topography, such that compliance with provisions of this rule would not allow reasonable use of the property;
    - (iv) The applicant did not cause the hardship by knowingly or unknowingly violating this Rule;
    - (v) The applicant did not purchase the property after the effective date of this Rule, and then request a variance; and
    - (vi) The hardship is rare or unique to the applicant's property.
  - (b) For any variance request, the local government shall make a finding of fact as to whether the variance is in harmony with the general purpose and intent of the State's riparian buffer protection requirements and preserves its spirit; and
  - (c) For any variance request, the local government shall make a finding of fact as to whether, in granting the variance, the public safety and welfare have been assured, water quality has been protected, and substantial justice has been done.
  - (d) **MINOR VARIANCES.** A minor variance request pertains to activities that will impact only Zone Two of the riparian buffer. Minor variance requests shall be reviewed and approved based on the criteria in Sub-Items (11)(a) through (11)(c) of this Rule by the local government pursuant to G.S. 153A-Article 18, or G.S. 160A-Article 19. The local government may attach conditions to the variance approval that support the purpose, spirit and intent of the riparian buffer protection program. Request for appeals to decisions made by the local governments shall be made in writing to the Director. The Director's decision is subject to review as provided in G.S. 150B Articles 3 and 4.

- (e) MAJOR VARIANCES. A major variance request pertains to activities that will impact any portion of Zone One or any portion of both Zones One and Two of the riparian buffer. If the local government has determined that a major variance request meets the requirements in Sub-Items (12)(a) through (12)(c) of this Rule, then it shall prepare a preliminary finding and submit it to the Commission for approval. Within 90 days after receipt by the local government, the Commission shall review preliminary findings on major variance requests and take one of the following actions: approve, approve with conditions and stipulations, or deny the request. Appeals from a Commission decision on a major variance request are made on judicial review to Superior Court.
- (13) MITIGATION. Persons who wish to undertake uses designated as allowable with mitigation shall meet the following requirements in order to proceed with their proposed use:
  - (a) Obtain a determination of "no practical alternatives" to the proposed use pursuant to Item (11) of this Rule; and
  - (b) Obtain approval for a mitigation proposal pursuant to 15A NCAC 02B .0268.
- (14) REQUIREMENTS SPECIFIC TO FOREST HARVESTING. The following requirements shall apply for forest harvesting operations and practices:
  - (a) All the following measures shall apply in the entire riparian buffer as applicable:
    - (i) Logging decks and sawmill sites shall not be placed in the riparian buffer;
    - (ii) Access roads and skid trails shall be prohibited except for temporary and permanent stream crossings established in accordance with 15A NCAC 01I .0203. Temporary stream crossings shall be permanently stabilized after any site disturbing activity is completed;
    - (iii) Timber felling shall be directed away from the stream or waterbody;
    - (iv) Skidding shall be directed away from the stream or water body and shall be done in a manner that minimizes soil disturbance and prevents the creation of channels or ruts;
    - (v) Individual trees may be treated to maintain or improve their health, form or vigor;
    - (vi) Harvesting of dead or infected trees as necessary to prevent or control the spread of tree pest and disease infestation shall be allowed. These practices must be approved by the Division of Forest Resources for a specific site pursuant to the rule. The Division of Forest Resources must notify the Division of all approvals;
    - (vii) Removal of individual trees that are in danger of causing damage to structures or human life shall be allowed;
    - (viii) Natural regeneration of forest vegetation and planting of trees, shrubs, or ground cover plants to enhance the riparian buffer shall be allowed provided that soil disturbance is minimized;
    - (ix) High-intensity prescribed burns shall not be allowed; and
    - (x) Application of fertilizer shall not be allowed except as necessary for permanent stabilization. Broadcast application of fertilizer to the adjacent forest stand shall be conducted so that the chemicals are not applied directly to or allowed to drift into the riparian buffer.
  - (b) In Zone One, forest vegetation shall be protected and maintained. Selective harvest as provided for below is allowed on forest lands that have a deferment for use value under forestry in accordance with G.S. 105-277.2 through 277.6 or on forest lands that have a forest management plan. A plan drafted under either option shall meet the standards set out in this Item. Copies of either the approval of the deferment for use value under forestry or the forest management plan shall be produced upon request. For such forest lands, selective harvest is allowed in accordance with the following:
    - (i) Tracked or wheeled vehicles are permitted for the purpose of selective timber harvesting where there is no other practical alternative for removal of individual trees provided activities comply with forest practice guidelines for water quality as defined in 15A NCAC 01I .0101 through .0209, and provided no equipment shall operate within the first 10 feet immediately adjacent to the stream except at stream crossings designed, constructed and maintained in accordance with Rule 15A NCAC 01I .0203;



- (ii) Soil disturbing site preparation activities are not allowed; and
  - (iii) Trees shall be removed with the minimum disturbance to the soil and residual vegetation.
- (c) In addition to the requirements of (b) in this Item, the following provisions for selective harvesting shall be met:
- (i) The first 10 feet of Zone One directly adjacent to the stream or waterbody shall be undisturbed except for the removal of individual high value trees as defined provided that no trees with exposed primary roots visible in the streambank be cut unless listed as an exempt activity under Vegetation Management in the Table of Uses, Sub-Item (9) of this Rule;
  - (ii) In the outer 20 feet of Zone One, a maximum of 50 percent of the trees greater than five inches DBH may be cut and removed. The reentry time for harvest shall be no more frequent than every 15 years, except on forest plantations where the reentry time shall be no more frequent than every five years. In either case, the trees remaining after harvest shall be as evenly spaced as possible; and
  - (iii) In Zone Two, harvesting and regeneration of the forest stand shall be allowed in accordance with 15A NCAC 01I .0100 through .0200 as enforced by the Division of Forest Resources.
- (15) RULE IMPLEMENTATION. This Rule shall be implemented as follows:
- (a) For Division-administered activities listed in Item (3) of this Rule, the Division shall implement the requirements of this Rule as of its effective date;
  - (b) Within two months after the effective date of this Rule, the Division shall submit a model local riparian buffer protection ordinance that embodies the standards set out in this Rule and 15A NCAC 02B .0268 to the Commission for approval;
  - (c) Within six months after the Commission's approval of a model local buffer ordinance, local governments shall submit local programs to the Division for review based on the standards set out in this Rule and 15A NCAC 02B .0268. A local program shall also detail implementation including but not limited to such factors as a method for making variance determinations, a plan for record keeping, and a plan for enforcement. Local governments shall use the latest version of the Division's publication, Identification Methods for the Origins of Intermittent and Perennial Streams, available at [http://h2o.enr.state.nc.us/ncwetlands/documents/NC\\_Stream\\_ID\\_Manual.pdf](http://h2o.enr.state.nc.us/ncwetlands/documents/NC_Stream_ID_Manual.pdf) or at the 401/Wetlands Unit of the North Carolina Division of Water Quality at: Mail Service Center 1650, Raleigh, NC, 27699-1650, to establish the existence of streams;
  - (d) Within one year after the Commission's approval of a model local buffer ordinance, the Division shall provide recommendations to the Commission on local buffer programs. The Commission shall either approve the programs or require changes based on the standards set out in this Rule and 15A NCAC 2B .0268. Should the Commission require changes, the applicable local government shall have two months to submit revisions, and the Division shall provide follow-up recommendations to the Commission within two months after receiving revisions;
  - (e) Within two months after the Commission's approval of local buffer programs, local governments shall implement programs to ensure that existing land use activities and proposed development complies with local programs. A local government shall issue an approval for new development only if the development application proposes to avoid impacts to riparian buffers defined in Item (4) of this Rule, or where the application proposes to impact such buffers, it demonstrates that the applicant has done the following, as applicable:
    - (i) Determined that the activity is exempt from requirements of this Rule;
    - (ii) Received an Authorization Certificate from the Division pursuant to Item (11) of this Rule for uses designated as Allowable or Allowable with Mitigation;
    - (iii) For uses designated as Allowable with Mitigation, received approval of a mitigation plan pursuant to 15A NCAC 02B .0268; and
    - (iv) Received a variance pursuant to Item (12) of this Rule;
  - (f) Upon implementation, local governments shall submit annual reports to the Division summarizing their activities in implementing the requirements of this Rule;

- (g) If a local government fails to adopt or adequately implement its program as called for in this Rule, the Division may take appropriate enforcement action as authorized by statute, and may choose to assume responsibility for implementing that program until such time as it determines that the local government is prepared to comply with its responsibilities; and
- (h) LOCAL OVERSIGHT. The Division shall periodically inspect local programs to ensure that they are being implemented and enforced in keeping with the requirements of this Rule. Local governments shall maintain on-site records for a minimum of five years, and shall furnish a copy of these records to the Division within 30 days of receipt of a written request for them. Local programs' records shall include the following:
  - (i) A copy of all variance requests;
  - (ii) Findings of fact on all variance requests;
  - (iii) Results of all variance proceedings;
  - (iv) A record of complaints and action taken as a result of complaints;
  - (v) Records for stream origin calls and stream ratings; and
  - (vi) Copies of all requests for authorization, records approving authorization and Authorization Certificates.
- (16) OTHER LAWS, REGULATIONS AND PERMITS. In all cases, compliance with this Rule does not preclude the requirement to comply with all other federal, state and local laws, regulations, and permits regarding streams, steep slopes, erodible soils, wetlands, floodplains, forest harvesting, surface mining, land disturbance activities, or any other landscape feature or water quality-related activity.

*History Note: Authority 143-214.1; 143-214.5; 143-214.7; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C; 143 215.8B; 143B-282(c); 143B-282(d) S.L. 1999-329, s. 7.1.; S.L. 2005-190; S.L. 2006-259; Eff. August 11, 2009; See S.L. 2009-216 and S.L. 2009-484.*

**15A NCAC 02B .0268 JORDAN WATER SUPPLY NUTRIENT STRATEGY: MITIGATION FOR RIPARIAN BUFFERS**

The following are requirements for the Riparian Buffer Mitigation Program for the Jordan watershed, as prefaced in 15A NCAC 02B .0262:

- (1) **PURPOSE.** The purpose of this Rule is to set forth the mitigation requirements that the local governments in the Jordan watershed and listed in 15A NCAC 02B .0262, and in the cases stated in 15A NCAC 02B .0267(3) the Division, shall apply to the riparian buffer protection program called for in 15A NCAC 02B .0267. Additionally this Rule will help to protect the water supply uses of Jordan Reservoir and of designated water supplies throughout the Jordan watershed. Local programs shall be established to meet or exceed the minimum requirements of this Rule. For the types of buffer activities listed in 15A NCAC 02B .0267(3), the Division shall apply the requirements of this Rule wherever local governments are referenced. The requirements of this Rule shall supersede all locally implemented buffer requirements stated in 15A NCAC 02B .0214 through .0216 as applied to WS-II, WS-III, and WS-IV waters in the Jordan watershed. Local governments may choose to implement more stringent requirements, including the one-hundred foot buffer requirement set out in Sub-Items (3)(b)(i) of 15A NCAC 02B .0214 through .0216 for high-density developments.
- (2) **APPLICABILITY.** This Rule applies to persons who wish to impact a riparian buffer in the Jordan watershed when one of the following applies:
  - (a) A person has received an Authorization Certificate pursuant to 15A NCAC 02B .0267 for a proposed use that is designated as "allowable with mitigation;" or
  - (b) A person has received a variance pursuant to 15A NCAC 02B .0267 and is required to perform mitigation as a condition of a variance approval.
- (3) **ISSUANCE OF THE MITIGATION APPROVAL.** The local government shall issue a mitigation approval upon determining that a proposal meets the requirements set out in this Rule. The approval shall identify at a minimum the option chosen, the required and proposed areas, and either the mitigation location or the offset payment amount as applicable.
- (4) **OPTIONS FOR MEETING THE MITIGATION REQUIREMENT.** The mitigation requirement may be met through one of the following options:
  - (a) Payment of a compensatory mitigation fee to the Riparian Buffer Restoration Fund pursuant to 15A NCAC 02B .0269 contingent upon acceptance of payments by the NC Ecosystem Enhancement Program, or to a private mitigation bank that complies with banking requirements of the US Army Corps of Engineers, currently set out at <http://www.saw.usace.army.mil/WETLANDS/Mitigation/mitbanks.html> or from the US Army Corps of Engineers, P.O. Box 1890, Wilmington, NC, 28402-1890, and the applicable trading criteria in 15A NCAC 02B .0273;
  - (b) Donation of real property or of an interest in real property pursuant to Item (7) of this Rule; or
  - (c) Restoration or enhancement of a non-forested riparian buffer pursuant to the requirements of Item (8) of this Rule.
- (5) **THE AREA OF MITIGATION.** The local government shall determine the required area of mitigation, which shall apply to all mitigation options identified in Item (4) of this Rule and as further specified in the requirements for each option set out in this Rule, according to the following:
  - (a) The impacts in square feet to each zone of the riparian buffer shall be determined by the local government by adding the following:
    - (i) The area of the footprint of the use causing the impact to the riparian buffer;
    - (ii) The area of the boundary of any clearing and grading activities within the riparian buffer necessary to accommodate the use; and
    - (iii) The area of any ongoing maintenance corridors within the riparian buffer associated with the use.
  - (b) The required area of mitigation shall be determined by applying the following multipliers to the impacts determined in Sub-item (5)(a) of this Rule to each zone of the riparian buffer:
    - (i) Impacts to Zone One of the riparian buffer shall be multiplied by three;
    - (ii) Impacts to Zone Two of the riparian buffer shall be multiplied by one and one-half; and

- (iii) Impacts to wetlands within Zones One and Two of the riparian buffer that are subject to mitigation under 15A NCAC 02H .0506 shall comply with the mitigation ratios in 15A NCAC 02H .0506.
- (6) THE LOCATION OF MITIGATION. For any option chosen, the mitigation effort shall be located within the same subwatershed of the Jordan watershed, as defined in Rule .0262 of this Section, and the same distance from the Jordan Reservoir as the proposed impact, or closer to the Reservoir than the impact, and as close to the location of the impact as feasible. Alternatively, the applicant may propose mitigation anywhere within the same subwatershed of the Jordan watershed, as defined in Rule .0262 of this Section, provided that the mitigation proposal accounts for differences in delivery of nutrients to the affected arm of Jordan Reservoir resulting from differences between the locations of the buffer impact and mitigation. Additional location requirements for the property donation option are enumerated in Sub-Item (7)(c)(i) of this Rule.
- (7) DONATION OF PROPERTY. Persons who choose to satisfy their mitigation determination by donating real property or an interest in real property shall meet the following requirements:
  - (a) The donation of real property interests may be used to either partially or fully satisfy the payment of a compensatory mitigation fee to the Riparian Buffer Restoration Fund pursuant to 15A NCAC 02B .0272. The value of the property interest shall be determined by an appraisal performed in accordance with Sub-item (7)(d)(iv) of this Rule. The donation shall satisfy the mitigation determination if the appraised value of the donated property interest is equal to or greater than the required fee. If the appraised value of the donated property interest is less than the required fee calculated pursuant to 15A NCAC 02B .0272, the applicant shall pay the remaining balance due.
  - (b) accepted only if the conservation easement is granted in perpetuity.
  - (c) Donation of real property interests to satisfy the mitigation determination shall be accepted only if such property meets all of the following requirements:
    - (i) In addition to the location requirements of Item (6), the property shall be located within an area that is identified as a priority for restoration in, or is otherwise consistent with the goals of, the *Basinwide Wetlands and Riparian Restoration Plan for the Cape Fear River Basin* developed by the Department pursuant to G.S. 143-214.10;
    - (ii) The property shall contain riparian buffers not currently protected by the State's riparian buffer protection program that are in need of restoration as defined in Sub-Item (8)(d) of this Rule;
    - (iii) The restorable riparian buffer on the property shall have a minimum length of 1000 linear feet along a surface water and a minimum width of 50 feet as measured horizontally on a line perpendicular to the surface water;
    - (iv) The size of the restorable riparian buffer on the property to be donated shall equal or exceed the area of mitigation responsibility determined pursuant to Item (5) of this Rule;
    - (v) Restoration shall not require removal of man-made structures or infrastructure;
    - (vi) The property shall be suitable to be successfully restored, based on existing hydrology, soils, and vegetation;
    - (vii) The estimated cost of restoring and maintaining the property shall not exceed the value of the property minus site identification and transaction costs;
    - (viii) The property shall not contain any building, structure, object, site, or district that is listed in the National Register of Historic Places established pursuant to Public Law 89-665, 16 U.S.C. 470 as amended;
    - (ix) The property shall not contain any hazardous substance or solid waste;
    - (x) The property shall not contain structures or materials that present health or safety problems to the general public. If wells, septic, water or sewer connections exist, they shall be filled, remediated or closed at owner's expense in accordance with state and local health and safety regulations;
    - (xi) The property and adjacent properties shall not have prior, current, and known future land use that would inhibit the function of the restoration effort; and

- (xii) The property shall not have any encumbrances or conditions on the transfer of the property interests.
- (d) At the expense of the applicant or donor, the following information shall be submitted to the local government with any proposal for donations or dedications of interest in real property:
  - (i) Documentation that the property meets the requirements laid out in Sub-Item (8)(c) of this Rule;
  - (ii) US Geological Survey 1:24,000 (7.5 minute) scale topographic map, county tax map, USDA Natural Resource Conservation Service County Soil Survey Map, and county road map showing the location of the property to be donated along with information on existing site conditions, vegetation types, presence of existing structures and easements;
  - (iii) A current property survey performed in accordance with the procedures of the North Carolina Department of Administration, State Property Office as identified by the State Board of Registration for Professional Engineers and Land Surveyors in "Standards of Practice for Land Surveying in North Carolina." Copies may be obtained from the North Carolina State Board of Registration for Professional Engineers and Land Surveyors, 3620 Six Forks Road, Suite 300, Raleigh, North Carolina 27609;
  - (iv) A current appraisal of the value of the property performed in accordance with the procedures of the North Carolina Department of Administration, State Property Office as identified by the Appraisal Board in the "Uniform Standards of Professional North Carolina Appraisal Practice." Copies may be obtained from the Appraisal Foundation, Publications Department, P.O. Box 96734, Washington, D.C. 20090-6734; and
  - (v) A title certificate.
- (8) **RIPARIAN BUFFER RESTORATION OR ENHANCEMENT.** Persons who choose to meet their mitigation requirement through riparian buffer restoration or enhancement shall meet the following requirements:
  - (a) The applicant may restore or enhance a non-forested riparian buffer if either of the following applies:
    - (i) The area of riparian buffer restoration is equal to the required area of mitigation determined pursuant to Item (5) of this Rule; or
    - (ii) The area of riparian buffer enhancement is three times larger than the required area of mitigation determined pursuant to Item (5) of this Rule;
  - (b) The location of the riparian buffer restoration or enhancement shall comply with the requirements in Item (6) of this Rule;
  - (c) The riparian buffer restoration or enhancement site shall have a minimum width of 50 feet as measured horizontally on a line perpendicular to the surface water;
  - (d) Enhancement and restoration shall both have the objective of establishing a forested riparian buffer according to the requirements of this Item. Enhancement shall be distinguished from restoration based on existing buffer conditions. Where existing trees are sparse, that is greater than or equal to 100 trees per acre but less than 200 trees per acre, a buffer may be enhanced. Where existing woody vegetation is absent, that is less than 100 trees per acre, a buffer may be restored;
  - (e) The applicant shall first receive an Authorization Certificate for the proposed use according to the requirements of 15A NCAC 02B .0267. After receiving this determination, the applicant shall submit a restoration or enhancement plan for approval by the local government. The restoration or enhancement plan shall contain the following:
    - (i) A map of the proposed restoration or enhancement site;
    - (ii) A vegetation plan. The vegetation plan shall include a minimum of at least two native hardwood tree species planted at a density sufficient to provide 320 trees per acre at maturity;
    - (iii) A grading plan. The site shall be graded in a manner to ensure diffuse flow through the riparian buffer;
    - (iv) A fertilization plan; and

- (v) vA schedule for implementation;
- (f) Within one year after the local government has approved the restoration or enhancement plan, the applicant shall present proof to the local government that the riparian buffer has been restored or enhanced. If proof is not presented within this timeframe, then the person shall be in violation of both the State's and the local government's riparian buffer protection program;
- (g) The mitigation area shall be placed under a perpetual conservation easement that will provide for protection of the property's nutrient removal functions; and
- (h) The applicant shall submit annual reports for a period of five years after the restoration or enhancement showing that the trees planted have survived and that diffuse flow through the riparian buffer has been maintained. The applicant shall replace trees that do not survive and restore diffuse flow if needed during that five-year period.

*History Note: Authority 143-214.1; 143-214.5; 143-214.7; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C; 143 215.8B; 143B-282(c); 143B-282(d); S.L. 1999-329, s. 7.1.; S.L. 2005-190; S.L. 2006-259; Eff. August 11, 2009.*

**15A NCAC 02B .0269 RIPARIAN BUFFER MITIGATION FEES TO THE NC ECOSYSTEM  
ENHANCEMENT PROGRAM**

The following is the process for payment of fees to the Riparian Buffer Restoration Fund administered by the North Carolina Ecosystem Enhancement Program as one option to mitigate riparian buffer impacts allowed under rules in this Subchapter. Persons who wish to use this option shall first meet the criteria established for doing so in the buffer rules in this subchapter that reference this Rule. Such buffer rules include, but may not be limited to, 15A NCAC 02B .0242, .0244, .0260, and .0268. Persons who choose to satisfy their mitigation determination by paying a compensatory mitigation fee to the Riparian Buffer Restoration Fund as allowed here shall use the following procedure:

- (1) **SCHEDULE OF FEES:** The amount of payment into the Fund shall be based on the costs of riparian buffer restoration. The payment amount shall be determined by multiplying the acres or square feet of mitigation required under other rules in this Subchapter by an initial value of ninety-six cents per square foot or forty-one thousand eight hundred and eighteen dollars per acre (\$41,818/acre). This initial per-acre rate shall be adjusted in January of each year by staff of the NC Ecosystem Enhancement Program based upon the construction cost index factor published every December in the *Engineering News Record*.
- (2) The required fee shall be submitted to the N.C. Ecosystem Enhancement Program (NC EEP), 1652 Mail Service Center, Raleigh, NC 27699-1652 prior to any activity that results in the removal or degradation of the protected riparian buffer for which a "no practical alternatives" determination has been made pursuant to requirements of other rules in this Subchapter.
- (3) The payment of a compensatory mitigation fee may be fully or partially satisfied by donation of real property interests pursuant to requirements of other rules in this Subchapter.

*History Note:* Authority G S. 143-214.1; 143-214.5; 143-214.5(i); 143-214.7; 143-214.12; 143-214.21; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C; 143 215.8B; 143B-282(c); 143B-282(d); S.L. 2005-190; S.L. 2006-259; Eff. August 11, 2009.

**15A NCAC 02B .0270 JORDAN WATER SUPPLY NUTRIENT STRATEGY: WASTEWATER DISCHARGE REQUIREMENTS**

(See S.L. 2009-216 and S.L. 2009-484)

The following is the NPDES wastewater discharge management strategy for the B. Everett Jordan Reservoir watershed, or Jordan watershed:

- (1) **PURPOSE.** The purpose of this Rule is to establish minimum nutrient control requirements for point source wastewater discharges in the Jordan watershed in order to restore and maintain water quality in the reservoir and its tributaries and protect their designated uses, including water supply.
- (2) **APPLICABILITY.** This Rule applies to all wastewater treatment facilities discharging in the Jordan watershed that receive nutrient-bearing wastewater and are subject to requirements for individual NPDES permits.
- (3) **DEFINITIONS.** For the purposes of this Rule, the following definitions apply:
  - (a) In regard to point source dischargers, treatment facilities, and wastewater flows and discharges,
    - (i) "Existing" means that which was subject to a NPDES permit as of December 31, 2001;
    - (ii) "Expanding" means that which has increased or will increase beyond its permitted flow as defined in this Rule; and
    - (iii) "New" means that which was not subject to a NPDES permit as of December 31, 2001.
  - (b) "Active" allocation means that portion of an allocation that has been applied toward and is expressed as a nutrient limit in an individual NPDES permit. Allocation that is held but not applied in this way is "reserve" allocation.
  - (c) "Limit" means the mass quantity of nitrogen or phosphorus that a discharger or group of dischargers is authorized through a NPDES permit to release into surface waters of the Jordan watershed. Limits are enforceable and may be expressed as "delivered limit" or as the equivalent "discharge limit."
  - (d) "MGD" means million gallons per day.
  - (e) "Permitted flow" means the maximum monthly average flow authorized in a facility's NPDES permit as of December 31, 2001, with the following exceptions:

Facility Owner	Facility Name	NPDES Permit	Permitted Flow (MGD)
B. E. Jordan & Son, LLC	B. E. Jordan & Son WWTP	NC0042528	0.036
Durham County	Triangle WWTP	NC0026051	12.0
Fearrington Utilities, Inc.	Fearrington Village WWTP	NC0043559	0.5
Greensboro, City of	T.Z. Osborne WWTP	NC0047384	40.0
Mervyn R. King	Countryside Manor WWTP	NC0073571	0.03
OWASA	Mason Farm WWTP	NC0025241	14.5
Pittsboro, Town of	Pittsboro WWTP	NC0020354	2.25
Quarterstone Farm Assoc.	Quarterstone Farm WWTP	NC0066966	0.2
Aqua North Carolina, Inc.	Chatham WRF	NC0056413	0.35

- (f) "Reserve" allocation means allocation that is held by a permittee or other person but which has not been applied toward and is not expressed as a nutrient limit in an individual NPDES permit. Allocation that has been applied and expressed in this way is "active" allocation.
- (4) This Item provides for the initial division of nutrient wasteload allocations among point source dischargers under this strategy.
  - (a) The delivered wasteload allocations of nitrogen and phosphorus assigned to point source dischargers collectively in each of the Jordan subwatersheds, as set out in 15A NCAC 02B .0262(4), shall be divided as follows:



Subwatershed and Discharger Subcategories	Delivered Allocations (lb/yr)	
	Total Nitrogen	Total Phosphorus
Upper New Hope Arm		
Permitted flows ≥ 0.1 MGD	332,466	22,498
Permitted flows < 0.1 MGD	3,613	608
Lower New Hope Arm		
Permitted flows ≥ 0.1 MGD	6,836	498
Permitted flows < 0.1 MGD	0	0
Haw River Arm		
Permitted flows ≥ 0.1 MGD	881,757	104,004
Permitted flows < 0.1 MGD	13,370	1,996

- (b) The nutrient allocations in Sub-Item (a) of this Item shall be apportioned among the existing dischargers in each subcategory in proportion to the dischargers' permitted flows and the resulting delivered nutrient allocations assigned to each individual discharger.
- (5) This Item describes allowable changes in nutrient allocations.
  - (a) The aggregate and individual nutrient allocations available to point source dischargers in the Jordan watershed are subject to change:
    - (i) Whenever the Commission, through rulemaking, revises the wasteload allocations in 15A NCAC 02B .0262 in order to ensure the protection of water quality in the reservoir and its tributaries or to conform with applicable state or federal requirements;
    - (ii) Whenever one or more point source dischargers acquires any portion of the nonpoint load allocations under the provisions in this Rule, and 15A NCAC 02B .0273, Options for Offsetting Nutrient Loads;
    - (iii) As the result of allocation transfers between point sources or between point and nonpoint sources, except that nutrient allocation can be transferred and applied only within its assigned subwatershed; or
    - (iv) Any allocation is valid only in the subwatershed for which it is first established.
  - (b) In the event that the Commission changes any nutrient wasteload allocation specified in 15A NCAC 02B .0262 or Item (4) of this Rule, the Commission shall also re-evaluate the apportionment among the dischargers and shall revise the individual allocations as necessary.
- (6) This Item identifies nutrient control requirements specific to existing discharges.
  - (a) Beginning with the first full calendar year following the effective date of this Rule, any existing discharger with a permitted flow of 0.1 MGD or greater shall limit its total phosphorus discharge to its active individual discharge allocation as defined or modified pursuant to this Rule.
  - (b) No later than six months after the effective date of this Rule, each existing discharger with a permitted flow greater than or equal to 0.1 MGD shall evaluate its treatment facilities and operations and identify further opportunities to improve and optimize nitrogen reduction in the existing facilities beyond those previously implemented pursuant to G.S. 143-215.1B(d); and submit a report to the Division documenting its findings, proposing optimization measures, and describing expected results. No later than six months following Division acceptance of the report, or as provided in the acceptance, the discharger shall implement the proposed measures. Beginning one year following Division acceptance of the report and continuing through the fifth calendar year after the effective date of this Rule, each such discharger shall submit a progress report to the Division documenting the status of the proposed measures and the nitrogen reductions achieved at the facility.
  - (c) Beginning with the fifth full calendar year after the effective date of this Rule, each existing discharger with a permitted flow greater than or equal to 0.1 MGD shall limit its total

- nitrogen discharge to its active individual discharge allocation as defined or modified pursuant to this Rule.
- (d) Not later than 45 days after the effective date of this Rule, the Director shall notify existing permittees of the individual nitrogen and phosphorus allocations assigned according to Item (4) of this Rule and shall further notify each permittee, pursuant to 15A NCAC 02H .0114, of the Division's intent to modify the permittee's NPDES permit to incorporate nitrogen and phosphorus limits pursuant to the requirements set out in this rule and in accordance with applicable rules and regulations.
- (7) This Item identifies nutrient control requirements specific to new discharges.
- (a) Any person proposing a new wastewater discharge to surface waters shall meet the following requirements prior to applying for an NPDES permit:
    - (i) Evaluate all practical alternatives to said discharge, pursuant to 15A NCAC 02H .0105(c)(2);
    - (ii) If the results of the evaluation support a new discharge, acquire sufficient nitrogen and phosphorus allocations for the discharge. The proponent may obtain allocation for the proposed discharge from existing dischargers pursuant to the applicable requirements of Item (9) of this Rule or employ measures to offset the increased nutrient loads resulting from the proposed discharge. The proponent may fund offset measures by making payment to the NC Ecosystem Enhancement Program contingent upon acceptance of payments by that Program, or implement other offset measures contingent upon approval by the Division, either of which shall meet the requirements of rule 15A NCAC 02B .0273. The offsets shall be of an amount equivalent to the allocations required for a period of 30 years. Payment for each 30-year portion of the nonpoint source load allocation shall be made prior to the ensuing permit issuance;
    - (iii) Determine whether the proposed discharge of nutrients will cause local water quality impacts; and
    - (iv) Provide documentation with its NPDES permit application demonstrating that the requirements of Sub-Items (i) through (iii) of this Sub-Item have been met.
  - (b) The nutrient discharge allocations and offsets for a new facility shall not exceed the mass loads equivalent to a concentration of 3.0 mg/L nitrogen or 0.18 mg/L phosphorus at the permitted flow in the discharger's NPDES permit.
  - (c) Upon the effective date of its NPDES permit, a new discharger shall be subject to nitrogen and phosphorus limits not to exceed its active individual discharge allocations.
- (8) This Item identifies nutrient control requirements specific to expanding discharges.
- (a) Any person proposing to expand an existing wastewater discharge to surface waters beyond its permitted flow as defined in this Rule shall meet the following requirements prior to applying for an NPDES permit:
    - (i) Evaluate all practical alternatives to said discharge, pursuant to 15A NCAC 02H .0105(c)(2);
    - (ii) If the results of the evaluation support an expanded discharge, acquire sufficient nitrogen and phosphorus allocations for the discharge. The proponent may obtain allocation for the proposed discharge from existing dischargers pursuant to the applicable requirements of Item (9) of this Rule or employ measures to offset the increased nutrient loads resulting from the proposed discharge. The proponent may fund offset measures by making payment to the NC Ecosystem Enhancement Program contingent upon acceptance of payments by that Program or implement other offset measures contingent upon approval by the Division, either of which shall meet the requirements of rule 15A NCAC 02B .0273. The offsets shall be of an amount equivalent to the allocations required for a period of 30 years. Payment for each 30-year portion of the nonpoint source load allocation shall be made prior to the ensuing permit issuance;
    - (iii) Determine whether the proposed discharge of nutrients will cause local water quality impact; and

- (iv) Provide documentation with its NPDES permit application demonstrating that the requirements of Sub-Items (i) through (iii) of this Sub-Item have been met.
- (b) The nutrient discharge limits for an expanding facility shall not exceed the greater of its nutrient allocations or the mass value equivalent to a concentration of 3.0 mg/L nitrogen or 0.18 mg/L phosphorus at the permitted flow in the discharger's NPDES permit; except that this provision shall not result in an allocation or limit that is less than originally assigned to the discharger under this Rule.
- (c) Upon expansion or upon notification by the Director that it is necessary to protect water quality, any discharger with a permitted flow of less than 0.1 MGD, as defined under this Rule, shall become subject to total nitrogen and total phosphorus permit limits not to exceed its active individual discharge allocations.
- (9) This Item describes additional requirements regarding nutrient discharge limits for wastewater facilities:
  - (a) Annual mass nutrient limits shall be established as calendar-year limits.
  - (b) Any point source discharger holding nutrient allocations under this Rule may by mutual agreement transfer all or part of its allocations to any new, existing, or expanding dischargers in the same Jordan subwatershed or to other person(s), subject to the provisions of the Jordan nutrient strategy.
  - (c) For NPDES compliance purposes, the enforceable nutrient limits for an individual facility or for a compliance association described in Item (10) shall be the effective limits in the governing permit, regardless of the allocation held by the discharger or association.
  - (d) The Director may establish more stringent nitrogen or phosphorus discharge limits for any discharger upon finding that such limits are necessary to prevent the discharge from causing adverse water quality impacts on surface waters other than an arm of Jordan Reservoir as defined in Rule .0262(4) of this strategy. The Director shall establish such limits through modification of the discharger's NPDES permit in accordance with applicable rules and regulations. When the Director does so, the discharger retains its nutrient allocations, and the non-active portion of the discharger's allocation becomes reserve allocation. The allocation remains in reserve until the director determines that less stringent limits are allowable or until the allocation is applied to another discharge not subject to such water quality-based limits.
  - (e) In order for any transfer of allocation to become effective as a discharge limit in an individual NPDES permit, the discharger must request and obtain modification of the permit. Such request shall:
    - (i) Describe the purpose and nature of the modification;
    - (ii) Describe the nature of the transfer agreement, the amount of allocation transferred, and the dischargers or persons involved;
    - (iii) Provide copies of the transaction agreements with original signatures consistent with NPDES signatory requirements; and
    - (iv) Demonstrate to the Director's satisfaction that the increased nutrient discharge will not violate water quality standards in localized areas.
  - (f) Changes in a discharger's nutrient limits shall become effective upon modification of its individual permit but no sooner than January 1 of the year following modification. If the modified permit is issued after January 1, the Director may make the limit effective on that January 1 provided that the discharger made acceptable application in a timely manner.
  - (g) Regional Facilities. In the event that an existing discharger or group of dischargers accepts wastewater from another NPDES-permitted treatment facility in the same Jordan subwatershed and that acceptance results in the elimination of the discharge from the other treatment facility, the eliminated facility's delivered nutrient allocations shall be transferred and added to the accepting discharger's delivered allocations.
- (10) This Item describes the option for dischargers to join a group compliance association to collectively meet nutrient control requirements.
  - (a) Any or all facilities within the same Jordan subwatershed may form a group compliance association to meet delivered nutrient allocations collectively. More than one group compliance association may be established in any subwatershed. No facility may belong to more than one association at a time.

- (b) Any such association must apply for and shall be subject to an NPDES permit that establishes the effective nutrient limits for the association and for its members.
- (c) No later than 180 days prior to the proposed date of a new association's operation or expiration of an existing association's NPDES permit, the association and its members shall submit an application for a NPDES permit for the discharge of nutrients to surface waters of the Jordan watershed. The association's NPDES permit shall be issued to the association and its members. It shall specify the delivered nutrient limits for the association and for each of its co-permittee members. Association members shall be deemed in compliance with the permit limits for nitrogen and phosphorus contained in their individually issued NPDES permits so long as they remain members in an association.
- (d) An association's delivered nitrogen and phosphorus limits shall be the sum of its members' individual active delivered allocations for each nutrient plus any other active allocation obtained by the association or its members.
- (e) The individual delivered allocations for each member in the association permit shall initially be equivalent to the discharge limits in effect in the member's NPDES permit. Thereafter, changes in individual allocations or limits must be incorporated into the members' individual permits before they are included in the association permit.
- (f) An association and its members may reapportion the individual delivered allocations of its members on an annual basis. Changes in individual allocations or limits must be incorporated into the members' individual permits before they are included in the association permit.
- (g) Changes in nutrient limits shall become effective no sooner than January 1 of the year following permit modification. If the modified permit is issued after January 1, the Director may make the limit effective on that January 1 provided that the discharger made acceptable application in a timely manner.
- (h) Beginning with the first full calendar year that the nitrogen or phosphorus limits are effective, an association that does not meet its permit limit for nitrogen or phosphorus for a calendar year shall, no later than May 1 of the year following the exceedance, make an offset payment to the NC Ecosystem Enhancement Program contingent upon acceptance of payments by that Program or by implementing other load offsetting measures contingent upon approval by the Division, either of which shall meet the requirements of rule 15A NCAC 02B .0273.
- (i) Association members shall be deemed in compliance with their individual delivered limits in the association NPDES permit for any calendar year in which the association is in compliance with its delivered limit. If the association fails to meet its delivered limit, the association and the members that have failed to meet their individual delivered nutrient limits in the association NPDES permit will be out of compliance with the association NPDES permit.

*History Note:* Authority G.S. 143-214.1; 143-214.5; 143-215; 143-215.1; 143-215.3(a)(1); 143-215B; 143B-282(c); 143B-282(d); S.L. 1995, c. 572; S.L. 2005-190; S.L. 2006-259; Eff. August 11, 2009; See S.L. 2009-216 and S.L. 2009-484.

**15A NCAC 02B .0271 JORDAN WATER SUPPLY NUTRIENT STRATEGY: STORMWATER REQUIREMENTS FOR STATE AND FEDERAL ENTITIES**  
 (See S.L. 2009-216 and 2009-484)

The following is the stormwater strategy for the activities of state and federal entities within the Jordan watershed, as prefaced in Rule 02B .0262.

- (1) **PURPOSE.** The purposes of this Rule are as follows.
  - (a) To achieve and maintain, on new non-road development lands, the nonpoint source nitrogen and phosphorus percentage reduction goals established for Jordan Reservoir in 15A NCAC 02B .0262 relative to the baseline period defined in that Rule, to provide the highest practicable level of treatment on new road development, and to achieve and maintain the percentage goals on existing developed lands by reducing loading from state-maintained roadways and facilities, and from lands controlled by other state and federal entities in the Jordan watershed;
  - (b) To ensure that the integrity and nutrient processing functions of receiving waters and associated riparian buffers are not compromised by erosive flows from state-maintained roadways and facilities and from lands controlled by other state and federal entities in the Jordan watershed; and
  - (c) To protect the water supply uses of Jordan Reservoir and of designated water supplies throughout the Jordan watershed.
- (2) **APPLICABILITY.** This Rule shall apply to all existing and new development, both as defined in 15A NCAC 02B .0263, that lies within or partially within the Jordan watershed under the control of the NC Department of Transportation (NCDOT), including roadways and facilities, and to all lands controlled by other state and federal entities in the Jordan watershed.
- (3) **NON-NCDOT REQUIREMENTS.** With the exception of the NCDOT, all state and federal entities that control lands within the Jordan watershed shall meet the following requirements:
  - (a) For any new development proposed within their jurisdictions that would disturb one-half acre or more, non-NCDOT state and federal entities shall develop stormwater management plans for submission to and approval by the Division. These stormwater plans shall not be approved by the Division unless the following criteria are met:
    - (i) The nitrogen and phosphorus loads contributed by the proposed new development activity in a given subwatershed shall not exceed the unit-area mass loading rates applicable to that subwatershed as follows for nitrogen and phosphorus, respectively, expressed in units of pounds per acre per year: 2.2 and 0.82 in the Upper New Hope; 4.4 and 0.78 in the Lower New Hope; and 3.8 and 1.43 in the Haw. The developer shall determine the need for engineered stormwater controls to meet these loading rate targets by using the loading calculation method called for in this Section or other equivalent method acceptable to the Division.
    - (ii) Proposed new development subject to NPDES, water supply, and other state-mandated stormwater regulations shall comply with those regulations in addition to the other requirements of this Sub-Item. Proposed new development in any water supply watershed in the Jordan watershed designated WS-II, WS-III, or WS-IV shall comply with the density-based restrictions, obligations, and requirements for engineered stormwater controls, clustering options, and 10/70 provisions described in Sub-Items (3)(b)(i) and (3)(b)(ii) of the applicable Rule among 15A NCAC 02B .0214 through .0216;
    - (iii) Stormwater systems shall be designed to control and treat the runoff generated from all surfaces by one inch of rainfall. The treatment volume shall be drawn down pursuant to guidance specific to each practice as provided in the most recent version of the *Stormwater Best Management Practices Manual* published by the Division, or other technically at least equivalent guidance acceptable to the Division. To ensure that the integrity and nutrient processing functions of receiving waters and associated riparian buffers are not compromised by erosive flows, stormwater flows from the development shall not contribute to degradation of waters of the State. At a minimum, the development shall not result in a net increase in peak flow leaving the site from pre-development conditions for the one-year, 24-hour storm event;

- (iv) Proposed new development that would replace or expand structures or improvements that existed as of December 2001, the end of the baseline period, and which would not result in a net increase in built-upon area shall not be required to meet the nutrient loading targets or high-density requirements except to the extent that it shall provide stormwater control at least equal to the previous development. Proposed new development that would replace or expand existing structures or improvements and would result in a net increase in built-upon area shall have the option either to achieve at least the percentage load reduction goals stated in 15A NCAC 02B .0262 as applied to nitrogen and phosphorus loading from the previous development for the entire project site, or to meet the loading rate targets described in Sub-Item (3)(a)(i);
  - (v) Proposed new development shall comply with the riparian buffer protection requirements of 15A NCAC 02B .0267 and .0268;
  - (vi) The entity shall have the option of offsetting part of the nitrogen and phosphorus loads by implementing or funding offsite management measures as follows: Before using offsite offset options, a development shall meet any requirements for engineered stormwater controls described in Sub-Item (3)(a)(ii) of this Rule, and shall attain a maximum nitrogen loading rate on-site of four pounds per acre per year for single-family, detached and duplex residential development and eight pounds per acre per year for other development, including multi-family residential, commercial and industrial and shall meet any requirements for engineered stormwater controls described in Sub-Item (3)(a)(iii) of this Rule. An entity may make offset payments to the NC Ecosystem Enhancement Program contingent upon acceptance of payments by that Program. An entity may propose other offset measures to the Division, including providing its own offsite offset or utilizing a private seller. All offset measures identified in this Sub-Item shall meet the requirements of 15A NCAC 02B .0273(2)-(4); and
  - (vii) The non-NCDOT state or federal entity shall include measures to ensure maintenance of best management practices (BMPs) implemented as a result of the provisions in Sub-Item (3)(a) of this Rule for the life of the development.
- (b) For existing development, non-NCDOT state and federal entities shall develop and implement load reduction programs for achieving and maintaining nutrient load reductions from existing development based on the standards set out in this Sub-Item. Such entities shall submit these programs for approval by the Division. A load reduction program shall include the following elements and meet the associated criteria:
- (i) The long-term objective of this program shall be for the entity to achieve the percentage nutrient load reduction goals in Item (3) of 15A NCAC 02B .0262 relative to annual mass loads, in pounds per year, representative of the baseline period defined in that Rule and reaching Jordan Reservoir from existing developed lands within each subwatershed under its control. Loads shall be calculated by applying the Tar-Pamlico Nutrient Export Calculation Worksheet, Piedmont Version, dated October 2004, or an equivalent or more accurate method acceptable to the Division, to acreages of different types of existing developed lands as defined in this Sub-Item and in Item (2) of this Rule. To provide entities spatial latitude to obtain reductions in different locations, loads thus calculated shall be converted to delivered loads to Jordan Reservoir using transport factors established in the Division document, *Nitrogen and Phosphorus Delivery from Small Watersheds to Jordan Lake*, dated June 30, 2002. Subject entities shall include estimates of, and plans for offsetting, nutrient load increases from lands developed subsequent to the baseline period but prior to implementation of new development programs. For these post-baseline developed lands, the new loading rate shall be compared to the applicable loading rate target in Sub-Item (3)(a)(i) of 15A NCAC 02B .0273 for the subwatershed and acres involved, and the difference shall constitute the load reduction need. Should percentage reduction goals be adjusted pursuant to Item (7) of 15A NCAC 02B .0262, then the annual load goals established in this Sub-Item

- shall be adjusted accordingly. Entities may seek to fund implementation of load-reducing activities through grant sources such as the North Carolina Clean Water Act Section 319 Grant Program, or other funding programs for nonpoint sources;
- (ii) The load reduction program shall include a plan and supporting technical analysis for achieving half of each load reduction goal within 10 years after the effective date of this Rule, and a plan and timeframes for achieving the remaining half subject to modification based on technical analysis at 10 years after effective date. A load reduction program may propose an alternative compliance timeframe provided it includes a technical analysis that demonstrates the need for that timeframe. A program technical analysis shall examine the feasibility of achieving stated goals and shall consider factors such as magnitude of reduction need relative to area within a subwatershed, the potential for utilizing the range of load-reducing activities listed in Sub-Item (3)(a)(iv), and relative costs and efficiencies of each activity to the extent information is available. The load reduction program shall propose implementation rates and timeframes for each activity, and shall provide for proportionate annual progress toward meeting the reduction goals as practicable, that is capable of being put into practice, done, or accomplished;
  - (iii) The load reduction program shall identify specific load-reducing practices implemented to date subsequent to the baseline period and for which it is seeking credit. It shall estimate load reductions for these practices using methods provided for in Item (8), and their anticipated duration;
  - (iv) The load reduction program shall identify the types of activities the entity intends to implement and types of existing development affected, relative proportions or a prioritization of practices, and the relative magnitude of reductions it expects to achieve from each. An entity may credit any nitrogen or phosphorus load reductions in excess of those required by other rules in this Chapter. The program shall identify the duration of anticipated load reductions, and may seek activities that provide sustained, long-term reductions. The load reduction program shall meet the requirements of 15A NCAC 02B .0273. Potential load-reducing activities may include stormwater activities such as street sweeping, improvement of existing ponds and stormwater structures, removal of existing built-upon area, retrofitting of existing development with engineered best management practices (BMPs), treatment of runoff in redevelopment projects, over-treatment of runoff in new development projects, source control activities such as pet waste reduction and fertilization reduction, alternative stormwater practices such as rain barrels, cisterns, downspout disconnections, and stormwater capture and reuse, restoration of ecological communities such as streams and riparian buffers, and wastewater activities such as creation of surplus allocation through advanced treatment at wastewater facilities, expansion of surplus allocation through regionalization, collection system improvements, and removal of illegal discharges;
  - (v) The load reduction program shall identify anticipated funding mechanisms or sources and discuss steps taken or planned to secure such funding;
  - (vi) An entity shall have the option of working with municipalities or counties within its subwatershed to jointly meet the load targets from all existing development within their combined jurisdictions. An entity may utilize private or third party sellers. All reductions shall meet the requirements of 15A NCAC 02B .0273;
  - (vii) The entity shall include measures to provide for operation and maintenance of retrofitted stormwater controls to ensure that they meet the load targets required in Sub-Item (3)(b) of this Rule for the life of the development; and
  - (viii) An entity may choose to conduct monitoring of stream flows and runoff from catchments to quantify disproportionately high loading rates relative to those used in the accounting methods stipulated under Item (8), and to subsequently target load-reducing activities to demonstrated high-loading source areas within such catchments for proportionately greater load reduction credit. An entity may propose such actions in its initial load reduction program submittal or at any time

subsequent, and shall obtain Division approval of the monitoring design. It shall also obtain Division approval of any resulting load reduction benefits based on the standards set out in this Rule. As detailed in Item (5), an entity that chooses such monitoring initially may delay submittal of its load reduction program by one year for the purpose of incorporating monitoring findings into its program design provided it submits to the Division within six months of the effective date of this Rule a satisfactory monitoring proposal involving at least one year of up-front monitoring, executes the monitoring, and provides the results to the Division as part of its load reduction program submittal.

- (4) NCDOT REQUIREMENTS The NCDOT shall develop a single Stormwater Management Program that will be applicable to the entire Jordan watershed and submit this program for approval by the Division according to the following standards:
- (a) Identify NCDOT stormwater outfalls from Interstate, US, and NC primary routes;
  - (b) Identify and eliminate illegal discharges into the NCDOT's stormwater conveyance system;
  - (c) Establish a program for post-construction stormwater runoff control for new development, including new and widening NCDOT roads and facilities. The program shall establish a process by which the Division shall review and approve stormwater designs for new NCDOT development projects. The program shall delineate the scope of vested projects that would be considered as existing development, and shall define lower thresholds of significance for activities considered new development. In addition, the following criteria shall apply:
    - (i) For new and widening roads, compliance with the riparian buffer protection requirements of Rules 15A NCAC 02B .0267 and .0268 which are expected to achieve a 30 percent nitrogen reduction efficiency in runoff treatment through either diffuse flow into buffers or other practices) shall be deemed as compliance with the purposes of this Rule.
    - (ii) New non-road development shall achieve and maintain the nitrogen and phosphorus percentage load reduction goals established for each subwatershed in 15A NCAC 02B .0262 relative to either area-weighted average loading rates of all developable lands as of the baseline period defined in 15A NCAC 02B .0262, or to project-specific pre-development loading rates. Values for area-weighted average loading rate targets for nitrogen and phosphorus, respectively, in each subwatershed shall be the following, expressed in units of pounds per acre per year: 2.2 and 0.82 in the Upper New Hope; 4.4 and 0.78 in the Lower New Hope; and 3.8 and 1.43 in the Haw. The NCDOT shall determine the need for engineered stormwater controls to meet these loading rate targets by using the loading calculation method called for in Item (8) or other equivalent method acceptable to the Division. Where stormwater treatment systems are needed to meet these targets, they shall be designed to control and treat the runoff generated from all surfaces by one inch of rainfall. Such systems shall be assumed to achieve the nutrient removal efficiencies identified in the most recent version of the *Stormwater Best Management Practices Manual* published by the Division provided that they meet associated drawdown and other design specifications included in the same document. The NCDOT may propose to the Division nutrient removal rates for practices currently included in the BMP Toolbox required under its NPDES stormwater permit, or may propose revisions to those practices or additional practices with associated nutrient removal rates. The NCDOT may use any such practices approved by the Division to meet loading rate targets identified in this Sub-Item. New non-road development shall also control runoff flows to meet the purpose of this Rule regarding protection of the nutrient functions and integrity of receiving waters.
    - (iii) For new non-road development, the NCDOT shall have the option of partially offsetting its nitrogen and phosphorus loads by implementing or funding offsite management measures. These offsite offsetting measures shall achieve at least equivalent reductions in nitrogen and phosphorus load to the remaining reduction needed onsite to comply with Sub-Item (4)(c)(ii) of this Rule. Before using offsite offset options, a development shall attain a maximum nitrogen loading rate of 8



- pounds per acre per year. The NCDOT may make offset payments to the NC Ecosystem Enhancement Program contingent upon acceptance of payments by that Program. The NCDOT may propose other offset measures to the Division. All offset measures identified in this Sub-Item shall meet the requirements of 15A NCAC 02B .0273.
- (d) Establish a program to identify and implement load-reducing opportunities on existing development within the watershed. The long-term objective of this effort shall be for the NCDOT to achieve the nutrient load goals in 15A NCAC 02B .0262 as applied to existing development under its control, including roads and facilities.
- (i) For existing non-roadway development, the program shall include estimates of, and plans for offsetting, nutrient load increases from lands developed subsequent to the baseline period but prior to implementation of its new development program. It shall include a technical analysis that includes a proposed implementation rate and schedule. This schedule shall provide for proportionate annual progress toward reduction goals as practicable throughout the proposed compliance period. The program shall identify the types of activities NCDOT intends to implement and types of existing non-roadway development affected, relative proportions or a prioritization of practices, and the relative magnitude of reductions it expects to achieve from each.
- (ii) For existing roadway development, NCDOT may meet minimum implementation rate and schedule requirements by implementing retrofits or other load-reducing measures in the watershed to achieve load reductions at the rate of 500 pounds of nitrogen reduction per 5-year period and at least 50 pounds per year. To the maximum extent practicable, retrofits shall be designed to treat the runoff generated from all surfaces by 1 inch of rainfall, and shall conform to the standards and criteria established in the most recent version of the Division-approved NCDOT BMP Toolbox required under NCDOT's NPDES stormwater permit. To establish removal rates for nutrients in the Toolbox, design criteria for individual practices therein shall be modified as needed consistent with such criteria in the most recent version of the *Stormwater Best Management Practices Manual* published by the Division, or other technically at least equivalent guidance acceptable to the Division, and the Division shall approve such modifications as part of the accounting process defined in Item (8) of this Rule. Other aspects of nutrient mass load calculations shall be based on the accounting process defined in Item (8) of this Rule.
- (e) Initiate a "Nutrient Management Education Program" for NCDOT staff and contractors engaged in the application of fertilizers on highway rights of way. The purpose of this program shall be to contribute to the load reduction goals established in 15A NCAC 02B .0262 through proper application of nutrients, both inorganic fertilizer and organic nutrients, to highway rights of way in the Jordan watershed in keeping with the most current state-recognized technical guidance on proper nutrient management; and
- (f) Address compliance with the riparian buffer protection requirements of 15A NCAC 02B .0267 and .0268 through a Division approval process.
- (5) NON-NCDOT RULE IMPLEMENTATION. For all state and federal entities that control lands within the Jordan watershed with the exception of the NCDOT, this Rule shall be implemented as follows:
- (a) Within six months after the effective date of this Rule, any entity that intends to use water quality monitoring to guide the initial design of its load reduction program shall provide a monitoring design to the Division. The Division shall notify any such entity of the adequacy of its design within three months of submittal. When an entity's monitoring design is deemed adequate, it may delay submittal of its load reduction program by up to one year from the timeframe given in Sub-Item (5)(c) of this Rule, whereupon the same time interval would be added to the approval and implementation timeframes given in Sub-Items (5)(d) through (5)(f) of this Rule;

- (b) Upon Commission approval of the accounting methods required by Item (8) of this Rule, subject entities shall comply with the requirements of Sub-Item (3)(a) of this Rule for any new development proposed within their jurisdictions;
  - (c) Within 24 months after the Commission's approval of the accounting methods, subject entities shall submit load reduction programs to the Division for preliminary approval according to the standards set out in Sub-Item (3)(b) of this Rule;
  - (d) Within 34 months after the Commission's approval of the accounting methods, the Division shall request the Commission's approval of entities' load reduction programs. The Commission shall either approve the programs or require changes. Should the Commission require changes, the Division shall seek Commission approval at the earliest feasible date subsequent to the original request;
  - (e) Within 36 months after the Commission's approval of the accounting methods, or within two months following Commission approval of a load reduction program, whichever is later, entities shall begin to implement load reduction programs; and
  - (f) Upon implementation of the requirements of Item (3) of this Rule, subject entities shall provide annual reports to the Division documenting their progress in implementing those requirements.
- (6) NCDOT RULE IMPLEMENTATION. For the NCDOT, this Rule shall be implemented as follows:
- (a) Within 30 months of the effective date of this Rule, the NCDOT shall submit the Stormwater Management Program for the Jordan watershed to the Division for approval. This Program shall meet or exceed the requirements in Item (4) of this Rule;
  - (b) Within 40 months of the effective date of this Rule, the Division shall request the Commission's approval of the NCDOT Stormwater Management Program;
  - (c) Within 42 months of the effective date of this Rule, the NCDOT shall implement the approved Stormwater Management Program; and
  - (d) Upon implementation, the NCDOT shall submit annual reports to the Division summarizing its activities in implementing each of the requirements in Item (4) of this Rule. This annual reporting may be incorporated into annual reporting required under NCDOT's NPDES stormwater permit.
- (7) RELATIONSHIP TO OTHER REQUIREMENTS. A party may in its program submittal under Item (5) or (6) of this Rule request that the Division accept its implementation of another stormwater program or programs, such as NPDES stormwater requirements, as satisfying one or more of the requirements set forth in Item (3) or (4) of this Rule. The Division shall provide determination on acceptability of any such alternatives prior to requesting Commission approval of programs as required in Items (5) and (6) of this Rule. The party shall include in its program submittal technical information demonstrating the adequacy of the alternative requirements.
- (8) ACCOUNTING METHODS. Within 18 months after the effective date of this Rule, the Division shall submit a nutrient accounting framework to the Commission for approval. This framework shall include tools for quantifying load reduction assignments on existing development for parties subject to this Rule, load reduction credits from various activities on existing developed lands, and a tool that will allow subject parties to account for loading from new and existing development and loading changes due to BMP implementation, The Division shall work in cooperation with subject parties and other watershed interests in developing this framework. The Division shall periodically revisit these accounting methods to determine the need for revisions to both the methods and to existing development load reduction assignments made using the methods set out in this Rule. It shall do so no less frequently than every 10 years. Its review shall include values subject to change over time independent of changes resulting from implementation of this Rule, such as untreated export rates that may change with changes in atmospheric deposition. It shall also review values subject to refinement, such as BMP nutrient removal efficiencies.

*History Note:* Authority G.S. 143-214.1; 143-214.5; 143-214.5(i); 143-214.7; 143-214.12; 143-214.21; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C; 143-215.8B; 143B-282(c); 143B-282(d); S.L. 2005-190; S.L. 2006-259; Eff. August 11, 2009; See S.L. 2009-216 and S.L. 2009-484.

**15A NCAC 02B .0272 JORDAN WATER SUPPLY NUTRIENT STRATEGY: FERTILIZER MANAGEMENT**

The following is the management strategy for controlling land-applied nutrients in the Jordan watershed, as prefaced in Rule .0262 of this Section.

- (1) **PURPOSE.** The purpose of this Rule is to protect the water supply uses of Jordan Reservoir and of designated water supplies throughout the Jordan watershed by managing the application of nutrients, both inorganic fertilizer and organic nutrients, to lands in the Jordan watershed. The requirements of this Rule are to be fully implemented within three years from the effective date as set out in Item (6) of this Rule.
- (2) **APPLICABILITY.** This Rule shall apply to the application of nutrients on:
  - (a) Cropland areas in the Jordan watershed for commercial purposes;
  - (b) Commercial ornamental and floriculture areas and greenhouse production areas in the Jordan watershed;
  - (c) Golf courses, public recreational lands, road or utility rights-of-way, or other commercial or institutional lands where any such land, or combination of such lands, under common management in the watershed totals at least five acres; and
  - (d) Any lands in the Jordan watershed where a hired applicator, as defined in 15A NCAC 02B .0202(4), who does not own or lease the lands applies nutrients to a total of at least five acres per year.
- (3) **REQUIREMENTS.** Application of nutrients to lands subject to this Rule shall be in accordance with the following requirements:
  - (a) Application shall be made either:
    - (i) By an applicator who has completed nutrient management training pursuant to Item (4) of this Rule; or
    - (ii) Pursuant to a nutrient management plan that meets the requirements of Item (5) of this Rule.
  - (b) With the exception of residential homeowners, a person who hires an applicator to apply nutrients to the land that they own or manage in the Jordan watershed shall either:
    - (i) Ensure that the applicator they hire has attended and completed nutrient management training pursuant to Item (4) of this Rule; or
    - (ii) Ensure that the applicator they hire follows a nutrient management plan that has been developed for the land that they own or manage pursuant to Item (5) of this Rule.
- (4) **NUTRIENT MANAGEMENT TRAINING.** To demonstrate compliance with this Rule through the nutrient management training option, the applicator shall have a certificate indicating completion of training provided by either the Cooperative Extension Service or the Division. Training certificates shall be kept on-site or be produced within 24 hours of a request by the Division. Training shall be sufficient to provide participants with an understanding of the value and importance of proper management of nitrogen and phosphorus, and the water quality impacts of poor nutrient management, and the ability to understand and properly carry out a nutrient management plan.
- (5) **NUTRIENT MANAGEMENT PLANS.** Nutrient management plans developed to comply with this rule shall meet the following requirements:
  - (a) Nutrient management plans for cropland, excluding those for application of Class A bulk, and Class B wastewater residuals, regulated under 15A NCAC 02T .1100 and septage application regulated under 15A NCAC 13B .0815 through .0829, shall meet the standards and specifications adopted by the NC Soil and Water Conservation Commission, including those found in 15A NCAC 06E .0104 and 15A NCAC 06H .0104, which are incorporated herein by reference, including any subsequent amendments and editions to such rules that are in place at the time that plans are approved by a technical specialist as required under Sub-Item (5)(e) of this Rule.
  - (b) Nutrient management plans for application of Class A bulk, and Class B, wastewater residuals regulated under 15A NCAC 02T .1100 and septage application regulated under 15A NCAC 13B .0815 through .0829 shall meet the standards and specifications adopted by the NC Soil and Water Conservation Commission in 15A NCAC 06E .0104, including any subsequent amendments and editions to such rule that are in place at the time that plans are

- approved by the permitting agency. This compliance includes addressing the phosphorus requirements of US Department of Agriculture Natural Resources Conservation Service Practice Standard 590 regarding Nutrient Management.
- (c) Nutrient management plans for lands identified in Sub-Item (2)(c) of this Rule shall follow the applicable guidance contained in the most recent version of North Carolina Cooperative Extension Service publications "Water Quality and Professional Lawn Care" (NCCES publication number WQWM-155), "Water Quality and Home Lawn Care" (NCCES publication number WQWM-151), or "Water Quality for Golf Course Superintendents and Professional Turf Managers" (NCCES publication number WQWM-156 Revised) as appropriate for the activity. The above-referenced guidelines are hereby incorporated by reference including any subsequent amendments and editions. Copies may be obtained from the Division of Water Quality, 512 North Salisbury Street, Raleigh, North Carolina 27604 at no cost. Nutrient management plans may also follow other guidance distributed by land-grant universities for turfgrass management as long as it is equivalent to or more stringent than the above-listed guidelines.
  - (d) Nutrient management plans for ornamental and floriculture production shall follow the Nutrient Management section of the most recent version of the Southern Nursery Association guidelines promulgated in "Best Management Practices – A BMP Guide For Producing Container and Field Grown Plants". Copies may be obtained from the Southern Nursery Association, 1827 Powers Ferry Road SE, Suite 4-100, Atlanta, GA 30339-8422 or from [www.sna.org](http://www.sna.org). The materials related to nutrient management plans for ornamental and floriculture production are hereby incorporated by reference including any subsequent amendments and editions. Copies are available for inspection at the Department of Environment and Natural Resources Library, 512 North Salisbury Street, Raleigh, North Carolina 27604. Nutrient management plans for ornamental and floriculture production may also follow other guidance distributed by land-grant universities for such production as long as it is equivalent or more stringent than the above-listed guidelines.
  - (e) The nutrient management plan shall be approved in writing by an appropriate technical specialist, as defined in 15A NCAC 06H .0102(9), as follows:
    - (i) Nutrient management plans for cropland using either inorganic or organic nutrients, except those using biosolids or septage, shall be approved by a technical specialist designated pursuant to the process and criteria specified in rules adopted by the Soil and Water Conservation Commission for nutrient management planning, including 15A NCAC 06H .0104, excepting Sub-Item (a)(2) of that Rule.
    - (ii) Nutrient management plans for lands identified in Sub-Item (2)(c) of this Rule, ornamental and floriculture production shall be approved by a technical specialist designated by the Soil and Water Conservation Commission pursuant to the process and criteria specified in 15A NCAC 06H .0104 excepting Sub-Item (a)(2) of that Rule. If the Soil and Water Conservation Commission does not designate such technical specialists, then the Environmental Management Commission shall do so using the same process and criteria.
  - (f) Persons with approved waste utilization plans that are required under state or federal animal waste regulations are deemed in compliance with this Rule as long as they are compliant with their approved waste utilization plans.
  - (g) Nutrient management plans and supporting documents must be kept on-site or be produced within 24 hours of a request by the Division.
- (6) COMPLIANCE. The following constitute the compliance requirements of this Rule:
- (a) For proposed new application of Class A bulk, and Class B, wastewater residuals pursuant to permits obtained under 15A NCAC 02T .1100 or its predecessor, and septage application pursuant to permits obtained under 15A NCAC 13B .0815 through .0829, all applications for new permits shall be made according to, and subsequent nutrient applications shall comply with, the applicable requirements of this Rule as of its effective date.
  - (b) For existing, ongoing application of residuals and septage as defined in this Item, beginning one year after the effective date of this Rule, all applications for renewal of existing permits

shall be made according to, and subsequent nutrient applications shall comply with, the applicable requirements of this Rule.

- (c) For all other application with the exception of the application of residuals and septage as defined in this Item, the requirements of this Rule shall become effective three years after its effective date and shall apply to all application of nutrients on lands subject to this Rule after that date.
- (d) Persons who fail to comply with this Rule are subject to enforcement measures authorized in G.S. 143-215.6A (civil penalties), G.S. 143-215.6B (criminal penalties), and G.S. 143-215.6C (injunctive relief).

*History Note:* Authority G. S. 143-214.1; 143-214.5; 143-214.7; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C; 143 215.8B; 143B-282(c); 143B-282(d); S.L. 2005-190; S.L. 2006-259; Eff. August 11, 2009.

**15A NCAC 02B .0273 JORDAN WATER SUPPLY NUTRIENT STRATEGY: OPTIONS FOR OFFSETTING NUTRIENT LOADS**

**PURPOSE.** This Rule provides parties subject to other rules within the Jordan nutrient strategy with options for meeting rule requirements by obtaining or buying credit for activities conducted by others (sellers) that produce excess load reductions relative to rule requirements. It provides the potential for parties who achieve excess load reductions to recover certain costs by selling such credits, and it provides opportunity for private parties to produce reductions and sell credits for profit. Overall it provides the potential for more cost-effective achievement of strategy reduction goals. Accounting is required to ensure and track the availability and use of trading credits. This accounting will be compared against compliance accounting required under other rules of the Jordan nutrient strategy. This Rule furthers the adaptive management intent of the strategy to protect the water supply uses of Jordan Reservoir and of designated water supplies throughout the Jordan watershed. The minimum requirements for these offset options are:

- (1) **PREREQUISITES.** The following buyers shall meet applicable criteria identified here and in rules imposing reduction requirements on them before utilizing the option outlined in this Rule:
  - (a) Agriculture Rule .0264: Agricultural producers shall receive approval from the Watershed Oversight Committee to obtain offsite credit pursuant to the conditions of Sub-Item (5)(b);
  - (b) New Development Rule .0265: Developers shall meet onsite reduction requirements enumerated in Sub-Item (3)(a)(vii) before obtaining offsite credit;
  - (c) Wastewater Rule .0270: New and expanding dischargers shall first make all reasonable efforts to obtain allocation from existing dischargers as stated in Sub-Items (7)(a)(ii) and (8)(a)(ii), respectively; and
  - (d) State and Federal Entities Stormwater Rule .0271:
    - (i) Non-DOT entities shall meet onsite new development reduction requirements enumerated in Sub-Item (3)(a)(vi); and
    - (ii) NC DOT shall meet onsite non-road new development reduction requirements enumerated in Sub-Item (4)(c)(iii) before obtaining offsite credit.
- (2) The party seeking approval to sell excess loading reduction credits pursuant to this Rule shall demonstrate to the Division that such reductions meet the following criteria:
  - (a) Loading reductions eligible for credit are only those in excess of load reduction goals or percentage reductions required under rules in this Section or in excess of the percentage load reduction goals established in Rule .0262 of this strategy as applied to sources not addressed by rules in this section;
  - (b) Load reductions eligible for credit shall not include reductions achieved under other regulations to mitigate or offset actions that increase nutrient loading;
  - (c) These excess loading reductions shall be available as credit only within the same subwatershed of the Jordan watershed, as defined in Rule .0262 of this Section, as the reduction need that they propose to offset;
  - (d) The party seeking to sell credits shall define the nature of the activities that would produce excess reductions and define the magnitude and duration of those reductions to the Division, including addressing the following items:
    - (i) Account for differences in instream nutrient losses between the location of the reduction need and excess loading reduction in reaching the affected arm of Jordan Reservoir;
    - (ii) Quantify and account for the relative uncertainties in reduction need estimates and excess loading reduction estimates;
    - (iii) Ensure that excess loading reductions shall take place at the time and for the duration in which the reduction need occurs; and
    - (iv) Demonstrate means adequate for assuring the achievement and claimed duration of excess loading reduction, including the cooperative involvement of any other involved parties.
- (3) The party seeking approval to sell excess loading reductions shall provide for accounting and tracking methods that ensure genuine, accurate, and verifiable achievement of the purposes of this Rule. The Division shall work cooperatively with interested parties at their request to develop such accounting and tracking methods to support the requirements of Item (2) of this Rule.
- (4) Proposals for use of offsetting actions as described in this Rule shall become effective after determination by the Director that the proposal contains adequate scientific or engineering standards or

procedures necessary to achieve and account for load reductions as required under Sub-Items (2) and (3) of this Rule, and that specific accounting tools required for these purposes in individual rules have been adequately established. In making this determination, the Director shall also evaluate the potential for excess loading to produce localized adverse water quality impacts that contribute to impairment of classified uses of the affected waters.

*History Note:* Authority G.S. 143-214.1; 143-214.5; 143-214.7; 143-215.3(a)(1); 143-215.6A; 143-215.6B; 143-215.6C; 143-214.12; 143-214.21; 143-215.8B; 143B-282(c); 143B-282(d); S.L. 1999; c. 329, s. 7.1; S.L. 2005-190; S.L. 2006-259; Eff. August 11, 2009.

**15A NCAC 02B .0311 CAPE FEAR RIVER BASIN**

(a) The Cape Fear River Basin Schedule of Classifications and Water Quality Standards may be inspected at the following places:

- (1) the Internet at <http://h2o.enr.state.nc.us/csu/>; and
- (2) the North Carolina Department of Environment and Natural Resources:
  - (A) Winston-Salem Regional Office  
585 Waughtown Street  
Winston-Salem, North Carolina
  - (B) Fayetteville Regional Office  
225 Green Street  
Systel Building Suite 714  
Fayetteville, North Carolina
  - (C) Raleigh Regional Office  
3800 Barrett Drive  
Raleigh, North Carolina
  - (D) Washington Regional Office  
943 Washington Square Mall  
Washington, North Carolina
  - (E) Wilmington Regional Office  
127 Cardinal Drive Extension  
Wilmington, North Carolina
  - (F) Division of Water Quality  
Central Office  
512 North Salisbury Street  
Raleigh, North Carolina.

(b) The Cape Fear River Basin Schedule of Classification and Water Quality Standards was amended effective:

- (1) March 1, 1977;
- (2) December 13, 1979;
- (3) December 14, 1980;
- (4) August 9, 1981;
- (5) April 1, 1982;
- (6) December 1, 1983;
- (7) January 1, 1985;
- (8) August 1, 1985;
- (9) December 1, 1985;
- (10) February 1, 1986;
- (11) July 1, 1987;
- (12) October 1, 1987;
- (13) March 1, 1988;
- (14) June 1, 1988;
- (15) July 1, 1988;
- (16) January 1, 1990;
- (17) August 1, 1990;
- (18) August 3, 1992;
- (19) September 1, 1994;
- (20) August 1, 1998;
- (21) April 1, 1999;
- (22) August 1, 2002;
- (23) November 1, 2004;
- (24) November 1, 2007;
- (25) January 1, 2009;
- (26) August 11, 2009;
- (27) September 1, 2009.

(c) The Schedule of Classifications and Water Quality Standards for the Cape Fear River Basin has been amended effective June 1, 1988 as follows:



- (1) Cane Creek [Index No. 16-21-(1)] from source to a point 0.5 mile north of N.C. Hwy. 54 (Cane Reservoir Dam) including the Cane Creek Reservoir and all tributaries has been reclassified from Class WS-III to WS-I.
  - (2) Morgan Creek [Index No. 16-41-1-(1)] to the University Lake dam including University Lake and all tributaries has been reclassified from Class WS-III to WS-I.
- (d) The Schedule of Classifications and Water Quality Standards for the Cape Fear River Basin has been amended effective July 1, 1988 by the reclassification of Crane Creek (Crains Creek) [Index No. 18-23-16-(1)] from source to mouth of Beaver Creek including all tributaries from C to WS-III.
- (e) The Schedule of Classifications and Water Quality Standards for the Cape Fear River Basin has been amended effective January 1, 1990 as follows:
- (1) Intracoastal Waterway (Index No. 18-87) from southern edge of White Oak River Basin to western end of Permuda Island (a line from Morris Landing to Atlantic Ocean), from the eastern mouth of Old Topsail Creek to the southwestern shore of Howe Creek and from the southwest mouth of Shinn Creek to channel marker No. 153 including all tributaries except the King Creek Restricted Area, Hardison Creek, Old Topsail Creek, Mill Creek, Futch Creek and Pages Creek were reclassified from Class SA to Class SA ORW.
  - (2) Topsail Sound and Middle Sound ORW Area which includes all waters between the Barrier Islands and the Intracoastal Waterway located between a line running from the western most shore of Mason Inlet to the southwestern shore of Howe Creek and a line running from the western shore of New Topsail Inlet to the eastern mouth of Old Topsail Creek was reclassified from Class SA to Class SA ORW.
  - (3) Masonboro Sound ORW Area which includes all waters between the Barrier Islands and the mainland from a line running from the southwest mouth of Shinn Creek at the Intracoastal Waterway to the southern shore of Masonboro Inlet and a line running from the Intracoastal Waterway Channel marker No. 153 to the southside of the Carolina Beach Inlet was reclassified from Class SA to Class SA ORW.
- (f) The Schedule of Classifications and Water Quality Standards for the Cape Fear River Basin has been amended effective January 1, 1990 as follows: Big Alamance Creek [Index No. 16-19-(1)] from source to Lake Mackintosh Dam including all tributaries has been reclassified from Class WS-III NSW to Class WS-II NSW.
- (g) The Schedule of Classifications and Water Quality Standards for the Cape Fear River Basin was amended effective August 3, 1992 with the reclassification of all water supply waters (waters with a primary classification of WS-I, WS-II or WS-III). These waters were reclassified to WS-I, WS-II, WS-III, WS-IV or WS-V as defined in the revised water supply protection rules, (15A NCAC 02B .0100, .0200 and .0300) which became effective on August 3, 1992. In some cases, streams with primary classifications other than WS were reclassified to a WS classification due to their proximity and linkage to water supply waters. In other cases, waters were reclassified from a WS classification to an alternate appropriate primary classification after being identified as downstream of a water supply intake or identified as not being used for water supply purposes.
- (h) The Schedule of Classifications and Water Quality Standards for the Cape Fear River Basin was amended effective June 1, 1994 as follows:
- (1) The Black River from its source to the Cape Fear River [Index Nos. 18-68-(0.5), 18-68-(3.5) and 18-65-(11.5)] was reclassified from Classes C Sw and C Sw HQW to Class C Sw ORW.
  - (2) The South River from Big Swamp to the Black River [Index Nos. 18-68-12-(0.5) and 18-68-12(11.5)] was reclassified from Classes C Sw and C Sw HQW to Class C Sw ORW.
  - (3) Six Runs Creek from Quewhiffle Swamp to the Black River [Index No. 18-68-2] was reclassified from Class C Sw to Class C Sw ORW.
- (i) The Schedule of Classifications and Water Quality Standards for the Cape Fear River Basin was amended effective September 1, 1994 with the reclassification of the Deep River [Index No. 17-(36.5)] from the Town of Gulf-Goldston water supply intake to US highway 421 including associated tributaries from Class C to Classes C, WS-IV and WS-IV CA.
- (j) The Schedule of Classifications and Water Quality Standards for the Cape Fear River Basin was amended effective August 1, 1998 with the revision to the primary classification for portions of the Deep River [Index No. 17-(28.5)] from Class WS-IV to Class WS-V, Deep River [Index No. 17-(41.5)] from Class WS-IV to Class C, and the Cape Fear River [Index 18-(10.5)] from Class WS-IV to Class WS-V.

(k) The Schedule of Classifications and Water Quality Standards for the Cape Fear River Basin was amended effective April 1, 1999 with the reclassification of Buckhorn Creek (Harris Lake)[Index No. 18-7-(3)] from the backwaters of Harris Lake to the Dam at Harris Lake from Class C to Class WS-V.

(l) The Schedule of Classifications and Water Quality Standards for the Cape Fear River Basin was amended effective April 1, 1999 with the reclassification of the Deep River [Index No. 17-(4)] from the dam at Oakdale-Cotton Mills, Inc. to the dam at Randleman Reservoir (located 1.6 mile upstream of U.S. Hwy 220 Business), and including tributaries from Class C and Class B to Class WS-IV and Class WS-IV & B. Streams within the Randleman Reservoir Critical Area have been reclassified to WS-IV CA. The Critical Area for a WS-IV reservoir is defined as 0.5 mile and draining to the normal pool elevation of the reservoir. All waters within the Randleman Reservoir Water Supply Watershed are within a designated Critical Water Supply Watershed and are subject to a special management strategy specified in 15A NCAC 02B .0248.

(m) The Schedule of Classifications and Water Quality Standards for the Cape Fear River Basin was amended effective August 1, 2002 as follows:

- (1) Mill Creek [Index Nos. 18-23-11-(1), 18-23-11-(2), 18-23-11-3, 18-23-11-(5)] from its source to the Little River, including all tributaries was reclassified from Class WS-III NSW and Class WS-III B NSW to Class WS-III NSW HQW@ and Class WS-III B NSW HQW@.
- (2) McDeed's Creek [Index Nos. 18-23-11-4, 18-23-11-4-1] from its source to Mill Creek, including all tributaries was reclassified from Class WS III NSW and Class WS-III B NSW to Class WS-III NSW HQW@ and Class WS-III B NSW HQW@.

The "@" symbol as used in this Paragraph means that if the governing municipality has deemed that a development is covered under a "5/70 provision" as described in Rule 15A NCAC 02B .0215(3)(b)(i)(E) (Fresh Surface Water Quality Standards for Class WS-III Waters), then that development is not subject to the stormwater requirements as described in rule 15A NCAC 02H .1006 (Stormwater Requirements: High Quality Waters).

(n) The Schedule of Classifications and Water Quality Standards for the Cape Fear River Basin was amended effective November 1, 2004 as follows:

- (1) A portion of Rocky River [Index Number 17-43-(1)] from a point approximately 0.3 mile upstream of Town of Siler City upper reservoir dam to a point approximately 0.3 mile downstream of Lacy Creek from WS-III to WS-III CA.
- (2) A portion of Rocky River [Index Number 17-43-(8)] from dam at lower water supply reservoir for Town of Siler City to a point approximately 65 feet below dam (site of proposed dam) from C to WS-III CA.
- (3) A portion of Mud Lick Creek (Index No. 17-43-6) from a point approximately 0.4 mile upstream of Chatham County SR 1355 to Town of Siler City lower water supply reservoir from WS-III to WS-III CA.
- (4) A portion of Lacy Creek (17-43-7) from a point approximately 0.6 mile downstream of Chatham County SR 1362 to Town of Siler City lower water supply reservoir from WS-III to WS-III CA.

(o) The Schedule of Classifications and Water Quality Standards for the Cape Fear River Basin was amended effective November 1, 2007 with the reclassifications listed below, and the North Carolina Division of Water Quality maintains a Geographic Information Systems data layer of these UWLs.

- (1) Military Ocean Terminal Sunny Point Pools, all on the eastern shore of the Cape Fear River [Index No. 18-(71)] were reclassified to Class WL UWL as defined in 15A NCAC 02B .0101.
- (2) Salters Lake Bay near Salters Lake [Index No. 18-44-4] was reclassified to Class WL UWL as defined in 15A NCAC 02B .0101.
- (3) Jones Lake Bay near Jones Lake [Index No. 18-46-7-1] was reclassified to Class WL UWL as defined in 15A NCAC 02B .0101.
- (4) Weymouth Woods Sandhill Seep near Mill Creek [18-23-11-(1)] was reclassified to Class WL UWL as defined in 15A NCAC 02B .0101.
- (5) Fly Trap Savanna near Cape Fear River [Index No. 18-(71)] was reclassified to Class WL UWL as defined in 15A NCAC 02B .0101.
- (6) Lily Pond near Cape Fear River [Index No. 18-(71)] was reclassified to Class WL UWL as defined in 15A NCAC 02B .0101.
- (7) Grassy Pond near Cape Fear River [Index No. 18-(71)] was reclassified to Class WL UWL as defined in 15A NCAC 02B .0101.
- (8) The Neck Savanna near Sandy Run Swamp [Index No. 18-74-33-2] was reclassified to Class WL UWL as defined in 15A NCAC 02B .0101.

- (9) Bower's Bog near Mill Creek [Index No. 18-23-11-(1)] was reclassified to Class WL UWL as defined in 15A NCAC 02B .0101.
  - (10) Bushy Lake near Turnbull Creek [Index No. 18-46] was reclassified to Class WL UWL as defined in 15A NCAC 02B .0101.
- (p) The Schedule of Classifications and Water Quality Standards for the Cape Fear River Basin was amended effective January 1, 2009 as follows:
- (1) a portion of Cape Fear River [Index No. 18-(26)] (including tributaries) from Smithfield Packing Company's intake, located approximately 2 miles upstream of County Road 1316, to a point approximately 0.5 miles upstream of Smithfield Packing Company's intake from Class C to Class WS-IV CA.
  - (2) a portion of Cape Fear River [Index No.18-(26)] (including tributaries) from a point approximately 0.5 miles upstream of Smithfield Packing Company's intake to a point approximately 1 mile upstream of Grays Creek from Class C to Class WS-IV.
- (q) The schedule of Classifications and Water Quality Standards for the Cape Fear River Basin was amended effective August 11, 2009 with the reclassification of all Class C NSW waters and all Class B NSW waters upstream of the dam at B. Everett Jordan Reservoir from Class C NSW and Class B NSW to Class WS-V NSW and Class WS-V & B NSW, respectively. All waters within the B. Everett Jordan Reservoir Watershed are within a designated Critical Water Supply Watershed and are subject to a special management strategy specified in 15A NCAC 02B .0262 through .0272.
- (r) The Schedule of Classifications and Water Quality Standards for the Cape Fear River Basin was amended effective September 1, 2009 with the reclassification of a portion of the Haw River [Index No. 16-(28.5)] from the Town of Pittsboro water supply intake, which is located approximately 0.15 mile west of U.S. 15/501, to a point 0.5 mile upstream of the Town of Pittsboro water supply intake from Class WS-IV to Class WS-IV CA.

*History Note: Authority G.S. 143-214.1; 143-215.1; 143-215.3(a)(1); Eff. February 1, 1976; Amended Eff. September 1, 2009; August 11, 2009; January 1, 2009; November 1, 2007; November 1, 2004; August 1, 2002; April 1, 1999; August 1, 1998; September 1, 1994; June 1, 1994; August 3, 1992; August 1, 1990.*

SESSION LAW 2009-216  
HOUSE BILL 239

AN ACT TO PROVIDE FOR IMPROVEMENTS IN THE MANAGEMENT OF THE JORDAN WATERSHED IN ORDER TO RESTORE WATER QUALITY IN THE JORDAN RESERVOIR.

The General Assembly of North Carolina enacts:

**SECTION 1.** Definitions. – The following definitions apply to this act and its implementation:

- (1) The definitions set out in G.S. 143-212 and G.S. 143-213.
- (2) The definitions set out in 15A NCAC 02B .0262 (Jordan Water Supply Nutrient Strategy: Purpose and Scope) and 15A NCAC 02B .0263 (Jordan Water Supply Nutrient Strategy: Definitions).
- (3) "Existing Development Rule 15A NCAC 02B .0266" means 15A NCAC 02B .0266 (Jordan Water Supply Nutrient Strategy: Stormwater Management for Existing Development), adopted by the Commission on May 8, 2008, and approved by the Rules Review Commission on November 20, 2008.
- (4) "Wastewater Discharge Rule 15A NCAC 02B .0270" means 15A NCAC 02B .0270 (Jordan Water Supply Nutrient Strategy: Wastewater Discharge Requirements) adopted by the Commission on May 8, 2008, and approved by the Rules Review Commission on October 16, 2008.

**SECTION 2.(a)** Wastewater Discharge Rule 15A NCAC 02B .0270. – Until the effective date of the revised permanent rule that the Commission is required to adopt pursuant to Section 2(c) of this act, the Commission and the Department shall implement the Wastewater Discharge Rule 15A NCAC 02B .0270, as provided in Section 2(b) of this act.

**SECTION 2.(b)** Implementation. – Notwithstanding sub-subdivision (c) of subdivision (6) of Wastewater Discharge Rule 15A NCAC 02B .0270, each existing discharger with a permitted flow greater than or equal to 0.1 million gallons per day (MGD) shall limit its total nitrogen discharge to its active individual discharge allocation as defined or modified pursuant to Wastewater Discharge Rule 15A NCAC 02B .0270 no later than calendar year 2016.

**SECTION 2.(c)** Additional Rule-Making Authority. – The Commission shall adopt a rule to replace Wastewater Discharge Rule 15A NCAC 02B .0270. Notwithstanding G.S. 150B-19(4), the rule adopted by the Commission pursuant to this section shall be substantively identical to the provisions of Section 2(b) of this act. Rules adopted pursuant to this section are not subject to G.S. 150B-21.9 through G.S. 150B-21.14. Rules adopted pursuant to this section shall become effective as provided in G.S. 150B-21.3(b1) as though 10 or more written objections had been received as provided by G.S. 150B-21.3(b2).

**SECTION 3.(a)** Existing Development Rule 15A NCAC 02B .0266 Disapproved. – Pursuant to G.S. 150B-21.3(b1), Existing Development Rule 15A NCAC 02B .0266, as adopted by the Environmental Management Commission on May 8, 2008, and approved by the Rules Review Commission on November 20, 2008, is disapproved.

**SECTION 3.(b)** References in the North Carolina Administrative Code to the rule cited in Section 3(a) of this act shall be deemed to refer to the equivalent provisions of this act.

**SECTION 3.(c)** Nutrient Monitoring. – The Department shall maintain an ongoing program to monitor water quality in each arm of Jordan Reservoir. The Department shall also accept water quality sampling data from a monitoring program implemented by a local government or nonprofit organization if the data meets quality assurance standards established by the Department. On March 1, 2014, the Department shall report the results of monitoring in



each arm of Jordan Reservoir to the Environmental Review Commission. The Department shall submit an updated monitoring report under this section every three years thereafter until such time as the lake is no longer impaired by nutrient pollution.

**SECTION 3.(d) Control of Nutrient Loading From Existing Development.** – The Department shall require implementation of reasonable nutrient load reduction measures for existing development in each subwatershed of the Jordan Reservoir, as provided in this act. The Department shall determine whether nutrient load reduction measures for existing development are necessary in each subwatershed of Jordan Reservoir and require implementation of reasonable nutrient reduction measures in accordance with an adaptive management program as follows:

- (1) Stage 1 Adaptive Management Program to Control Nutrient Loading From Existing Development. –
  - a. Municipalities and counties located in whole or in part in the Jordan watershed shall implement a Stage 1 adaptive management program to control nutrient loading from existing development in the Jordan watershed. The Stage 1 adaptive management program shall meet the requirements set out in 40 C.F.R. § 122.34 as applied by the Department in the NPDES General Permit for municipal separate storm sewer systems in effect on July 1, 2009. The Stage 1 adaptive management program shall include all of the following measures:
    1. A public education program to inform the public of the impacts of nutrient loading and measures that can be implemented to reduce nutrient loading from stormwater runoff from existing development.
    2. A mapping program that includes major components of the municipal separate storm sewer system, including the location of major outfalls, as defined in 40 Code of Federal Regulations §122.26(b)(5) (July 1, 2008) and the names and location of all waters of the United States that receive discharges from those outfalls, land use types, and location of sanitary sewers.
    3. A program to identify and remove illegal discharges.
    4. A program to identify opportunities for retrofits and other projects to reduce nutrient loading from existing developed lands.
    5. A program to ensure maintenance of best management practices implemented by the local government.
  - b. The Department shall accept local government implementation of another stormwater program or programs meeting the standards set out in this section as satisfying one or more of the requirements set forth in sub-subdivision a. of this subdivision. The local government shall provide technical information sufficient to demonstrate the adequacy of the alternative program or program elements.
  - c. A Stage 1 adaptive management program to control nutrient loading from existing development shall be implemented as follows:
    1. No later than December 31, 2009, each local government shall submit its Stage 1 adaptive management program to the Commission for review and approval.
    2. Within six months following submission of a Stage 1 adaptive management program, the Department shall recommend that the Commission approve or disapprove the program. The Commission shall either approve the program or require changes based on the standards set out in sub-subdivision a. of this subdivision. If the Commission requires changes, the local government shall submit revisions responding to the required changes within two months and the Department shall provide follow-up recommendations to the Commission within two months after receiving revisions.

3. Within three months following Commission approval of a Stage 1 adaptive management program, the local government shall begin implementation of the program. Each local government shall report annually to the Department on implementation of its program.
- (2) Stage 2 Adaptive Management Program to Control Nutrient Loading From Existing Development. –
- a. If the March 1, 2014 monitoring report or any subsequent monitoring report for the Upper New Hope Creek Arm of Jordan Reservoir required under Section 3(c) of this act shows that nutrient-related water quality standards are not being achieved, a municipality or county located in whole or in part in the subwatershed of that arm of Jordan Reservoir shall develop and implement a Stage 2 adaptive management program to control nutrient loading from existing development within the subwatershed, as provided in this act. If the March 1, 2017 monitoring report or any subsequent monitoring report for the Haw River Arm or the Lower New Hope Creek Arm of Jordan Reservoir required under Section 3(c) of this act shows that nutrient-related water quality standards are not being achieved, a municipality or county located in whole or in part in the subwatershed of that arm of Jordan Reservoir shall develop and implement a Stage 2 adaptive management program to control nutrient loading from existing development within the subwatershed, as provided in this act. The Department shall defer development and implementation of Stage 2 adaptive management programs to control nutrient loading from existing development required in a subwatershed by this subdivision if it determines that additional reductions in nutrient loading from existing development in that subwatershed will not be necessary to achieve nutrient-related water quality standards. In making this determination, the Department shall consider the anticipated effect of measures implemented or scheduled to be implemented to reduce nutrient loading from sources in the subwatershed other than existing development. If any subsequent monitoring report for an arm of Jordan Reservoir required under Section 3(c) of this act shows that nutrient-related water quality standards have not been achieved, the Department shall notify the municipalities and counties located in whole or in part in the subwatershed of that arm of Jordan Reservoir and the municipalities and counties shall develop and implement a Stage 2 adaptive management program as provided in this subdivision.
  - b. The Department shall establish a load reduction goal for existing development for each municipality and county required to implement a Stage 2 adaptive management program to control nutrient loading from existing development. The load reduction goal shall be designed to achieve, relative to the baseline period 1997 through 2001, an eight percent (8%) reduction in nitrogen loading and a five percent (5%) reduction in phosphorus loading reaching Jordan Reservoir from existing developed lands within the police power jurisdiction of the local government. The baseline load shall be calculated by applying the Tar-Pamlico Nutrient Export Calculation Worksheet, Piedmont Version, dated October 2004, to acreages of different types of existing development within the police power jurisdiction of the local government during the baseline period. The baseline load may also be calculated using an equivalent or more accurate method acceptable to the Department and recommended by the Scientific Advisory Board established pursuant to Section 4(a) of this act. The baseline load for a municipality or county shall not include nutrient loading from lands under State or federal control or lands in agriculture or forestry. The load reduction goal shall be

adjusted to account for nutrient loading increases from lands developed subsequent to the baseline period but prior to implementation of new development stormwater programs.

- c. Based on findings under sub-subdivision a. of this subdivision, the Department shall notify the local governments in each subwatershed that either:
  - 1. Implementation of a Stage 2 adaptive management program to control nutrient loading from existing development will be necessary to achieve water quality standards in an arm of the reservoir and direct the municipalities and counties in the subwatershed to develop a load reduction program in compliance with this section.
  - 2. Implementation of a Stage 2 adaptive management program to control nutrient loading from existing development is not necessary at that time but will be reevaluated in three years based on the most recent water quality monitoring information.
- d. A local government receiving notice of the requirement to develop and implement a Stage 2 adaptive management program to control nutrient loading from existing development under this section shall not be required to submit a program if the local government demonstrates that it has already achieved the reductions in nutrient loadings required by sub-subdivision b. of this subdivision.
- e. Within six months after receiving notice to develop and implement a Stage 2 adaptive management program to control nutrient loading from existing development, each local government shall submit to the Commission a program that is designed to achieve the reductions in nutrient loadings established by the Department pursuant to sub-subdivision b. of this subdivision. A local government program may include nutrient management strategies that are not included in the model program developed pursuant to Section 3(e) of this act in addition to or in place of any component of the model program. In addition, a local government may satisfy the requirements of this subdivision through reductions in nutrient loadings from other sources in the same subwatershed to the extent those reductions go beyond measures otherwise required by statute or rule. A local government may also work with other local governments within the same subwatershed to collectively meet the required reductions in nutrient loadings from existing development within their combined jurisdictions. Any credit for reductions achieved or obtained outside of the police power jurisdiction of a local government shall be adjusted based on transport factors established by the Department document Nitrogen and Phosphorus Delivery from Small Watersheds to Jordan Lake, dated June 30, 2002.
- f. Within six months following submission of a local government's Stage 2 adaptive management program to control nutrient loading from existing development, the Department shall recommend that the Commission approve or disapprove the program. The Commission shall approve the program if it meets the requirements of this subdivision, unless the Commission finds that the local government can, through the implementation of reasonable and cost-effective measures not included in the proposed program, meet the reductions in nutrient loading established by the Department pursuant to sub-subdivision b. of this subdivision by a date earlier than that proposed by the local government. If the Commission finds that there are additional or alternative reasonable and cost-effective measures, the Commission may require the local government to modify its proposed program to include such measures to achieve the required reductions by the earlier date. If the Commission requires such

modifications, the local government shall submit a modified program within two months. The Department shall recommend that the Commission approve or disapprove the modified program within three months after receiving the local government's modified program. In determining whether additional or alternative load reduction measures are reasonable and cost effective, the Commission shall consider factors including, but not limited to, the increase in the per capita cost of a local government's stormwater management program that would be required to implement such measures and the cost per pound of nitrogen and phosphorus removed by such measures. The Commission shall not require additional or alternative measures that would require a local government to:

1. Install or require installation of a new stormwater collection system in an area of existing development unless the area is being redeveloped.
  2. Acquire developed private property.
  3. Reduce or require the reduction of impervious surfaces within an area of existing development unless the area is being redeveloped.
- g. Within three months after the Commission's approval of a Stage 2 adaptive management program to control nutrient loading from existing development, the local government shall complete adoption and begin implementation of its program.
- h. Each local government implementing a Stage 2 adaptive management program to control nutrient loading from existing development shall submit an annual report to the Department summarizing its activities in implementing its program.
- i. If at any time the Department finds, based on water quality monitoring, that an arm of the Jordan Reservoir has achieved compliance with water quality standards, the Department shall notify the local governments in the subwatershed. Subject to the approval of the Commission, a local government may modify its Stage 2 adaptive management program to control nutrient loading from existing development to maintain only those measures necessary to prevent increases in nutrient loading from existing development.

**SECTION 3.(e)** Model Stage 2 Adaptive Management Program to Control Nutrient Loading From Existing Development. – No later than July 1, 2013, the Department shall submit a model Stage 2 adaptive management program to control nutrient loading from existing development to the Commission for approval. The model program shall identify specific load reduction practices and programs and reduction credits associated with each practice or program and shall provide that a local government may obtain additional or alternative load-reduction credits based on site-specific monitoring data. In developing the model program, the Department shall consider the findings and recommendations of the Scientific Advisory Board established pursuant to Section 4(a) of this act and comments submitted by municipalities and counties identified in 15A NCAC 02B .0262(7) (Jordan Water Supply Nutrient Strategy: Purpose and Scope). The Commission shall review the model program and either approve the program or return it to the Department with requested changes. The Department shall revise the model program to address changes requested by the Commission. The Commission shall approve a final model program no later than December 31, 2013.

**SECTION 3.(f)** Additional Measures to Reduce Nitrogen Loading From Existing Development in the Upper New Hope Creek Arm of the Jordan Reservoir. – If the March 1, 2023, monitoring report or any subsequent monitoring report for the Upper New Hope Creek Arm of Jordan Reservoir shows that nutrient-related water quality standards are not being achieved, a municipality or county located in whole or in part in the Upper New Hope Creek Subwatershed shall modify its Stage 2 adaptive management program to control nutrient loading from existing development to achieve additional reductions in nitrogen loading from existing development. The modified Stage 2 adaptive management program shall be designed



to achieve a total reduction in nitrogen loading from existing development of thirty-five percent (35%) relative to the baseline period 1997 through 2001. The Department shall notify local governments of the requirement to submit a modified Stage 2 adaptive management program. Submission, review and approval, and implementation of a modified Stage 2 adaptive management program shall follow the process, timeline, and standards set out in sub-subdivisions e. through g. of subdivision (2) of Section 3(d) of this act.

**SECTION 3.(g) Enforcement.** – The Department shall enforce the provisions of this act as provided in G.S. 143-215.6A, 143-215.6B, and 143-215.6C.

**SECTION 3.(h) Collective Compliance.** – Local governments that are subject to regulation under this act may establish collective programs to comply with the requirements of this act.

**SECTION 3.(i) Report.** – The Department shall report annually to the Commission regarding the implementation of adaptive management programs to control nutrient loading from existing development in the Jordan watershed.

**SECTION 3.(j) Additional Rule-Making Authority.** – The Commission shall adopt a rule to replace Sections 3(c) through 3(i) of this act. Notwithstanding G.S. 150B-19(4), the rule adopted by the Commission pursuant to this section shall be substantively identical to the provisions of Sections 3(c) through 3(f) of this act. Rules adopted pursuant to this section are not subject to G.S. 150B-21.9 through G.S. 150B-21.14. Rules adopted pursuant to this section shall become effective as provided in G.S. 150B-21.3(b1) as though 10 or more written objections had been received as provided by G.S. 150B-21.3(b2).

**SECTION 3.(k) No Change to Existing Regulatory Authority.** – Nothing in this act shall be construed to limit, expand, or modify the authority of the Commission to undertake alternative regulatory actions otherwise authorized by State or federal law, including, but not limited to, the reclassification of waters of the State pursuant to G.S. 143-214.1, the revision of water quality standards pursuant to G.S. 143-214.3, and the granting of variances pursuant to G.S. 143-215.3.

**SECTION 4.(a) Scientific Advisory Board for Nutrient-Impaired Waters Established.** – No later than July 1, 2010, the Secretary shall establish a Nutrient Sensitive Waters Scientific Advisory Board. The Scientific Advisory Board shall consist of no fewer than five and no more than 10 members with the following expertise or experience:

- (1) Representatives of one or more local governments in the Jordan Reservoir watershed. Local government representatives shall have experience in stormwater management, flood control, or management of a water or wastewater utility.
- (2) One member with at least 10 years of professional or academic experience relevant to the management of nutrients in impaired water bodies and possessing a graduate degree in a related scientific discipline, such as aquatic science, biology, chemistry, geology, hydrology, environmental science, engineering, economics, or limnology.
- (3) One professional engineer with expertise in stormwater management, hydrology, or flood control.
- (4) One representative of the Department of Transportation with expertise in stormwater management.
- (5) One representative of a conservation organization with expertise in stormwater management, urban landscape design, nutrient reduction, or water quality.

**SECTION 4.(b) Duties.** – No later than July 1, 2012, the Scientific Advisory Board shall do all of the following:

- (1) Identify management strategies that can be used by local governments to reduce nutrient loading from existing development.
- (2) Evaluate the feasibility, costs, and benefits of implementing the identified management strategies.
- (3) Develop an accounting system for assignment of nutrient reduction credits for the identified management strategies.
- (4) Identify the need for any improvements or refinements to modeling and other analytical tools used to evaluate water quality in nutrient-impaired waters and nutrient management strategies.

**SECTION 4.(c) Report; Miscellaneous Provisions.** – The Scientific Advisory Board shall also advise the Secretary on any other issue related to management and restoration of nutrient-impaired water bodies. The Scientific Advisory Board shall submit an annual report to the Secretary no later than July 1 of each year concerning its activities, findings, and recommendations. Members of the Scientific Advisory Board shall be reimbursed for reasonable travel expenses to attend meetings convened by the Department for the purposes set out in this section.

**SECTION 5. No Preemption.** – A local government may adopt and implement a stormwater management program that contains provisions that are more restrictive than the standards set forth in Sections 2 and 3 of this act or in any rules concerning stormwater management in the Jordan watershed adopted by the Commission. This section shall not be construed to authorize a local government to impose stormwater management requirements on lands in agriculture or forestry.

**SECTION 6. Construction of Act.** –

- (1) Except as specifically provided in Sections 2(c) and 3(j) of this act, nothing in this act shall be construed to limit, expand, or otherwise alter the authority of the Commission or any unit of local government.
- (2) This act shall not be construed to affect any delegation of any power or duty by the Commission to the Department or subunit of the Department.

**SECTION 7. Note to Revisor of Statutes.** – Notwithstanding G.S. 164-10, the Revisor of Statutes shall not codify any of the provisions of this act. The Revisor of Statutes shall set out the text of Section 2 of this act as a note to G.S. 143-215.1 and may make notes concerning this act to other sections of the General Statutes as the Revisor of Statutes deems appropriate. The Revisor of Statutes shall set out the text of Section 3 of this act as a note to G.S. 143-214.7 and may make notes concerning this act to other sections of the General Statutes as the Revisor of Statutes deems appropriate.

**SECTION 8. Effective Date.** – This act is effective when it becomes law.

In the General Assembly read three times and ratified this the 23<sup>rd</sup> day of June, 2009.

s/ Walter H. Dalton  
President of the Senate

s/ Joe Hackney  
Speaker of the House of Representatives

s/ Beverly E. Perdue  
Governor

Approved 5:30 p.m. this 30<sup>th</sup> day of June, 2009

SESSION LAW 2009-484  
SENATE BILL 838

AN ACT TO AMEND CERTAIN ENVIRONMENTAL AND NATURAL RESOURCES LAWS TO: (1) REQUIRE ELECTRONIC REPORTING OF ENVIRONMENTAL LEAD TEST RESULTS AND BLOOD LEAD TEST RESULTS; (2) CLARIFY THE FEE STRUCTURE FOR FOOD AND LODGING PERMITS; (3) REVISE THE SUNSET PROVISION FOR NUTRIENT OFFSET PAYMENTS; (4) AMEND THE SOLID WASTE DISPOSAL TAX TO STREAMLINE THE PROCESS WHEN A LOCAL GOVERNMENT IS SERVED BY A SOLID WASTE MANAGEMENT AUTHORITY; (5) REPEAL THE REQUIREMENT THAT SEASONAL STATE PARK EMPLOYEES WEAR A UNIFORM VEST; (6) CLARIFY IMPLEMENTATION OF NUTRIENT OFFSETS UNDER THE JORDAN LAKE RULES; (7) CLARIFY IMPLEMENTATION OF THE JORDAN LAKE RULES RELATED TO FEDERAL AND STATE ENTITIES; (8) MAKE CLARIFYING, CONFORMING, AND TECHNICAL AMENDMENTS TO VARIOUS LAWS RELATED TO THE ENVIRONMENT AND NATURAL RESOURCES; (9) AMEND OR REPEAL VARIOUS ENVIRONMENTAL REPORTING REQUIREMENTS; AND (10) DELAY THE EFFECTIVE DATES FOR LAWS GOVERNING THE MANAGEMENT OF DISCARDED COMPUTER EQUIPMENT AND DISCARDED TELEVISIONS TO JULY 1, 2010.

The General Assembly of North Carolina enacts:

**PART I. AMEND ENVIRONMENTAL AND NATURAL RESOURCES LAWS.**

**SECTION 1.** G.S. 130A-131.8 reads as rewritten:

"§ 130A-131.8. Laboratory Reports ~~reports of blood levels in children.~~

(a) All laboratories doing business in this State shall report to the Department all environmental lead test results and blood lead test results for children less than six years of age and for individuals whose ages are unknown at the time of testing. Reports shall be made by electronic submission within five working days after test completion on forms provided by the Department or on self-generated forms containing completion.

(b) Reports of blood lead test results shall contain all of the following:

- (1) ~~the~~ The child's full name, date of birth, sex, race, ethnicity, address, and Medicaid number, if any; any.
- (2) ~~the~~ The name, address, and telephone number of the requesting health care provider; provider.
- (3) ~~the~~ The name, address, and telephone number of the testing laboratory; laboratory.
- (4) ~~the~~ The laboratory results, whether the specimen type—type is venous or capillary; the laboratory sample number, and the dates the sample was collected and analyzed. The reports may be made by electronic submissions.

(c) Reports of environmental lead test results shall contain all of the following:

- (1) The address where the samples were collected.
- (2) Sample type, such as dust, paint, soil, or water.
- (3) Surface type, such as floor, window sill, or window trough.
- (4) Collection location.
- (5) The name, address, and telephone number of the testing laboratory.
- (6) The laboratory results, unit of measurement, the laboratory sample number, and the dates the sample was collected and analyzed."

**SECTION 2.(a)** If Senate Bill 202, 2009 Regular Session, does not become law then G.S. 130A-248(d) reads as rewritten:



"(d) The Department shall charge each establishment subject to this section, except nutrition programs for the elderly administered by the Division of Aging and Adult Services of the Department of Health and Human Services, establishments that prepare and sell meat food products or poultry products, and public school cafeterias, ~~an annual fee of fifty dollars (\$50.00).~~ cafeterias, a fee of fifty dollars (\$50.00) for each permit issued. This fee shall be reassessed annually for permits that do not expire. The Commission shall adopt rules to implement this subsection. Fees collected under this subsection shall be used for State and local food, lodging, and institution sanitation programs and activities. No more than thirty-three and one-third percent (33 1/3%) of the fees collected under this subsection may be used to support State health programs and activities."

**SECTION 2.(b)** If Senate Bill 202, 2009 Regular Session, does become law then G.S. 130A-248(d) reads as rewritten:

"(d) The Department shall charge each establishment subject to this section, except nutrition programs for the elderly administered by the Division of Aging and Adult Services of the Department of Health and Human Services, establishments that prepare and sell meat food products or poultry products, and public school cafeterias, ~~an annual a fee of seventy-five dollars (\$75.00).~~ (\$75.00) for each permit issued. This fee shall be reassessed annually for permits that do not expire. The Commission shall adopt rules to implement this subsection. Fees collected under this subsection shall be used for State and local food, lodging, and institution sanitation programs and activities. No more than thirty-three and one-third percent (33 1/3%) of the fees collected under this subsection may be used to support State health programs and activities."

**SECTION 3.(a)** Section 2 of S.L. 2007-438 reads as rewritten:

"**SECTION 2.** No later than ~~1 September 2009,~~ 1 September 2010, the Department of Environment and Natural Resources shall develop and implement a plan to transition the North Carolina Ecosystem Enhancement Program nutrient offset program from a fee-based program to a program based on the actual costs of providing nutrient credits. The new program shall use the least cost alternative for providing nutrient offset credits consistent with rules adopted by the Environmental Management Commission for implementation of nutrient management strategies in the Neuse River Basin and the Tar-Pamlico River Basin."

**SECTION 3.(b)** Section 5 of S.L. 2007-438 reads as rewritten:

"**SECTION 5.** This act becomes effective 1 September 2007 and applies to all nutrient offset payments, including those set out in 15A NCAC 2B .0240, as adopted by the Environmental Management Commission on 12 January 2006. The fee schedule set out in Section 1 of this act expires ~~1 September 2009.~~ 1 September 2010."

**SECTION 4.** G.S. 105-187.63 reads as rewritten:

**"§ 105-187.63. Use of tax proceeds.**

From the taxes received pursuant to this Article, the Secretary may retain the costs of collection, not to exceed two hundred twenty-five thousand dollars (\$225,000) a year, as reimbursement to the Department. The Secretary must credit or distribute taxes received pursuant to this Article, less the cost of collection, on a quarterly basis as follows:

- (1) Fifty percent (50%) to the Inactive Hazardous Sites Cleanup Fund established by G.S. 130A-310.11.
- (2) Thirty-seven and one-half percent (37.5%) to cities and counties in the State on a per capita basis, using the most recent annual estimate of population certified by the State Budget Officer. One-half of this amount must be distributed to cities, and one-half of this amount must be distributed to counties. For purposes of this distribution, the population of a county does not include the population of a city located in the county.

A city or county is excluded from the distribution under this subdivision if it does not provide solid waste management programs and services and is not responsible by contract for payment for these programs and services. ~~services, unless it is served by a regional solid waste management authority established under Article 22 of Chapter 153A of the General Statutes.~~ The Department of Environment and Natural Resources must provide the Secretary with a list of the cities and counties that are excluded under this subdivision. The list must be provided by May 15 of each year and applies to distributions made in the fiscal year that begins on July 1 of that year.

Funds distributed under this subdivision must be used by a city or county solely for solid waste management programs and services. ~~A city or county that receives funds under this subdivision and is served by a regional solid waste management authority must forward the amount it receives to that authority.~~

- (3) Twelve and one-half percent (12.5%) to the Solid Waste Management Trust Fund established by G.S. 130A-309.12."

**SECTION 5.** G.S. 113-35.1 is repealed.

**SECTION 5.1.** Section 5 of S.L. 2009-406 reads as rewritten:

**"SECTION 5.** This act shall not be construed or implemented to:

- (1) Extend any permit or approval issued by the United States or any of its agencies or instrumentalities.
- (2) Extend any permit or approval for which the term or duration of the permit or approval is specified or determined pursuant to federal law.
- (3) Shorten the duration that any development approval would have had in the absence of this act.
- (4) Prohibit the granting of such additional extensions as are provided by law.
- (5) Affect any administrative consent order issued by the Department of Environment and Natural Resources in effect or issued at any time from the effective date of this act to December 31, 2010.
- (6) Affect the ability of a government entity to revoke or modify a development approval or to accept voluntary relinquishment of a development approval by the holder of the development approval pursuant to law.
- (7) Modify any requirement of law that is necessary to retain federal delegation by the State of the authority to implement a federal law or program."

**PART II. AMEND CERTAIN JORDAN WATER SUPPLY NUTRIENT STRATEGY RULES.**

**SECTION 6.(a)** S.L. 2009-216 is amended by adding a new subsection to read:

**"SECTION 2.(d)** Section 2(b) of this act expires on the date that rules adopted pursuant to Section 2(c) of this act become effective."

**SECTION 6.(b)** S.L. 2009-216 is amended by adding a new subsection to read:

**"SECTION 3.(k)** Sections 3(c) through 3(i) of this act expire on the date that rules adopted pursuant to Section 3(j) of this act become effective."

**SECTION 6.(c)** Section 3(k) of S.L. 2009-216 reads as rewritten:

**~~SECTION 3.(k)~~ SECTION 3.(l)** No Change to Existing Regulatory Authority. – Nothing in this act shall be construed to limit, expand, or modify the authority of the Commission to undertake alternative regulatory actions otherwise authorized by State or federal law, including, but not limited to, the reclassification of waters of the State pursuant to G.S. 143-214.1, the revision of water quality standards pursuant to G.S. 143-214.3, and the granting of variances pursuant to G.S. 143-215.3."

**SECTION 7.(a)** S.L. 2009-216 is amended by adding a new section to read:

**"SECTION 5.(a)** Definition. – As used in this section, "New Development Rule 15A NCAC 02B .0265" means 15A NCAC 02B .0265 (Jordan Water Supply Nutrient Strategy: Stormwater Management for New Development) adopted by the Commission on May 8, 2008, and approved by the Rules Review Commission on November 20, 2008.

**"SECTION 5.(b)** New Development Rule 15A NCAC 02B .0265. – Until the effective date of the revised permanent rule that the Commission is required to adopt pursuant to Section 5(d) of this act, the Commission and the Department shall implement New Development Rule 15A NCAC 02B .0265, as provided in Section 5(c) of this act.

**"SECTION 5.(c)** Implementation. – Notwithstanding sub-subdivision (vii) of sub-subdivision (a) of subdivision (3) of New Development Rule 15A NCAC 02B .0265, New Development Rule 15A NCAC 02B .0265 shall be implemented as follows:

- (1) New development that would exceed the nitrogen or phosphorus loading rate targets set out in sub-subdivision (i) of sub-subdivision (a) of subdivision (3) of New Development Rule 15A NCAC 02B .0265 without the use of engineered stormwater controls and that is not subject to more stringent stormwater requirements under S.L. 2006-246 or rules adopted pursuant to G.S. 143-214.5 shall have  $\frac{1}{7}$  engineered stormwater controls that meet the

- design requirements set out in sub-subdivision (iv) of sub-subdivision (a) of subdivision (3) of New Development Rule 15A NCAC 02B .0265 and achieve eighty-five percent (85%) removal of total suspended solids.
- (2) A developer may offset part of the nitrogen and phosphorus load from a new development by implementing or funding off-site management measures in accordance with this subdivision. New development shall comply with requirements for engineered stormwater controls as set out in this act and in New Development Stormwater Rule 15A NCAC 02B .0265. On-site stormwater controls shall achieve a maximum nitrogen loading rate that does not exceed six pounds per acre per year for single-family detached and duplex residential development and 10 pounds per acre per year for other development, including multifamily residential, commercial, and industrial. Off-site management measures may be used to offset the difference between the nitrogen and phosphorus loading rates achieved through compliance with the stormwater control requirements of this act and the loading rate targets set out in sub-subdivision (i) of sub-subdivision (a) of subdivision (3) of New Development Rule 15A NCAC 02B .0265. Off-site offsetting measures shall achieve at least the reduction in nitrogen and phosphorus loading equivalent to the remaining reduction needed to comply with the loading rate targets set out in sub-subdivision (i) of sub-subdivision (a) of subdivision (3) of New Development Rule 15A NCAC 02B .0265. A developer may make offset payments to the North Carolina Ecosystem Enhancement Program contingent upon acceptance of payments by that Program. A developer may use an offset option provided by the local government in which the development activity occurs. A developer may propose other offset measures to the local government, including providing his or her own off-site offset or utilizing a private seller. All offset measures identified above shall meet the requirements of subdivisions (2) through (4) of 15A NCAC 02B .0273.

**"SECTION 5.(d) Additional Rule-Making Authority.** – The Commission shall adopt a rule to replace New Development Rule 15A NCAC 02B .0265. Notwithstanding G.S. 150B-19(4), the rule adopted by the Commission pursuant to this section shall be substantively identical to the provisions of Section 5(c) of this act. Rules adopted pursuant to this section are not subject to G.S. 150B-21.9 through G.S. 150B-21.14. Rules adopted pursuant to this section shall become effective as provided in G.S. 150B-21.3(b1) as though 10 or more written objections had been received as provided by G.S. 150B-21.3(b2).

**"SECTION 5.(e) Sunset.** – Section 5(c) of this act expires on the date that rules adopted pursuant to Section 5(d) of this act become effective."

**SECTION 7.(b) S.L. 2009-216** is amended by adding a new section to read:

**"SECTION 6.(a) Definitions.** – The following definitions apply to this section and its implementation:

- (1) The definitions set out in G.S. 143-212 and G.S. 143-213.
- (2) The definitions set out in 15A NCAC 02B .0262 (Jordan Water Supply Nutrient Strategy: Purpose and Scope) and 15A NCAC 02B .0263 (Jordan Water Supply Nutrient Strategy: Definitions).
- (3) "State and Federal Rule 15A NCAC 02B .0271" means 15A NCAC 02B .0271 (Jordan Water Supply Nutrient Strategy: Stormwater Requirements for State and Federal Entities), adopted by the Commission on May 8, 2008, and approved by the Rules Review Commission on October 16, 2008.
- (4) "Riparian Buffer Rule 15A NCAC 02B .0267" means 15A NCAC 02B .0267 (Jordan Water Supply Nutrient Strategy: Protection of Existing Riparian Buffers), adopted by the Commission on May 8, 2008, and approved by the Rules Review Commission on November 20, 2008.

**"SECTION 6.(b) State and Federal Rule 15A NCAC 02B .0271.** – Until the effective date of the revised permanent rule that the Commission is required to adopt pursuant to Section 6(d) of this act, the Commission and the Department shall implement the State and Federal Rule 15A NCAC 02B .0271, as provided in Section 6(c) of this act.

**"SECTION 6.(c) Implementation.** – Notwithstanding State and Federal Rule 15A NCAC 02B .0271, the Commission shall implement the State and Federal Rule 15A NCAC 02B .0271 as follows:

- (1) The load reduction goal for existing North Carolina Department of Transportation roadway and nonroadway development shall be established as provided in this subdivision. The load reduction goal shall be designed to achieve, relative to the baseline period 1997 through 2001, an eight percent (8%) reduction in nitrogen loading and a five percent (5%) reduction in phosphorus loading reaching Jordan Reservoir from existing roadway and nonroadway development in the Upper New Hope and Haw subwatersheds. The load reduction goal for the Lower New Hope arm shall be designed to maintain no increases in nitrogen and phosphorus loads from existing roadway and nonroadway development relative to the baseline period 1997 through 2001. Load reduction goals for each subwatershed shall be calculated from baseline loads for existing North Carolina Department of Transportation development present during the baseline period. Baseline loads shall be established for roadways and industrial facilities using stormwater runoff nutrient load characterization data collected through the National Pollutant Discharge Elimination System (NPDES) Research Program under NCS0000250 Permit Part II Section G. Baseline loads for other nonroadway development shall be calculated by applying the Tar-Pamlico Nutrient Export Calculation Worksheet, Piedmont Version, dated October 2004, to acreages of nonroadway development under the control of North Carolina Department of Transportation during the baseline period. The baseline load for other nonroadway development may also be calculated using an equivalent or more accurate method acceptable to the Department and recommended by the Scientific Advisory Board established pursuant to Section 4(a) of S.L. 2009-216. The load reduction goal shall be adjusted to account for nutrient loading increases from existing roadway and nonroadway development subsequent to the baseline period but prior to implementation of new development stormwater programs pursuant to 15A NCAC 02B .0271(4)(c).
- (2) Sub-subdivision (b) of subdivision (3) and sub-subdivision (d) of subdivision (4) of State and Federal Rule 15A NCAC 02B .0271 shall be implemented as follows:
  - a. If the March 1, 2014, monitoring report or any subsequent monitoring report for the Upper New Hope Creek Arm of Jordan Reservoir required under Section 3(c) of S.L. 2009-216 shows that nutrient-related water quality standards are not being achieved, State and federal entities shall develop and implement a program to control nutrient loading from existing development within the subwatershed, as provided in this section and State and Federal Rule 15A NCAC 02B .0271. If the March 1, 2017, monitoring report or any subsequent monitoring report for the Haw River Arm or the Lower New Hope Creek Arm of Jordan Reservoir required under Section 3(c) of S.L. 2009-216 shows that nutrient-related water quality standards are not being achieved, State and federal entities shall develop and implement a program to control nutrient loading from existing development within the subwatershed, as provided in this section and State and Federal Rule 15A NCAC 02B .0271. The Department shall defer development and implementation of a program to control nutrient loading from existing development required in a subwatershed by this sub-subdivision if it determines that additional reductions in nutrient loading from existing development in that subwatershed will not be necessary to achieve nutrient-related water quality standards. In making this determination, the Department shall consider the anticipated effect of measures implemented or scheduled to be implemented to reduce nutrient loading from sources in the subwatershed other than existing development. If any subsequent monitoring report for an arm of Jordan Reservoir required under Section 3(c) of S.L. 2009-216 shows that nutrient-related water quality standards have not been achieved,

the Department shall notify each State and federal entity, and each entity shall develop and implement a program to control nutrient loading from existing development as provided in this section and State and Federal Rule 15A NCAC 02B .0271.

- b. If the Commission requires additional reductions in nutrient loading from local governments pursuant to Section 3(f) of S.L. 2009-216, the Commission shall require State and federal entities to modify their nutrient reduction programs for the Upper New Hope Creek subwatershed to achieve a total reduction in nitrogen loading from existing roadway and nonroadway development in nitrogen loading from existing development of thirty-five percent (35%) relative to the baseline period 1997-2001.
- (3) Notwithstanding sub-subdivision (d) of subdivision (4) of State and Federal Rule 15A NCAC 02B .0271, the North Carolina Department of Transportation may achieve the nutrient load reduction goal in subdivision (1) of this section for existing roadway and nonroadway development under its control by development of a load reduction program that addresses both roadway and nonroadway development in the watershed for each arm of Jordan Reservoir. A combined program to address roadway and nonroadway development may include stormwater retrofits and other load-reducing measures in the watershed including, but not limited to, illicit discharge removal; street sweeping; source control activities such as pet waste reduction and fertilizer management at NCDOT facilities; improvement of existing stormwater structures; alternative stormwater practices such as use of rain barrels and cisterns; stormwater capture and reuse; and purchase of nutrient reduction credits. NCDOT may meet minimum implementation rate and schedule requirements by implementing a combination of three stormwater retrofits per year for existing roadway development in the Jordan Lake watershed and other load-reducing measures identified in the program to control nutrient loading from existing development developed pursuant to State and Federal Entities Rule 15A NCAC 02B .0271 and this act and approved by the Commission.

**"SECTION 6.(d) Additional Rule-Making Authority.** – The Commission shall adopt a rule to replace State and Federal Rule 15A NCAC 02B .0271. Notwithstanding G.S. 150B-19(4), the rule adopted by the Commission pursuant to this section shall be substantively identical to the provisions of Section 6(c) of this act. Rules adopted pursuant to this section are not subject to G.S. 150B-21.9 through G.S. 150B-21.14. Rules adopted pursuant to this section shall become effective as provided in G.S. 150B-21.3(b1) as though 10 or more written objections had been received as provided by G.S. 150B-21.3(b2).

**"SECTION 6.(e) Sunset.** – Section 6(c) of this act expires on the date that rules adopted pursuant to Section 6(d) of this act become effective.

**"SECTION 6.(f) Riparian Buffer Rule 15A NCAC 02B .0267.** – Until the effective date of the revised permanent rule that the Commission is required to adopt pursuant to Section 6(h) of this act, the Commission and the Department shall implement the Riparian Buffer Rule 15A NCAC 02B .0267, as provided in Section 6(g) of this act.

**"SECTION 6.(g) Implementation.** – Notwithstanding Riparian Buffer Rule 15A NCAC 02B .0267, the Commission shall implement Riparian Buffer Rule 15A NCAC 02B .0267 as provided in this section.

- (1) For purposes of implementing Riparian Buffer Rule 15A NCAC 02B .0267, the Commission may only use one of the following types of maps for purposes of identifying a water body subject to the riparian buffer protection requirements of Riparian Buffer Rule 15A NCAC 02B .0267:
  - a. The most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United State Department of Agriculture.
  - b. The most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geological Survey.



- c. A map approved by the Geographic Information Coordinating Council and by the Commission. Prior to approving a map under this sub-subdivision, the Commission shall provide a 30-day public notice and opportunity for comment.
- (2) Alternative maps approved by the Commission under subdivision (1) of this section shall not be used for buffer delineation on projects that are existing and ongoing within the meaning of subdivision (6) of Riparian Buffer Rule 15A NCAC 02B .0267.
- (3) Sub-subdivision a. of subdivision (4) of Riparian Buffer Rule 15A NCAC 02B .0267 shall be interpreted to prohibit only those activities conducted outside the buffer that have the effect of altering the hydrology in violation of the diffuse flow requirements set out in subdivision (8) of Riparian Buffer Rule 15A NCAC 02B .0267.

**"SECTION 6.(h) Additional Rule-Making Authority.** – The Commission shall adopt a rule to replace Riparian Buffer Rule 15A NCAC 02B .0267. Notwithstanding G.S. 150B-19(4), the rule adopted by the Commission pursuant to this section shall be substantively identical to the provisions of Section 6(g) of this act. Rules adopted pursuant to this section are not subject to G.S. 150B-21.9 through G.S. 150B-21.14. Rules adopted pursuant to this section shall become effective as provided in G.S. 150B-21.3(b1) as though 10 or more written objections had been received as provided by G.S. 150B-21.3(b2).

**"SECTION 6.(i) Sunset.** – Section 6(g) of this act expires on the date that rules adopted pursuant to Section 6(h) of this act become effective."

**SECTION 8.** Sections 5 through 8 of S.L. 2009-216 read as rewritten:

~~"SECTION 5."~~**SECTION 7.** No Preemption. – A local government may adopt and implement a stormwater management program that contains provisions that are more restrictive than the standards set forth in Sections ~~2 and 3~~, 3, and 5 of this act or in any rules concerning stormwater management in the Jordan watershed adopted by the Commission. This section shall not be construed to authorize a local government to impose stormwater management requirements on lands in agriculture or forestry.

~~"SECTION 6."~~**SECTION 8.** Construction of Act. –

- (1) Except as specifically provided in ~~Sections 2(c) and 3(j)~~ Sections 2(c), 3(j), 5(d), and 6(h) of this act, nothing in this act shall be construed to limit, expand, or otherwise alter the authority of the Commission or any unit of local government.
- (2) This act shall not be construed to affect any delegation of any power or duty by the Commission to the Department or subunit of the Department.

~~"SECTION 7."~~**SECTION 9.** Note to Revisor of Statutes. – Notwithstanding G.S. 164-10, the Revisor of Statutes shall not codify any of the provisions of this act. The Revisor of Statutes shall set out the text of Section 2 of this act as a note to G.S. 143-215.1 and may make notes concerning this act to other sections of the General Statutes as the Revisor of Statutes deems appropriate. The Revisor of Statutes shall set out the text of Sections 3, 4, 5, and 6 of this act as a note to G.S. 143-214.7 and may make notes concerning this act to other sections of the General Statutes as the Revisor of Statutes deems appropriate.

~~"SECTION 8."~~**SECTION 10.** Effective Date. – This act is effective when it becomes law."

**PART III. ENVIRONMENTAL TECHNICAL CORRECTIONS.**

**SECTION 9.** G.S. 120-70.61(c) reads as rewritten:

**"§ 120-70.61. Membership; cochairs; vacancies; quorum.**

(c) Except as otherwise provided in this section, a legislative member of the Commission shall ~~continue to~~ serve for so long as the member remains a member of the General Assembly and no successor has been appointed. A member of the General Assembly who does not seek reelection or is not reelected to the General Assembly may complete a term of service on the Commission until the day on which a new General Assembly convenes. A legislative member of the Commission who resigns or is removed from service in the General Assembly shall be deemed to have resigned or been removed from office on the Commission. Any vacancy that occurs on the Commission shall be filled in the same manner as the original appointment."

**SECTION 10.** G.S. 146-64(9) reads as rewritten:

"(9) "Vacant and unappropriated lands" means all State lands title to which is vested in the State as sovereign, and land acquired by the State by virtue of being sold for taxes, except ~~swamplands as hereinafter defined.~~ swamplands."

**SECTION 11.** G.S. 130A-310.11 reads as rewritten:

**"§ 130A-310.11. Inactive Hazardous Sites Cleanup Fund created.**

(a) There is established under the control and direction of the Department the Inactive Hazardous Sites Cleanup Fund. This fund shall be a revolving fund consisting of any monies appropriated for such purpose by the General Assembly or available to it from grants, taxes, and other monies paid to it or recovered by or on behalf of the Department. The Inactive Hazardous Sites Cleanup Fund shall be treated as a nonreverting special trust fund and shall be credited with interest by the State Treasurer pursuant to G.S. 147-69.2 and G.S. 147-69.3.

(b) Funds credited to the Inactive Hazardous Sites Cleanup Fund pursuant to G.S. 130A-295.9 shall be used only as provided in ~~G.S. 130A-309.295.9(c).~~ G.S. 130A-295.9(1) and G.S. 130A-310.5(c)."

**PART IV. REPORTS CONSOLIDATION.**

**SECTION 12.** G.S. 106-744(i) reads as rewritten:

"(i) The Advisory Committee shall report no later than ~~May 1~~ October 1 of each year to the Joint Legislative Commission on Governmental Operations, the Environmental Review Commission, and the House of Representatives and Senate Appropriations Subcommittees on Natural and Economic Resources regarding the activities of the Advisory Committee, the agriculture easements purchased, and agricultural projects funded during the previous year."

**SECTION 13.** G.S. 113-44.15(c) reads as rewritten:

"(c) Reports. – The North Carolina Parks and Recreation Authority shall report no later than October 1 of each year to the Joint Legislative Commission on Governmental Operations, the House and Senate Appropriations Subcommittees on Natural and Economic Resources, the Fiscal Research Division, and the Environmental Review Commission on allocations from the Trust Fund from the prior fiscal year. ~~The Authority also shall provide a progress report no later than March 15 of each year to the same recipients on the activities of and the expenditures from the Trust Fund for the current fiscal year.~~"

**SECTION 14.** G.S. 113-77.9(e) reads as rewritten:

"(e) Reports. – The Secretary shall maintain and annually ~~twice each year~~ revise a list of ~~acquisitions grants~~ made pursuant to this Article. The list shall include the acreage of each tract, the county in which the tract is located, the amount ~~paid~~ awarded from the Fund to acquire the tract, and the State department or division responsible for managing the tract. The Secretary shall furnish a copy of the list to each Trustee, the Joint Legislative Commission on Governmental Operations, the House and Senate Appropriations Subcommittees on Natural and Economic Resources, the Fiscal Research Division, and the Environmental Review Commission ~~within 30 days after each revision.~~ no later than October 1 of each year."

**SECTION 15.** G.S. 143-58.2(f) is repealed.

**PART V. DELAY EFFECTIVE DATES FOR LAWS GOVERNING THE MANAGEMENT OF DISCARDED COMPUTER EQUIPMENT AND DISCARDED TELEVISIONS.**

**SECTION 16.(a)** Section 16.6 of S.L. 2007-550, as amended by Section 7 of S.L. 2008-208, as amended by Section 11.4 of S.L. 2008-198, reads as rewritten:

**"SECTION 16.6.(a)** Part 2E of Article 9 of Chapter 130A of the General Statutes, as enacted by Section 16.1(a) of this act, becomes effective as follows:

- (1) G.S. 130A-309.90 becomes effective ~~1 January~~ July 1, 2010.
- (2) G.S. 130A-309.91 becomes effective ~~1 January~~ July 1, 2010.
- (3) G.S. 130A-309.92 becomes effective ~~1 January~~ July 1, 2010.
- (4) G.S. 130A-309.93(a) becomes effective ~~1 January~~ July 1, 2010.
- (5) G.S. 130A-309.93(b) becomes effective ~~1 January~~ July 1, 2010.
- (6) G.S. 130A-309.93(c) becomes effective ~~1 January~~ July 1, 2010.
- (7) G.S. 130A-309.93(d) becomes effective ~~1 January~~ July 1, 2010.
- (8) G.S. 130A-309.93(e) becomes effective ~~1 January~~ July 1, 2010.
- (9) G.S. 130A-309.93(f) becomes effective ~~1 January~~ July 1, 2010.
- (10) G.S. 130A-309.93(g) becomes effective ~~1 February~~ February 1, 2011.

- (10a) G.S. 130A-309.93A(a) through (f) become effective ~~1 January~~ July 1, 2010. **D-141**
- (10b) G.S. 130A-309.93A(g) becomes effective ~~1 October~~ October 1, 2011.
- (10c) G.S. 130A-309.93B becomes effective ~~1 January~~ July 1, 2010.
- (11) G.S. 130A-309.94 becomes effective ~~1 January~~ July 1, 2010.
- (12) G.S. 130A-309.95(1) becomes effective ~~1 January~~ July 1, 2010.
- (13) G.S. 130A-309.95(2) becomes effective ~~1 January~~ July 1, 2010.
- (14) G.S. 130A-309.95(3) becomes effective ~~1 January~~ July 1, 2010.
- (14a) G.S. 130A-309.95(4) becomes effective July 1, 2010.
- (15) G.S. 130A-309.96 becomes effective ~~1 January~~ July 1, 2010.
- (16) G.S. 130A-309.97 becomes effective ~~1 January~~ July 1, 2010.
- (17) G.S. 130A-309.98 becomes effective ~~15 January~~ January 15, 2011.

**"SECTION 16.6.(b)** Section 16.2 of this act becomes effective ~~1 January~~ July 1, 2010. Sections 16.3 and 16.4 of this act become effective ~~1 January~~ January 1, 2011. Section 16.5 of this act becomes effective ~~1 July~~ July 1, 2010. Subsection (b) of Section 16.1 of this act, Section 16.6 of this act, and any other provision of Section 16 of this act for which an effective date is not specified become effective ~~1 January~~ July 1, 2010."

**SECTION 16.(b)** Section 8 of S.L. 2008-208 reads as rewritten:

**"SECTION 8.** Sections ~~3, 4, and 5~~ 3 and 4 of this act become effective ~~1 January~~ January 1, 2011. The remainder of this act becomes effective July 1, 2010. ~~The remainder of this act is effective when it becomes law."~~

**PART VI. EFFECTIVE DATE.**

**SECTION 17.** Sections 12, 13, 14, and 15 of this act become effective January 1, 2010. The remaining sections of this act are effective when this act becomes law.

In the General Assembly read three times and ratified this the 11<sup>th</sup> day of August, 2009.

s/ Walter H. Dalton  
President of the Senate

s/ Joe Hackney  
Speaker of the House of Representatives

s/ Beverly E. Perdue  
Governor

Approved 1:35 p.m. this 26<sup>th</sup> day of August, 2009

SESSION LAW 2009-216  
HOUSE BILL 239

AN ACT TO PROVIDE FOR IMPROVEMENTS IN THE MANAGEMENT OF THE JORDAN WATERSHED IN ORDER TO RESTORE WATER QUALITY IN THE JORDAN RESERVOIR.

The General Assembly of North Carolina enacts:

**SECTION 1.** Definitions. – The following definitions apply to this act and its implementation:

- (1) The definitions set out in G.S. 143-212 and G.S. 143-213.
- (2) The definitions set out in 15A NCAC 02B .0262 (Jordan Water Supply Nutrient Strategy: Purpose and Scope) and 15A NCAC 02B .0263 (Jordan Water Supply Nutrient Strategy: Definitions).
- (3) "Existing Development Rule 15A NCAC 02B .0266" means 15A NCAC 02B .0266 (Jordan Water Supply Nutrient Strategy: Stormwater Management for Existing Development), adopted by the Commission on May 8, 2008, and approved by the Rules Review Commission on November 20, 2008.
- (4) "Wastewater Discharge Rule 15A NCAC 02B .0270" means 15A NCAC 02B .0270 (Jordan Water Supply Nutrient Strategy: Wastewater Discharge Requirements) adopted by the Commission on May 8, 2008, and approved by the Rules Review Commission on October 16, 2008.

**SECTION 2.(a)** Wastewater Discharge Rule 15A NCAC 02B .0270. – Until the effective date of the revised permanent rule that the Commission is required to adopt pursuant to Section 2(c) of this act, the Commission and the Department shall implement the Wastewater Discharge Rule 15A NCAC 02B .0270, as provided in Section 2(b) of this act.

**SECTION 2.(b)** Implementation. – Notwithstanding sub-subdivision (c) of subdivision (6) of Wastewater Discharge Rule 15A NCAC 02B .0270, each existing discharger with a permitted flow greater than or equal to 0.1 million gallons per day (MGD) shall limit its total nitrogen discharge to its active individual discharge allocation as defined or modified pursuant to Wastewater Discharge Rule 15A NCAC 02B .0270 no later than calendar year 2016.

**SECTION 2.(c)** Additional Rule-Making Authority. – The Commission shall adopt a rule to replace Wastewater Discharge Rule 15A NCAC 02B .0270. Notwithstanding G.S. 150B-19(4), the rule adopted by the Commission pursuant to this section shall be substantively identical to the provisions of Section 2(b) of this act. Rules adopted pursuant to this section are not subject to G.S. 150B-21.9 through G.S. 150B-21.14. Rules adopted pursuant to this section shall become effective as provided in G.S. 150B-21.3(b1) as though 10 or more written objections had been received as provided by G.S. 150B-21.3(b2).

**SECTION 3.(a)** Existing Development Rule 15A NCAC 02B .0266 Disapproved. – Pursuant to G.S. 150B-21.3(b1), Existing Development Rule 15A NCAC 02B .0266, as adopted by the Environmental Management Commission on May 8, 2008, and approved by the Rules Review Commission on November 20, 2008, is disapproved.

**SECTION 3.(b)** References in the North Carolina Administrative Code to the rule cited in Section 3(a) of this act shall be deemed to refer to the equivalent provisions of this act.

**SECTION 3.(c)** Nutrient Monitoring. – The Department shall maintain an ongoing program to monitor water quality in each arm of Jordan Reservoir. The Department shall also accept water quality sampling data from a monitoring program implemented by a local government or nonprofit organization if the data meets quality assurance standards established by the Department. On March 1, 2014, the Department shall report the results of monitoring in



each arm of Jordan Reservoir to the Environmental Review Commission. The Department shall submit an updated monitoring report under this section every three years thereafter until such time as the lake is no longer impaired by nutrient pollution.

**SECTION 3.(d) Control of Nutrient Loading From Existing Development.** – The Department shall require implementation of reasonable nutrient load reduction measures for existing development in each subwatershed of the Jordan Reservoir, as provided in this act. The Department shall determine whether nutrient load reduction measures for existing development are necessary in each subwatershed of Jordan Reservoir and require implementation of reasonable nutrient reduction measures in accordance with an adaptive management program as follows:

- (1) Stage 1 Adaptive Management Program to Control Nutrient Loading From Existing Development. –
  - a. Municipalities and counties located in whole or in part in the Jordan watershed shall implement a Stage 1 adaptive management program to control nutrient loading from existing development in the Jordan watershed. The Stage 1 adaptive management program shall meet the requirements set out in 40 C.F.R. § 122.34 as applied by the Department in the NPDES General Permit for municipal separate storm sewer systems in effect on July 1, 2009. The Stage 1 adaptive management program shall include all of the following measures:
    - 1. A public education program to inform the public of the impacts of nutrient loading and measures that can be implemented to reduce nutrient loading from stormwater runoff from existing development.
    - 2. A mapping program that includes major components of the municipal separate storm sewer system, including the location of major outfalls, as defined in 40 Code of Federal Regulations §122.26(b)(5) (July 1, 2008) and the names and location of all waters of the United States that receive discharges from those outfalls, land use types, and location of sanitary sewers.
    - 3. A program to identify and remove illegal discharges.
    - 4. A program to identify opportunities for retrofits and other projects to reduce nutrient loading from existing developed lands.
    - 5. A program to ensure maintenance of best management practices implemented by the local government.
  - b. The Department shall accept local government implementation of another stormwater program or programs meeting the standards set out in this section as satisfying one or more of the requirements set forth in sub-subdivision a. of this subdivision. The local government shall provide technical information sufficient to demonstrate the adequacy of the alternative program or program elements.
  - c. A Stage 1 adaptive management program to control nutrient loading from existing development shall be implemented as follows:
    - 1. No later than December 31, 2009, each local government shall submit its Stage 1 adaptive management program to the Commission for review and approval.
    - 2. Within six months following submission of a Stage 1 adaptive management program, the Department shall recommend that the Commission approve or disapprove the program. The Commission shall either approve the program or require changes based on the standards set out in sub-subdivision a. of this subdivision. If the Commission requires changes, the local government shall submit revisions responding to the required changes within two months and the Department shall provide follow-up recommendations to the Commission within two months after receiving revisions.

3. Within three months following Commission approval of a Stage 1 adaptive management program, the local government shall begin implementation of the program. Each local government shall report annually to the Department on implementation of its program.
- (2) Stage 2 Adaptive Management Program to Control Nutrient Loading From Existing Development. –
- a. If the March 1, 2014 monitoring report or any subsequent monitoring report for the Upper New Hope Creek Arm of Jordan Reservoir required under Section 3(c) of this act shows that nutrient-related water quality standards are not being achieved, a municipality or county located in whole or in part in the subwatershed of that arm of Jordan Reservoir shall develop and implement a Stage 2 adaptive management program to control nutrient loading from existing development within the subwatershed, as provided in this act. If the March 1, 2017 monitoring report or any subsequent monitoring report for the Haw River Arm or the Lower New Hope Creek Arm of Jordan Reservoir required under Section 3(c) of this act shows that nutrient-related water quality standards are not being achieved, a municipality or county located in whole or in part in the subwatershed of that arm of Jordan Reservoir shall develop and implement a Stage 2 adaptive management program to control nutrient loading from existing development within the subwatershed, as provided in this act. The Department shall defer development and implementation of Stage 2 adaptive management programs to control nutrient loading from existing development required in a subwatershed by this subdivision if it determines that additional reductions in nutrient loading from existing development in that subwatershed will not be necessary to achieve nutrient-related water quality standards. In making this determination, the Department shall consider the anticipated effect of measures implemented or scheduled to be implemented to reduce nutrient loading from sources in the subwatershed other than existing development. If any subsequent monitoring report for an arm of Jordan Reservoir required under Section 3(c) of this act shows that nutrient-related water quality standards have not been achieved, the Department shall notify the municipalities and counties located in whole or in part in the subwatershed of that arm of Jordan Reservoir and the municipalities and counties shall develop and implement a Stage 2 adaptive management program as provided in this subdivision.
  - b. The Department shall establish a load reduction goal for existing development for each municipality and county required to implement a Stage 2 adaptive management program to control nutrient loading from existing development. The load reduction goal shall be designed to achieve, relative to the baseline period 1997 through 2001, an eight percent (8%) reduction in nitrogen loading and a five percent (5%) reduction in phosphorus loading reaching Jordan Reservoir from existing developed lands within the police power jurisdiction of the local government. The baseline load shall be calculated by applying the Tar-Pamlico Nutrient Export Calculation Worksheet, Piedmont Version, dated October 2004, to acreages of different types of existing development within the police power jurisdiction of the local government during the baseline period. The baseline load may also be calculated using an equivalent or more accurate method acceptable to the Department and recommended by the Scientific Advisory Board established pursuant to Section 4(a) of this act. The baseline load for a municipality or county shall not include nutrient loading from lands under State or federal control or lands in agriculture or forestry. The load reduction goal shall be

- adjusted to account for nutrient loading increases from lands developed subsequent to the baseline period but prior to implementation of new development stormwater programs.
- c. Based on findings under sub-subdivision a. of this subdivision, the Department shall notify the local governments in each subwatershed that either:
    1. Implementation of a Stage 2 adaptive management program to control nutrient loading from existing development will be necessary to achieve water quality standards in an arm of the reservoir and direct the municipalities and counties in the subwatershed to develop a load reduction program in compliance with this section.
    2. Implementation of a Stage 2 adaptive management program to control nutrient loading from existing development is not necessary at that time but will be reevaluated in three years based on the most recent water quality monitoring information.
  - d. A local government receiving notice of the requirement to develop and implement a Stage 2 adaptive management program to control nutrient loading from existing development under this section shall not be required to submit a program if the local government demonstrates that it has already achieved the reductions in nutrient loadings required by sub-subdivision b. of this subdivision.
  - e. Within six months after receiving notice to develop and implement a Stage 2 adaptive management program to control nutrient loading from existing development, each local government shall submit to the Commission a program that is designed to achieve the reductions in nutrient loadings established by the Department pursuant to sub-subdivision b. of this subdivision. A local government program may include nutrient management strategies that are not included in the model program developed pursuant to Section 3(e) of this act in addition to or in place of any component of the model program. In addition, a local government may satisfy the requirements of this subdivision through reductions in nutrient loadings from other sources in the same subwatershed to the extent those reductions go beyond measures otherwise required by statute or rule. A local government may also work with other local governments within the same subwatershed to collectively meet the required reductions in nutrient loadings from existing development within their combined jurisdictions. Any credit for reductions achieved or obtained outside of the police power jurisdiction of a local government shall be adjusted based on transport factors established by the Department document Nitrogen and Phosphorus Delivery from Small Watersheds to Jordan Lake, dated June 30, 2002.
  - f. Within six months following submission of a local government's Stage 2 adaptive management program to control nutrient loading from existing development, the Department shall recommend that the Commission approve or disapprove the program. The Commission shall approve the program if it meets the requirements of this subdivision, unless the Commission finds that the local government can, through the implementation of reasonable and cost-effective measures not included in the proposed program, meet the reductions in nutrient loading established by the Department pursuant to sub-subdivision b. of this subdivision by a date earlier than that proposed by the local government. If the Commission finds that there are additional or alternative reasonable and cost-effective measures, the Commission may require the local government to modify its proposed program to include such measures to achieve the required reductions by the earlier date. If the Commission requires such

modifications, the local government shall submit a modified program within two months. The Department shall recommend that the Commission approve or disapprove the modified program within three months after receiving the local government's modified program. In determining whether additional or alternative load reduction measures are reasonable and cost effective, the Commission shall consider factors including, but not limited to, the increase in the per capita cost of a local government's stormwater management program that would be required to implement such measures and the cost per pound of nitrogen and phosphorus removed by such measures. The Commission shall not require additional or alternative measures that would require a local government to:

- 1. Install or require installation of a new stormwater collection system in an area of existing development unless the area is being redeveloped.
  - 2. Acquire developed private property.
  - 3. Reduce or require the reduction of impervious surfaces within an area of existing development unless the area is being redeveloped.
- g. Within three months after the Commission's approval of a Stage 2 adaptive management program to control nutrient loading from existing development, the local government shall complete adoption and begin implementation of its program.
  - h. Each local government implementing a Stage 2 adaptive management program to control nutrient loading from existing development shall submit an annual report to the Department summarizing its activities in implementing its program.
  - i. If at any time the Department finds, based on water quality monitoring, that an arm of the Jordan Reservoir has achieved compliance with water quality standards, the Department shall notify the local governments in the subwatershed. Subject to the approval of the Commission, a local government may modify its Stage 2 adaptive management program to control nutrient loading from existing development to maintain only those measures necessary to prevent increases in nutrient loading from existing development.

**SECTION 3.(e)** Model Stage 2 Adaptive Management Program to Control Nutrient Loading From Existing Development. – No later than July 1, 2013, the Department shall submit a model Stage 2 adaptive management program to control nutrient loading from existing development to the Commission for approval. The model program shall identify specific load reduction practices and programs and reduction credits associated with each practice or program and shall provide that a local government may obtain additional or alternative load-reduction credits based on site-specific monitoring data. In developing the model program, the Department shall consider the findings and recommendations of the Scientific Advisory Board established pursuant to Section 4(a) of this act and comments submitted by municipalities and counties identified in 15A NCAC 02B .0262(7) (Jordan Water Supply Nutrient Strategy: Purpose and Scope). The Commission shall review the model program and either approve the program or return it to the Department with requested changes. The Department shall revise the model program to address changes requested by the Commission. The Commission shall approve a final model program no later than December 31, 2013.

**SECTION 3.(f)** Additional Measures to Reduce Nitrogen Loading From Existing Development in the Upper New Hope Creek Arm of the Jordan Reservoir. – If the March 1, 2023, monitoring report or any subsequent monitoring report for the Upper New Hope Creek Arm of Jordan Reservoir shows that nutrient-related water quality standards are not being achieved, a municipality or county located in whole or in part in the Upper New Hope Creek Subwatershed shall modify its Stage 2 adaptive management program to control nutrient loading from existing development to achieve additional reductions in nitrogen loading from existing development. The modified Stage 2 adaptive management program shall be designed



to achieve a total reduction in nitrogen loading from existing development of thirty-five percent (35%) relative to the baseline period 1997 through 2001. The Department shall notify local governments of the requirement to submit a modified Stage 2 adaptive management program. Submission, review and approval, and implementation of a modified Stage 2 adaptive management program shall follow the process, timeline, and standards set out in sub-subdivisions e. through g. of subdivision (2) of Section 3(d) of this act.

**SECTION 3.(g) Enforcement.** – The Department shall enforce the provisions of this act as provided in G.S. 143-215.6A, 143-215.6B, and 143-215.6C.

**SECTION 3.(h) Collective Compliance.** – Local governments that are subject to regulation under this act may establish collective programs to comply with the requirements of this act.

**SECTION 3.(i) Report.** – The Department shall report annually to the Commission regarding the implementation of adaptive management programs to control nutrient loading from existing development in the Jordan watershed.

**SECTION 3.(j) Additional Rule-Making Authority.** – The Commission shall adopt a rule to replace Sections 3(c) through 3(i) of this act. Notwithstanding G.S. 150B-19(4), the rule adopted by the Commission pursuant to this section shall be substantively identical to the provisions of Sections 3(c) through 3(f) of this act. Rules adopted pursuant to this section are not subject to G.S. 150B-21.9 through G.S. 150B-21.14. Rules adopted pursuant to this section shall become effective as provided in G.S. 150B-21.3(b1) as though 10 or more written objections had been received as provided by G.S. 150B-21.3(b2).

**SECTION 3.(k) No Change to Existing Regulatory Authority.** – Nothing in this act shall be construed to limit, expand, or modify the authority of the Commission to undertake alternative regulatory actions otherwise authorized by State or federal law, including, but not limited to, the reclassification of waters of the State pursuant to G.S. 143-214.1, the revision of water quality standards pursuant to G.S. 143-214.3, and the granting of variances pursuant to G.S. 143-215.3.

**SECTION 4.(a) Scientific Advisory Board for Nutrient-Impaired Waters Established.** – No later than July 1, 2010, the Secretary shall establish a Nutrient Sensitive Waters Scientific Advisory Board. The Scientific Advisory Board shall consist of no fewer than five and no more than 10 members with the following expertise or experience:

- (1) Representatives of one or more local governments in the Jordan Reservoir watershed. Local government representatives shall have experience in stormwater management, flood control, or management of a water or wastewater utility.
- (2) One member with at least 10 years of professional or academic experience relevant to the management of nutrients in impaired water bodies and possessing a graduate degree in a related scientific discipline, such as aquatic science, biology, chemistry, geology, hydrology, environmental science, engineering, economics, or limnology.
- (3) One professional engineer with expertise in stormwater management, hydrology, or flood control.
- (4) One representative of the Department of Transportation with expertise in stormwater management.
- (5) One representative of a conservation organization with expertise in stormwater management, urban landscape design, nutrient reduction, or water quality.

**SECTION 4.(b) Duties.** – No later than July 1, 2012, the Scientific Advisory Board shall do all of the following:

- (1) Identify management strategies that can be used by local governments to reduce nutrient loading from existing development.
- (2) Evaluate the feasibility, costs, and benefits of implementing the identified management strategies.
- (3) Develop an accounting system for assignment of nutrient reduction credits for the identified management strategies.
- (4) Identify the need for any improvements or refinements to modeling and other analytical tools used to evaluate water quality in nutrient-impaired waters and nutrient management strategies.

**SECTION 4.(c)** Report; Miscellaneous Provisions. – The Scientific Advisory Board shall also advise the Secretary on any other issue related to management and restoration of nutrient-impaired water bodies. The Scientific Advisory Board shall submit an annual report to the Secretary no later than July 1 of each year concerning its activities, findings, and recommendations. Members of the Scientific Advisory Board shall be reimbursed for reasonable travel expenses to attend meetings convened by the Department for the purposes set out in this section.

**SECTION 5.** No Preemption. – A local government may adopt and implement a stormwater management program that contains provisions that are more restrictive than the standards set forth in Sections 2 and 3 of this act or in any rules concerning stormwater management in the Jordan watershed adopted by the Commission. This section shall not be construed to authorize a local government to impose stormwater management requirements on lands in agriculture or forestry.

**SECTION 6.** Construction of Act. –

- (1) Except as specifically provided in Sections 2(c) and 3(j) of this act, nothing in this act shall be construed to limit, expand, or otherwise alter the authority of the Commission or any unit of local government.
- (2) This act shall not be construed to affect any delegation of any power or duty by the Commission to the Department or subunit of the Department.

**SECTION 7.** Note to Revisor of Statutes. – Notwithstanding G.S. 164-10, the Revisor of Statutes shall not codify any of the provisions of this act. The Revisor of Statutes shall set out the text of Section 2 of this act as a note to G.S. 143-215.1 and may make notes concerning this act to other sections of the General Statutes as the Revisor of Statutes deems appropriate. The Revisor of Statutes shall set out the text of Section 3 of this act as a note to G.S. 143-214.7 and may make notes concerning this act to other sections of the General Statutes as the Revisor of Statutes deems appropriate.

**SECTION 8.** Effective Date. – This act is effective when it becomes law.

In the General Assembly read three times and ratified this the 23<sup>rd</sup> day of June, 2009.

s/ Walter H. Dalton  
President of the Senate

s/ Joe Hackney  
Speaker of the House of Representatives

s/ Beverly E. Perdue  
Governor

Approved 5:30 p.m. this 30<sup>th</sup> day of June, 2009

SESSION LAW 2009-484  
SENATE BILL 838

AN ACT TO AMEND CERTAIN ENVIRONMENTAL AND NATURAL RESOURCES LAWS TO: (1) REQUIRE ELECTRONIC REPORTING OF ENVIRONMENTAL LEAD TEST RESULTS AND BLOOD LEAD TEST RESULTS; (2) CLARIFY THE FEE STRUCTURE FOR FOOD AND LODGING PERMITS; (3) REVISE THE SUNSET PROVISION FOR NUTRIENT OFFSET PAYMENTS; (4) AMEND THE SOLID WASTE DISPOSAL TAX TO STREAMLINE THE PROCESS WHEN A LOCAL GOVERNMENT IS SERVED BY A SOLID WASTE MANAGEMENT AUTHORITY; (5) REPEAL THE REQUIREMENT THAT SEASONAL STATE PARK EMPLOYEES WEAR A UNIFORM VEST; (6) CLARIFY IMPLEMENTATION OF NUTRIENT OFFSETS UNDER THE JORDAN LAKE RULES; (7) CLARIFY IMPLEMENTATION OF THE JORDAN LAKE RULES RELATED TO FEDERAL AND STATE ENTITIES; (8) MAKE CLARIFYING, CONFORMING, AND TECHNICAL AMENDMENTS TO VARIOUS LAWS RELATED TO THE ENVIRONMENT AND NATURAL RESOURCES; (9) AMEND OR REPEAL VARIOUS ENVIRONMENTAL REPORTING REQUIREMENTS; AND (10) DELAY THE EFFECTIVE DATES FOR LAWS GOVERNING THE MANAGEMENT OF DISCARDED COMPUTER EQUIPMENT AND DISCARDED TELEVISIONS TO JULY 1, 2010.

The General Assembly of North Carolina enacts:

**PART I. AMEND ENVIRONMENTAL AND NATURAL RESOURCES LAWS.**

**SECTION 1.** G.S. 130A-131.8 reads as rewritten:

"§ 130A-131.8. Laboratory Reports ~~reports of blood levels in children.~~

(a) All laboratories doing business in this State shall report to the Department all environmental lead test results and blood lead test results for children less than six years of age and for individuals whose ages are unknown at the time of testing. Reports shall be made by electronic submission within five working days after test ~~completion on forms provided by the Department or on self-generated forms containing:~~ completion.

(b) Reports of blood lead test results shall contain all of the following:

- (1) ~~the~~ The child's full name, date of birth, sex, race, ethnicity, address, and Medicaid number, if any; any.
- (2) ~~the~~ The name, address, and telephone number of the requesting health care provider; provider.
- (3) ~~the~~ The name, address, and telephone number of the testing laboratory; laboratory.
- (4) ~~the~~ The laboratory results, whether the specimen type—type is venous or capillary; the laboratory sample number, and the dates the sample was collected and analyzed. The reports may be made by electronic submissions.

(c) Reports of environmental lead test results shall contain all of the following:

- (1) The address where the samples were collected.
- (2) Sample type, such as dust, paint, soil, or water.
- (3) Surface type, such as floor, window sill, or window trough.
- (4) Collection location.
- (5) The name, address, and telephone number of the testing laboratory.
- (6) The laboratory results, unit of measurement, the laboratory sample number, and the dates the sample was collected and analyzed."

**SECTION 2.(a)** If Senate Bill 202, 2009 Regular Session, does not become law then G.S. 130A-248(d) reads as rewritten:



"(d) The Department shall charge each establishment subject to this section, except nutrition programs for the elderly administered by the Division of Aging and Adult Services of the Department of Health and Human Services, establishments that prepare and sell meat food products or poultry products, and public school cafeterias, ~~an annual fee of fifty dollars (\$50.00).~~ cafeterias, a fee of fifty dollars (\$50.00) for each permit issued. This fee shall be reassessed annually for permits that do not expire. The Commission shall adopt rules to implement this subsection. Fees collected under this subsection shall be used for State and local food, lodging, and institution sanitation programs and activities. No more than thirty-three and one-third percent (33 1/3%) of the fees collected under this subsection may be used to support State health programs and activities."

**SECTION 2.(b)** If Senate Bill 202, 2009 Regular Session, does become law then G.S. 130A-248(d) reads as rewritten:

"(d) The Department shall charge each establishment subject to this section, except nutrition programs for the elderly administered by the Division of Aging and Adult Services of the Department of Health and Human Services, establishments that prepare and sell meat food products or poultry products, and public school cafeterias, ~~an annual a fee of seventy-five dollars (\$75.00).~~ (\$75.00) for each permit issued. This fee shall be reassessed annually for permits that do not expire. The Commission shall adopt rules to implement this subsection. Fees collected under this subsection shall be used for State and local food, lodging, and institution sanitation programs and activities. No more than thirty-three and one-third percent (33 1/3%) of the fees collected under this subsection may be used to support State health programs and activities."

**SECTION 3.(a)** Section 2 of S.L. 2007-438 reads as rewritten:

**"SECTION 2.** No later than ~~1 September 2009,~~ 1 September 2010, the Department of Environment and Natural Resources shall develop and implement a plan to transition the North Carolina Ecosystem Enhancement Program nutrient offset program from a fee-based program to a program based on the actual costs of providing nutrient credits. The new program shall use the least cost alternative for providing nutrient offset credits consistent with rules adopted by the Environmental Management Commission for implementation of nutrient management strategies in the Neuse River Basin and the Tar-Pamlico River Basin."

**SECTION 3.(b)** Section 5 of S.L. 2007-438 reads as rewritten:

**"SECTION 5.** This act becomes effective 1 September 2007 and applies to all nutrient offset payments, including those set out in 15A NCAC 2B .0240, as adopted by the Environmental Management Commission on 12 January 2006. The fee schedule set out in Section 1 of this act expires ~~1 September 2009,~~ 1 September 2010."

**SECTION 4.** G.S. 105-187.63 reads as rewritten:

**"§ 105-187.63. Use of tax proceeds.**

From the taxes received pursuant to this Article, the Secretary may retain the costs of collection, not to exceed two hundred twenty-five thousand dollars (\$225,000) a year, as reimbursement to the Department. The Secretary must credit or distribute taxes received pursuant to this Article, less the cost of collection, on a quarterly basis as follows:

- (1) Fifty percent (50%) to the Inactive Hazardous Sites Cleanup Fund established by G.S. 130A-310.11.
- (2) Thirty-seven and one-half percent (37.5%) to cities and counties in the State on a per capita basis, using the most recent annual estimate of population certified by the State Budget Officer. One-half of this amount must be distributed to cities, and one-half of this amount must be distributed to counties. For purposes of this distribution, the population of a county does not include the population of a city located in the county.

A city or county is excluded from the distribution under this subdivision if it does not provide solid waste management programs and services and is not responsible by contract for payment for these programs and ~~services, unless it is served by a regional solid waste management authority established under Article 22 of Chapter 153A of the General Statutes.~~ The Department of Environment and Natural Resources must provide the Secretary with a list of the cities and counties that are excluded under this subdivision. The list must be provided by May 15 of each year and applies to distributions made in the fiscal year that begins on July 1 of that year.

Funds distributed under this subdivision must be used by a city or county solely for solid waste management programs and services. ~~A city or county that receives funds under this subdivision and is served by a regional solid waste management authority must forward the amount it receives to that authority.~~

- (3) Twelve and one-half percent (12.5%) to the Solid Waste Management Trust Fund established by G.S. 130A-309.12."

**SECTION 5.** G.S. 113-35.1 is repealed.

**SECTION 5.1.** Section 5 of S.L. 2009-406 reads as rewritten:

**"SECTION 5.** This act shall not be construed or implemented to:

- (1) Extend any permit or approval issued by the United States or any of its agencies or instrumentalities.
- (2) Extend any permit or approval for which the term or duration of the permit or approval is specified or determined pursuant to federal law.
- (3) Shorten the duration that any development approval would have had in the absence of this act.
- (4) Prohibit the granting of such additional extensions as are provided by law.
- (5) Affect any administrative consent order issued by the Department of Environment and Natural Resources in effect or issued at any time from the effective date of this act to December 31, 2010.
- (6) Affect the ability of a government entity to revoke or modify a development approval or to accept voluntary relinquishment of a development approval by the holder of the development approval pursuant to law.
- (7) Modify any requirement of law that is necessary to retain federal delegation by the State of the authority to implement a federal law or program."

## **PART II. AMEND CERTAIN JORDAN WATER SUPPLY NUTRIENT STRATEGY RULES.**

**SECTION 6.(a)** S.L. 2009-216 is amended by adding a new subsection to read:

**"SECTION 2.(d)** Section 2(b) of this act expires on the date that rules adopted pursuant to Section 2(c) of this act become effective."

**SECTION 6.(b)** S.L. 2009-216 is amended by adding a new subsection to read:

**"SECTION 3.(k)** Sections 3(c) through 3(i) of this act expire on the date that rules adopted pursuant to Section 3(j) of this act become effective."

**SECTION 6.(c)** Section 3(k) of S.L. 2009-216 reads as rewritten:

**~~SECTION 3.(k)~~ SECTION 3.(l)** No Change to Existing Regulatory Authority. – Nothing in this act shall be construed to limit, expand, or modify the authority of the Commission to undertake alternative regulatory actions otherwise authorized by State or federal law, including, but not limited to, the reclassification of waters of the State pursuant to G.S. 143-214.1, the revision of water quality standards pursuant to G.S. 143-214.3, and the granting of variances pursuant to G.S. 143-215.3."

**SECTION 7.(a)** S.L. 2009-216 is amended by adding a new section to read:

**"SECTION 5.(a)** Definition. – As used in this section, "New Development Rule 15A NCAC 02B .0265" means 15A NCAC 02B .0265 (Jordan Water Supply Nutrient Strategy: Stormwater Management for New Development) adopted by the Commission on May 8, 2008, and approved by the Rules Review Commission on November 20, 2008.

**"SECTION 5.(b)** New Development Rule 15A NCAC 02B .0265. – Until the effective date of the revised permanent rule that the Commission is required to adopt pursuant to Section 5(d) of this act, the Commission and the Department shall implement New Development Rule 15A NCAC 02B .0265, as provided in Section 5(c) of this act.

**"SECTION 5.(c)** Implementation. – Notwithstanding sub-subdivision (vii) of sub-subdivision (a) of subdivision (3) of New Development Rule 15A NCAC 02B .0265, New Development Rule 15A NCAC 02B .0265 shall be implemented as follows:

- (1) New development that would exceed the nitrogen or phosphorus loading rate targets set out in sub-subdivision (i) of sub-subdivision (a) of subdivision (3) of New Development Rule 15A NCAC 02B .0265 without the use of engineered stormwater controls and that is not subject to more stringent stormwater requirements under S.L. 2006-246 or rules adopted pursuant to G.S. 143-214.5 shall have engineered stormwater controls that meet the

- design requirements set out in sub-subdivision (iv) of sub-subdivision (c) of subdivision (3) of New Development Rule 15A NCAC 02B .0265 and achieve eighty-five percent (85%) removal of total suspended solids.
- (2) A developer may offset part of the nitrogen and phosphorus load from a new development by implementing or funding off-site management measures in accordance with this subdivision. New development shall comply with requirements for engineered stormwater controls as set out in this act and in New Development Stormwater Rule 15A NCAC 02B .0265. On-site stormwater controls shall achieve a maximum nitrogen loading rate that does not exceed six pounds per acre per year for single-family detached and duplex residential development and 10 pounds per acre per year for other development, including multifamily residential, commercial, and industrial. Off-site management measures may be used to offset the difference between the nitrogen and phosphorus loading rates achieved through compliance with the stormwater control requirements of this act and the loading rate targets set out in sub-subdivision (i) of sub-subdivision (a) of subdivision (3) of New Development Rule 15A NCAC 02B .0265. Off-site offsetting measures shall achieve at least the reduction in nitrogen and phosphorus loading equivalent to the remaining reduction needed to comply with the loading rate targets set out in sub-subdivision (i) of sub-subdivision (a) of subdivision (3) of New Development Rule 15A NCAC 02B .0265. A developer may make offset payments to the North Carolina Ecosystem Enhancement Program contingent upon acceptance of payments by that Program. A developer may use an offset option provided by the local government in which the development activity occurs. A developer may propose other offset measures to the local government, including providing his or her own off-site offset or utilizing a private seller. All offset measures identified above shall meet the requirements of subdivisions (2) through (4) of 15A NCAC 02B .0273.

**"SECTION 5.(d) Additional Rule-Making Authority.** – The Commission shall adopt a rule to replace New Development Rule 15A NCAC 02B .0265. Notwithstanding G.S. 150B-19(4), the rule adopted by the Commission pursuant to this section shall be substantively identical to the provisions of Section 5(c) of this act. Rules adopted pursuant to this section are not subject to G.S. 150B-21.9 through G.S. 150B-21.14. Rules adopted pursuant to this section shall become effective as provided in G.S. 150B-21.3(b1) as though 10 or more written objections had been received as provided by G.S. 150B-21.3(b2).

**"SECTION 5.(e) Sunset.** – Section 5(c) of this act expires on the date that rules adopted pursuant to Section 5(d) of this act become effective."

**SECTION 7.(b) S.L. 2009-216** is amended by adding a new section to read:

**"SECTION 6.(a) Definitions.** – The following definitions apply to this section and its implementation:

- (1) The definitions set out in G.S. 143-212 and G.S. 143-213.
- (2) The definitions set out in 15A NCAC 02B .0262 (Jordan Water Supply Nutrient Strategy: Purpose and Scope) and 15A NCAC 02B .0263 (Jordan Water Supply Nutrient Strategy: Definitions).
- (3) "State and Federal Rule 15A NCAC 02B .0271" means 15A NCAC 02B .0271 (Jordan Water Supply Nutrient Strategy: Stormwater Requirements for State and Federal Entities), adopted by the Commission on May 8, 2008, and approved by the Rules Review Commission on October 16, 2008.
- (4) "Riparian Buffer Rule 15A NCAC 02B .0267" means 15A NCAC 02B .0267 (Jordan Water Supply Nutrient Strategy: Protection of Existing Riparian Buffers), adopted by the Commission on May 8, 2008, and approved by the Rules Review Commission on November 20, 2008.

**"SECTION 6.(b) State and Federal Rule 15A NCAC 02B .0271.** – Until the effective date of the revised permanent rule that the Commission is required to adopt pursuant to Section 6(d) of this act, the Commission and the Department shall implement the State and Federal Rule 15A NCAC 02B .0271, as provided in Section 6(c) of this act.

**"SECTION 6.(c) Implementation.** – Notwithstanding State and Federal Rule 15A NCAC 02B .0271, the Commission shall implement the State and Federal Rule 15A NCAC 02B .0271 as follows:

- (1) The load reduction goal for existing North Carolina Department of Transportation roadway and nonroadway development shall be established as provided in this subdivision. The load reduction goal shall be designed to achieve, relative to the baseline period 1997 through 2001, an eight percent (8%) reduction in nitrogen loading and a five percent (5%) reduction in phosphorus loading reaching Jordan Reservoir from existing roadway and nonroadway development in the Upper New Hope and Haw subwatersheds. The load reduction goal for the Lower New Hope arm shall be designed to maintain no increases in nitrogen and phosphorus loads from existing roadway and nonroadway development relative to the baseline period 1997 through 2001. Load reduction goals for each subwatershed shall be calculated from baseline loads for existing North Carolina Department of Transportation development present during the baseline period. Baseline loads shall be established for roadways and industrial facilities using stormwater runoff nutrient load characterization data collected through the National Pollutant Discharge Elimination System (NPDES) Research Program under NCS0000250 Permit Part II Section G. Baseline loads for other nonroadway development shall be calculated by applying the Tar-Pamlico Nutrient Export Calculation Worksheet, Piedmont Version, dated October 2004, to acreages of nonroadway development under the control of North Carolina Department of Transportation during the baseline period. The baseline load for other nonroadway development may also be calculated using an equivalent or more accurate method acceptable to the Department and recommended by the Scientific Advisory Board established pursuant to Section 4(a) of S.L. 2009-216. The load reduction goal shall be adjusted to account for nutrient loading increases from existing roadway and nonroadway development subsequent to the baseline period but prior to implementation of new development stormwater programs pursuant to 15A NCAC 02B .0271(4)(c).
- (2) Sub-subdivision (b) of subdivision (3) and sub-subdivision (d) of subdivision (4) of State and Federal Rule 15A NCAC 02B .0271 shall be implemented as follows:
  - a. If the March 1, 2014, monitoring report or any subsequent monitoring report for the Upper New Hope Creek Arm of Jordan Reservoir required under Section 3(c) of S.L. 2009-216 shows that nutrient-related water quality standards are not being achieved, State and federal entities shall develop and implement a program to control nutrient loading from existing development within the subwatershed, as provided in this section and State and Federal Rule 15A NCAC 02B .0271. If the March 1, 2017, monitoring report or any subsequent monitoring report for the Haw River Arm or the Lower New Hope Creek Arm of Jordan Reservoir required under Section 3(c) of S.L. 2009-216 shows that nutrient-related water quality standards are not being achieved, State and federal entities shall develop and implement a program to control nutrient loading from existing development within the subwatershed, as provided in this section and State and Federal Rule 15A NCAC 02B .0271. The Department shall defer development and implementation of a program to control nutrient loading from existing development required in a subwatershed by this sub-subdivision if it determines that additional reductions in nutrient loading from existing development in that subwatershed will not be necessary to achieve nutrient-related water quality standards. In making this determination, the Department shall consider the anticipated effect of measures implemented or scheduled to be implemented to reduce nutrient loading from sources in the subwatershed other than existing development. If any subsequent monitoring report for an arm of Jordan Reservoir required under Section 3(c) of S.L. 2009-216 shows that nutrient-related water quality standards have not been achieved,

- the Department shall notify each State and federal entity, and each entity shall develop and implement a program to control nutrient loading from existing development as provided in this section and State and Federal Rule 15A NCAC 02B .0271.
- b. If the Commission requires additional reductions in nutrient loading from local governments pursuant to Section 3(f) of S.L. 2009-216, the Commission shall require State and federal entities to modify their nutrient reduction programs for the Upper New Hope Creek subwatershed to achieve a total reduction in nitrogen loading from existing roadway and nonroadway development in nitrogen loading from existing development of thirty-five percent (35%) relative to the baseline period 1997-2001.
- (3) Notwithstanding sub-subdivision (d) of subdivision (4) of State and Federal Rule 15A NCAC 02B .0271, the North Carolina Department of Transportation may achieve the nutrient load reduction goal in subdivision (1) of this section for existing roadway and nonroadway development under its control by development of a load reduction program that addresses both roadway and nonroadway development in the watershed for each arm of Jordan Reservoir. A combined program to address roadway and nonroadway development may include stormwater retrofits and other load-reducing measures in the watershed including, but not limited to, illicit discharge removal; street sweeping; source control activities such as pet waste reduction and fertilizer management at NCDOT facilities; improvement of existing stormwater structures; alternative stormwater practices such as use of rain barrels and cisterns; stormwater capture and reuse; and purchase of nutrient reduction credits. NCDOT may meet minimum implementation rate and schedule requirements by implementing a combination of three stormwater retrofits per year for existing roadway development in the Jordan Lake watershed and other load-reducing measures identified in the program to control nutrient loading from existing development developed pursuant to State and Federal Entities Rule 15A NCAC 02B .0271 and this act and approved by the Commission.

**"SECTION 6.(d) Additional Rule-Making Authority.** – The Commission shall adopt a rule to replace State and Federal Rule 15A NCAC 02B .0271. Notwithstanding G.S. 150B-19(4), the rule adopted by the Commission pursuant to this section shall be substantively identical to the provisions of Section 6(c) of this act. Rules adopted pursuant to this section are not subject to G.S. 150B-21.9 through G.S. 150B-21.14. Rules adopted pursuant to this section shall become effective as provided in G.S. 150B-21.3(b1) as though 10 or more written objections had been received as provided by G.S. 150B-21.3(b2).

**"SECTION 6.(e) Sunset.** – Section 6(c) of this act expires on the date that rules adopted pursuant to Section 6(d) of this act become effective.

**"SECTION 6.(f) Riparian Buffer Rule 15A NCAC 02B .0267.** – Until the effective date of the revised permanent rule that the Commission is required to adopt pursuant to Section 6(h) of this act, the Commission and the Department shall implement the Riparian Buffer Rule 15A NCAC 02B .0267, as provided in Section 6(g) of this act.

**"SECTION 6.(g) Implementation.** – Notwithstanding Riparian Buffer Rule 15A NCAC 02B .0267, the Commission shall implement Riparian Buffer Rule 15A NCAC 02B .0267 as provided in this section.

- (1) For purposes of implementing Riparian Buffer Rule 15A NCAC 02B .0267, the Commission may only use one of the following types of maps for purposes of identifying a water body subject to the riparian buffer protection requirements of Riparian Buffer Rule 15A NCAC 02B .0267:
- a. The most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture.
  - b. The most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geological Survey.



- c. A map approved by the Geographic Information Coordinating Council and by the Commission. Prior to approving a map under this sub-subdivision, the Commission shall provide a 30-day public notice and opportunity for comment.
- (2) Alternative maps approved by the Commission under subdivision (1) of this section shall not be used for buffer delineation on projects that are existing and ongoing within the meaning of subdivision (6) of Riparian Buffer Rule 15A NCAC 02B .0267.
- (3) Sub-subdivision a. of subdivision (4) of Riparian Buffer Rule 15A NCAC 02B .0267 shall be interpreted to prohibit only those activities conducted outside the buffer that have the effect of altering the hydrology in violation of the diffuse flow requirements set out in subdivision (8) of Riparian Buffer Rule 15A NCAC 02B .0267.

**"SECTION 6.(h) Additional Rule-Making Authority.** – The Commission shall adopt a rule to replace Riparian Buffer Rule 15A NCAC 02B .0267. Notwithstanding G.S. 150B-19(4), the rule adopted by the Commission pursuant to this section shall be substantively identical to the provisions of Section 6(g) of this act. Rules adopted pursuant to this section are not subject to G.S. 150B-21.9 through G.S. 150B-21.14. Rules adopted pursuant to this section shall become effective as provided in G.S. 150B-21.3(b1) as though 10 or more written objections had been received as provided by G.S. 150B-21.3(b2).

**"SECTION 6.(i) Sunset.** – Section 6(g) of this act expires on the date that rules adopted pursuant to Section 6(h) of this act become effective."

**SECTION 8.** Sections 5 through 8 of S.L. 2009-216 read as rewritten:

~~"SECTION 5."~~**SECTION 7.** No Preemption. – A local government may adopt and implement a stormwater management program that contains provisions that are more restrictive than the standards set forth in Sections ~~2 and 3~~, 3, and 5 of this act or in any rules concerning stormwater management in the Jordan watershed adopted by the Commission. This section shall not be construed to authorize a local government to impose stormwater management requirements on lands in agriculture or forestry.

~~"SECTION 6."~~**SECTION 8.** Construction of Act. –

- (1) Except as specifically provided in ~~Sections 2(c) and 3(j)~~ Sections 2(c), 3(j), 5(d), and 6(h) of this act, nothing in this act shall be construed to limit, expand, or otherwise alter the authority of the Commission or any unit of local government.
- (2) This act shall not be construed to affect any delegation of any power or duty by the Commission to the Department or subunit of the Department.

~~"SECTION 7."~~**SECTION 9.** Note to Revisor of Statutes. – Notwithstanding G.S. 164-10, the Revisor of Statutes shall not codify any of the provisions of this act. The Revisor of Statutes shall set out the text of Section 2 of this act as a note to G.S. 143-215.1 and may make notes concerning this act to other sections of the General Statutes as the Revisor of Statutes deems appropriate. The Revisor of Statutes shall set out the text of Sections 3, 4, 5, and 6 of this act as a note to G.S. 143-214.7 and may make notes concerning this act to other sections of the General Statutes as the Revisor of Statutes deems appropriate.

~~"SECTION 8."~~**SECTION 10.** Effective Date. – This act is effective when it becomes law."

**PART III. ENVIRONMENTAL TECHNICAL CORRECTIONS.**

**SECTION 9.** G.S. 120-70.61(c) reads as rewritten:

**"§ 120-70.61. Membership; cochairs; vacancies; quorum.**

(c) Except as otherwise provided in this section, a legislative member of the Commission shall ~~continue to~~ serve for so long as the member remains a member of the General Assembly and no successor has been appointed. A member of the General Assembly who does not seek reelection or is not reelected to the General Assembly may complete a term of service on the Commission until the day on which a new General Assembly convenes. A legislative member of the Commission who resigns or is removed from service in the General Assembly shall be deemed to have resigned or been removed from office on the Commission. Any vacancy that occurs on the Commission shall be filled in the same manner as the original appointment."

**SECTION 10.** G.S. 146-64(9) reads as rewritten:

"(9) "Vacant and unappropriated lands" means all State lands title to which is vested in the State as sovereign, and land acquired by the State by virtue of being sold for taxes, except ~~swamplands as hereinafter defined.~~ swamplands."

**SECTION 11.** G.S. 130A-310.11 reads as rewritten:

**"§ 130A-310.11. Inactive Hazardous Sites Cleanup Fund created.**

(a) There is established under the control and direction of the Department the Inactive Hazardous Sites Cleanup Fund. This fund shall be a revolving fund consisting of any monies appropriated for such purpose by the General Assembly or available to it from grants, taxes, and other monies paid to it or recovered by or on behalf of the Department. The Inactive Hazardous Sites Cleanup Fund shall be treated as a nonreverting special trust fund and shall be credited with interest by the State Treasurer pursuant to G.S. 147-69.2 and G.S. 147-69.3.

(b) Funds credited to the Inactive Hazardous Sites Cleanup Fund pursuant to G.S. 130A-295.9 shall be used only as provided in ~~G.S. 130A-309.295.9(c).~~ G.S. 130A-295.9(1) and G.S. 130A-310.5(c)."

**PART IV. REPORTS CONSOLIDATION.**

**SECTION 12.** G.S. 106-744(i) reads as rewritten:

"(i) The Advisory Committee shall report no later than ~~May 1~~ October 1 of each year to the Joint Legislative Commission on Governmental Operations, the Environmental Review Commission, and the House of Representatives and Senate Appropriations Subcommittees on Natural and Economic Resources regarding the activities of the Advisory Committee, the agriculture easements purchased, and agricultural projects funded during the previous year."

**SECTION 13.** G.S. 113-44.15(c) reads as rewritten:

"(c) Reports. – The North Carolina Parks and Recreation Authority shall report no later than October 1 of each year to the Joint Legislative Commission on Governmental Operations, the House and Senate Appropriations Subcommittees on Natural and Economic Resources, the Fiscal Research Division, and the Environmental Review Commission on allocations from the Trust Fund from the prior fiscal year. ~~The Authority also shall provide a progress report no later than March 15 of each year to the same recipients on the activities of and the expenditures from the Trust Fund for the current fiscal year.~~"

**SECTION 14.** G.S. 113-77.9(e) reads as rewritten:

"(e) Reports. – The Secretary shall maintain and annually ~~twice each year~~ revise a list of ~~acquisitions grants~~ made pursuant to this Article. The list shall include the acreage of each tract, the county in which the tract is located, the amount ~~paid~~ awarded from the Fund to acquire the tract, and the State department or division responsible for managing the tract. The Secretary shall furnish a copy of the list to each Trustee, the Joint Legislative Commission on Governmental Operations, the House and Senate Appropriations Subcommittees on Natural and Economic Resources, the Fiscal Research Division, and the Environmental Review Commission ~~within 30 days after each revision.~~ no later than October 1 of each year."

**SECTION 15.** G.S. 143-58.2(f) is repealed.

**PART V. DELAY EFFECTIVE DATES FOR LAWS GOVERNING THE MANAGEMENT OF DISCARDED COMPUTER EQUIPMENT AND DISCARDED TELEVISIONS.**

**SECTION 16.(a)** Section 16.6 of S.L. 2007-550, as amended by Section 7 of S.L. 2008-208, as amended by Section 11.4 of S.L. 2008-198, reads as rewritten:

**"SECTION 16.6.(a)** Part 2E of Article 9 of Chapter 130A of the General Statutes, as enacted by Section 16.1(a) of this act, becomes effective as follows:

- (1) G.S. 130A-309.90 becomes effective ~~1 January~~ July 1, 2010.
- (2) G.S. 130A-309.91 becomes effective ~~1 January~~ July 1, 2010.
- (3) G.S. 130A-309.92 becomes effective ~~1 January~~ July 1, 2010.
- (4) G.S. 130A-309.93(a) becomes effective ~~1 January~~ July 1, 2010.
- (5) G.S. 130A-309.93(b) becomes effective ~~1 January~~ July 1, 2010.
- (6) G.S. 130A-309.93(c) becomes effective ~~1 January~~ July 1, 2010.
- (7) G.S. 130A-309.93(d) becomes effective ~~1 January~~ July 1, 2010.
- (8) G.S. 130A-309.93(e) becomes effective ~~1 January~~ July 1, 2010.
- (9) G.S. 130A-309.93(f) becomes effective ~~1 January~~ July 1, 2010.
- (10) G.S. 130A-309.93(g) becomes effective ~~1 February~~ February 1, 2011.

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- (10a) G.S. 130A-309.93A(a) through (f) become effective ~~1 January~~ July 1, 2010.
  - (10b) G.S. 130A-309.93A(g) becomes effective ~~1 October~~ October 1, 2011.
  - (10c) G.S. 130A-309.93B becomes effective ~~1 January~~ July 1, 2010.
  - (11) G.S. 130A-309.94 becomes effective ~~1 January~~ July 1, 2010.
  - (12) G.S. 130A-309.95(1) becomes effective ~~1 January~~ July 1, 2010.
  - (13) G.S. 130A-309.95(2) becomes effective ~~1 January~~ July 1, 2010.
  - (14) G.S. 130A-309.95(3) becomes effective ~~1 January~~ July 1, 2010.
  - (14a) G.S. 130A-309.95(4) becomes effective July 1, 2010.
  - (15) G.S. 130A-309.96 becomes effective ~~1 January~~ July 1, 2010.
  - (16) G.S. 130A-309.97 becomes effective ~~1 January~~ July 1, 2010.
  - (17) G.S. 130A-309.98 becomes effective ~~15 January~~ January 15, 2011.

**"SECTION 16.6.(b)** Section 16.2 of this act becomes effective ~~1 January~~ July 1, 2010. Sections 16.3 and 16.4 of this act become effective ~~1 January~~ January 1, 2011. Section 16.5 of this act becomes effective ~~1 July~~ July 1, 2010. Subsection (b) of Section 16.1 of this act, Section 16.6 of this act, and any other provision of Section 16 of this act for which an effective date is not specified become effective ~~1 January~~ July 1, 2010."

**SECTION 16.(b)** Section 8 of S.L. 2008-208 reads as rewritten:

**"SECTION 8.** Sections ~~3, 4, and 53~~ and 4 of this act become effective ~~1 January~~ January 1, 2011. The remainder of this act becomes effective July 1, 2010. ~~The remainder of this act is effective when it becomes law."~~

#### **PART VI. EFFECTIVE DATE.**

**SECTION 17.** Sections 12, 13, 14, and 15 of this act become effective January 1, 2010. The remaining sections of this act are effective when this act becomes law.

In the General Assembly read three times and ratified this the 11<sup>th</sup> day of August, 2009.

s/ Walter H. Dalton  
President of the Senate

s/ Joe Hackney  
Speaker of the House of Representatives

s/ Beverly E. Perdue  
Governor

Approved 1:35 p.m. this 26<sup>th</sup> day of August, 2009

APPENDIX D- STORMWATER ORDINANCE

**City of Burlington**  
**Stormwater Ordinance**  
**DRAFT for EMC Approval**

March 20, 2012



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## SECTION 1: GENERAL PROVISIONS

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### xx-101 TITLE

This ordinance shall be officially known as “The City of Burlington Stormwater Ordinance.” It is referred to herein as “this ordinance.”

### xx-102 AUTHORITY

The Burlington City Council is authorized to adopt this ordinance pursuant to North Carolina law, including but not limited to Article 14, Section 5 of the Constitution of North Carolina; the Charter of the City of Burlington; North Carolina General Statutes Chapter 143-214.7 and rules promulgated by the Environmental Management Commission thereunder; Chapter 143-215.6A; Session Laws 2006-246, 2009-216, 2009-484; Chapter 153A-454; Chapter 160A, §§ 174, 185, 459; as well as Chapter 113A, Article 4 (Sedimentation Pollution Control); Article 21, Part 6 (Floodway Regulation) ;Chapter 143-214.5, Water Supply Watershed Protection; Chapter 160A, Article 19 (Planning and Regulation of Development); Chapter 153A, Article 18.

### xx-103 FINDINGS

It is hereby determined that:

*Development and redevelopment* alter the hydrologic response of local watersheds and increases stormwater runoff rates and volumes, flooding, soil erosion, stream channel erosion, nonpoint and point source pollution, and sediment transport and deposition, as well as reducing groundwater recharge;

These changes in stormwater runoff contribute to increased quantities of water-borne pollutants and alterations in hydrology that are harmful to public health and safety as well as to the natural environment; and

These effects can be managed and minimized by applying proper design and well-planned controls to manage stormwater runoff from *development* sites.

Further, the *Commission* has identified B. Everett Jordan reservoir, a water supply reservoir, as nutrient sensitive waters; has identified all or a portion of the reservoir as impaired waters under the federal Clean Water Act due to exceedances of the chlorophyll a standard; and has promulgated rules that have been amended and affirmed by the North Carolina General Assembly (the “Jordan Rules”) to reduce the average annual loads of nitrogen and phosphorus delivered to Jordan Reservoir from all point and nonpoint sources of these nutrients located within its watershed, including stormwater from new development in this jurisdiction;

Therefore, the Burlington City Council establishes this set of water quality and quantity regulations to meet the requirements of state and federal law regarding control of stormwater runoff and discharge for *development*.

### xx-104 PURPOSE

The purpose of this ordinance is to protect, maintain and enhance the public health, safety, environment and general welfare by establishing minimum requirements and procedures to control the adverse effects of increased stormwater runoff, nitrogen and phosphorus in

stormwater runoff and nonpoint and point source pollution associated with new *development* and *redevelopment* as well as illicit discharges into municipal separate stormwater systems in the watershed of B. Everett Jordan reservoir. It has been determined that proper management of construction-related and post-*development* stormwater runoff will minimize damage to public and private property and infrastructure; safeguard the public health, safety, and general welfare; and protect water and aquatic resources.

This ordinance seeks to meet its general purpose through the following specific objectives and means:

1. Establishing decision-making processes for *development* that protects the integrity of watersheds and preserves the health of water resources;
2. Requiring that new *development* and *redevelopment* maintain the pre-*development* hydrologic response in their post-*development* state for the applicable design storm to reduce flooding, streambank erosion, nonpoint and point source pollution and increases in stream temperature, and to maintain the integrity of stream channels and aquatic habitats;
3. Establishing minimum post-*development* stormwater management standards and design criteria for the regulation and control of stormwater runoff quantity and quality;
4. Establishing design and review criteria for the construction, function, and use of *structural stormwater BMPs* that may be used to meet the minimum post-*development* stormwater management standards;
5. Encouraging the use of better management and site design practices, such as the use of vegetated conveyances for stormwater and the preservation of greenspace, riparian buffers and other conservation areas to the maximum extent practicable;
6. Establishing provisions for the long-term responsibility for and maintenance of *structural and nonstructural stormwater BMPs* to ensure that they continue to function as designed, are maintained appropriately, and pose no threat to public safety;
7. Establishing administrative procedures for the submission, review, approval and disapproval of *stormwater management plans*, for the inspection of approved projects, and to assure appropriate long-term maintenance.
8. Coordinating site design plans that include open space and natural areas with the City of Burlington open space and natural area protection plans, policies or ordinances.
9. Controlling illicit discharges into the municipal separate *stormwater system*.
10. Controlling erosion and sedimentation from construction activities per the City of Burlington Code of Ordinances Chapter 31.5 - Soil Erosion and Sedimentation Control.

11. Assigning responsibility and processes for approving the creation and maintenance of adequate drainage and flood damage prevention measures per the City of Burlington Code of Ordinance Appendix B – Flood Damage Prevention Ordinance.

**xx-105 APPLICABILITY AND JURISDICTION**

**(A) General**

Beginning with and subsequent to its effective date, this ordinance shall be applicable to all *development* and *redevelopment*, including, but not limited to, site plan applications, subdivision applications, and grading applications, within the corporate limits and extra territorial jurisdiction limits unless exempt pursuant to this ordinance.

**(B) Exemptions**

Single family and duplex residential and recreational *development* and *redevelopment* that cumulatively disturbs less than one acre and is not part of a *larger common plan of development or sale* is exempt from the provisions of this ordinance.

Commercial, industrial, institutional, multifamily residential or local government *development* and *redevelopment* that cumulatively disturbs less than one-half acre and is not part of a *larger common plan of development or sale* is exempt from the provisions of this ordinance.

*Development* and *redevelopment* that disturbs less than the above thresholds are not exempt if such activities are part of a *larger common plan of development or sale* and the larger common plan exceeds the relevant threshold, even though multiple, separate or distinct activities take place at different times on different schedules.

*Development* that is exempt from permit requirements of Section 404 of the federal Clean Water Act as specified in 40 CFR 232 (primarily, ongoing farming and forestry activities) are exempt from the provisions of this ordinance.

**(C) No Development or Redevelopment Until Compliance and Permit**

No *development* or *redevelopment* shall occur except in compliance with the provisions of this ordinance or unless exempted. No *development* or *redevelopment* for which a permit is required pursuant to this ordinance shall occur except in compliance with the provisions, conditions, and limitations of the permit.

**(D) Map**

The provisions of this ordinance shall apply within the areas designated on the map titled "Stormwater Map of the City of Burlington, North Carolina" ("the Stormwater Map"), which is adopted simultaneously herewith. The Stormwater Map and all explanatory matter contained thereon accompanies and is hereby made a part of this ordinance.

The Stormwater Map shall be kept on file by the Stormwater Administrator and shall be updated to take into account changes in the land area covered by this ordinance and the geographic location of all *engineered stormwater controls* permitted

under this ordinance. In the event of a dispute, the applicability of this ordinance to a particular area of land or BMP shall be determined by reference to the North Carolina Statutes, the North Carolina Administrative Code, and local zoning and jurisdictional boundary ordinances.

**xx-106 INTERPRETATION****(A) Meaning and Intent**

All provisions, terms, phrases, and expressions contained in this ordinance shall be construed according to the general and specific purposes set forth in Section 104, Purpose. If a different or more specific meaning is given for a term defined elsewhere in the Code of Ordinances of the City of Burlington, the meaning and application of the term in this ordinance shall control for purposes of application of this ordinance.

**(B) Text Controls in Event of Conflict**

In the event of a conflict or inconsistency between the text of this ordinance and any heading, caption, figure, illustration, table, or map, the text shall control.

**(C) Authority for Interpretation**

The Stormwater Administrator has authority to determine the interpretation of this ordinance. Any *person* may request an interpretation by submitting a written request to the Stormwater Administrator, who shall respond in writing within 30 days. The Stormwater Administrator shall keep on file a record of all written interpretations of this ordinance.

**(D) References to Statutes, Regulations, and Documents**

Whenever reference is made to a resolution, ordinance, statute, regulation, manual (including the *Design Manual*), or document, it shall be construed as a reference to the most recent edition of such that has been finalized and published with due provision for notice and comment, unless otherwise specifically stated.

**(E) Computation of Time**

The time in which an act is to be done shall be computed by excluding the first day and including the last day. If a deadline or required date of action falls on a Saturday, Sunday, or holiday observed by the City of Burlington, the deadline or required date of action shall be the next day that is not a Saturday, Sunday or holiday observed by the City of Burlington. References to days are calendar days unless otherwise stated.

**(F) Delegation of Authority**

Any act authorized by this Ordinance to be carried out by the Stormwater Administrator of City of Burlington may be carried out by his or her designee.

**(G) Usage****(1) Mandatory and Discretionary Terms**

The words “shall,” “must,” and “will” are mandatory in nature, establishing an obligation or duty to comply with the particular provision. The words “may” and “should” are permissive in nature.

**(2) Conjunctions**

Unless the context clearly indicates the contrary, conjunctions shall be interpreted as follows: The word “and” indicates that all connected items, conditions, provisions and events apply. The word “or” indicates that one or more of the connected items, conditions, provisions or events apply.

**(3) Tense, Plurals, and Gender**

Words used in the present tense include the future tense. Words used in the singular number include the plural number and the plural number includes the singular number, unless the context of the particular usage clearly indicates otherwise. Words used in the masculine gender include the feminine gender, and vice versa.

**(H) Measurement and Computation**

Lot area refers to the amount of horizontal land area contained inside the lot lines of a lot or site.

**xx-107 DESIGN MANUAL****(A) Reference to Design Manual**

The Stormwater Administrator shall use the policy, criteria, and information, including technical specifications and standards, in the *Design Manual* as the basis for decisions about stormwater permits and about the design, implementation and performance of *engineered stormwater controls* and other practices for compliance with this ordinance.

The *Design Manual* includes a list of acceptable stormwater treatment practices, including specific design criteria for each stormwater practice. Stormwater treatment practices that are designed, constructed, and maintained in accordance with these design and sizing criteria will be presumed to meet the minimum water quality performance standards of the Jordan Rules.

**(B) Relationship of Design Manual to Other Laws and Regulations**

If the specifications or guidelines of the *Design Manual* are more restrictive or apply a higher standard than other laws or regulations, that fact shall not prevent application of the specifications or guidelines in the *Design Manual*.

**(C) Changes to Standards and Specifications**

If the standards, specifications, guidelines, policies, criteria, or other information in the *Design Manual* are amended subsequent to the submittal of an application for approval pursuant to this ordinance but prior to approval, the new information shall control and shall be utilized in reviewing the application and in implementing this ordinance with regard to the application.

**(D) Amendments to Design Manual**

The *Design Manual* may be updated and expanded from time to time, based on advancements in technology and engineering, improved knowledge of local conditions, or local monitoring or maintenance experience.

**xx-108 RELATIONSHIP TO OTHER LAWS, REGULATIONS AND PRIVATE AGREEMENTS**

**(A) Conflict of Laws**



This ordinance is not intended to modify or repeal any other ordinance, rule, regulation or other provision of law. The requirements of this ordinance are in addition to the requirements of any other ordinance, rule, regulation or other provision of law. Where any provision of this ordinance imposes restrictions different from those imposed by any other ordinance, rule, regulation or other provision of law, whichever provision is more restrictive or imposes higher protective standards for human or environmental health, safety, and welfare shall control.

**(B) Private Agreements**

This ordinance is not intended to revoke or repeal any easement, covenant, or other private agreement. However, where the regulations of this ordinance are more restrictive or impose higher standards or requirements than such an easement, covenant, or other private agreement, the requirements of this ordinance shall govern. Nothing in this ordinance shall modify or repeal any private covenant or deed restriction, but such covenant or restriction shall not legitimize any failure to comply with this ordinance. In no case shall City of Burlington be obligated to enforce the provisions of any easements, covenants, or agreements between private parties.

**xx-109 SEVERABILITY**

If the provisions of any section, subsection, paragraph, subdivision or clause of this ordinance shall be adjudged invalid by a court of competent jurisdiction, such judgment shall not affect or invalidate the remainder of any section, subsection, paragraph, subdivision or clause of this ordinance.

**xx-110 EFFECTIVE DATE AND TRANSITIONAL PROVISIONS**

**(A) Effective Date**

This Ordinance shall take effect on \_\_\_\_\_, 201\_\_\_\_.



**(B) Final Approvals, Complete Applications**

All development and redevelopment projects for which complete and full applications were submitted and approved by the City of Burlington Technical Review Committee prior to the effective date of this ordinance and which remain valid, unexpired, unrevoked and not otherwise terminated at the time of development shall be exempt from complying with all provisions of this ordinance dealing with the control and/or management of stormwater, but shall be required to comply with all other applicable provisions, including but not limited to illicit discharge provisions. A phased development plan shall be deemed approved prior to the effective date of this ordinance if it has been approved by all necessary government units, it remains valid, unexpired, unrevoked and not otherwise terminated, and it shows:

1. For the initial or first phase of *development* or *redevelopment*, the type and intensity of use for a specific parcel or parcels, including at a minimum, the boundaries of the project and a subdivision plan that has been approved.
2. For any subsequent phase of *development* or *redevelopment*, sufficient detail so that implementation of the requirements of this ordinance to that phase of *development* would require a material change in that phase of the plan.

**(C) Violations Continue**

Any violation of provisions existing on the effective date of this ordinance shall continue to be a violation under this ordinance and be subject to penalties and enforcement under this ordinance unless the use, *development*, construction, or other activity complies with the provisions of this ordinance.

**SECTION 2: ADMINISTRATION AND PROCEDURES**

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**xx-201 REVIEW AND DECISION-MAKING ENTITIES**

**(A) Stormwater Administrator**

**(1) Designation**

A Stormwater Administrator shall be designated by the City Council to administer and enforce this ordinance.

**(2) Powers and Duties**

In addition to the powers and duties that may be conferred by other provisions of the Code of Ordinances of the City of Burlington and other laws, the Stormwater Administrator shall have the following powers and duties under this ordinance:

- a. To review and approve, approve with conditions, or disapprove applications for approval of plans pursuant to this ordinance.
- b. To make determinations and render interpretations of this ordinance.
- c. To establish application requirements and schedules for submittal and review of applications and appeals, to review and make recommendations to the City Council on applications for *development* or *redevelopment* approvals.
- d. To enforce the provisions of this ordinance in accordance with its enforcement provisions.
- e. To maintain records, maps, forms and other official materials as relate to the adoption, amendment, enforcement, and administration of this ordinance.
- f. To provide expertise and technical assistance to the City Council, upon request.
- g. To designate appropriate other *person(s)* who shall carry out the powers and duties of the Stormwater Administrator.
- h. To take any other action necessary to administer the provisions of this ordinance.

**xx-202 REVIEW PROCEDURES**

**(A) Permit Required; Must Apply for Permit**

A stormwater permit is required for all *development* and *redevelopment* unless exempt pursuant to this ordinance. A permit may only be issued subsequent to a properly submitted and reviewed permit application, pursuant to this section.

**(B) Effect of Permit**

A stormwater permit shall govern the design, installation, and construction of stormwater management and control practices on the site, including *engineered stormwater controls* and elements of site design for stormwater management other than *engineered stormwater controls*.

The permit is intended to provide a mechanism for the review, approval, and inspection of the approach to be used for the management and control of stormwater for the *development* or *redevelopment* site consistent with the requirements of this ordinance, whether the approach consists of *engineered stormwater controls* or other techniques such as low-impact or low-density design. The permit does not continue in existence indefinitely after the completion of the project; rather, compliance after project construction is assured by the maintenance provisions of this ordinance.

**(C) Authority to File Applications**

All applications required pursuant to this Code shall be submitted to the Stormwater Administrator by the land *owner* or the land *owner's* duly authorized agent.

**(D) Establishment of Application Requirements, Schedule, and Fees****(1) Application Contents and Form**

The Stormwater Administrator shall establish requirements for the content and form of all applications and shall amend and update those requirements from time to time. At a minimum, the stormwater permit application shall describe in detail how post-*development* stormwater runoff will be controlled and managed, the design of all stormwater facilities and practices, and how the proposed project will meet the requirements of this ordinance.

**(2) Submission Schedule**

The Stormwater Administrator shall establish a submission schedule for applications. The schedule shall establish deadlines by which complete applications must be submitted for the purpose of ensuring that there is adequate time to review applications; and that the various stages in the review process are accommodated.

**(3) Permit Review Fees**

The City Council shall establish permit review fees as well as policies regarding refund of any fees upon withdrawal of an application, and may amend and update the fees and policies from time to time.

**(4) Administrative Manual**

For applications required under this Code, the Stormwater Administrator shall compile the application requirements, submission schedule, fee schedule, a copy of this ordinance, and information on how and where to obtain the Design

Manual in an Administrative Manual, which shall be made available to the public.

**(E) Submittal of Complete Application**

Applications shall be submitted to the Stormwater Administrator pursuant to the application submittal schedule in the form established by the Stormwater Administrator, along with the appropriate fee established pursuant to this section.

An application shall be considered as timely submitted only when it contains all elements of a complete application pursuant to this ordinance, along with the appropriate fee. If the Stormwater Administrator finds that an application is incomplete, the applicant shall be notified of the deficient elements and shall be provided with an opportunity to submit a complete application. However, the submittal of an incomplete application shall not suffice to meet a deadline contained in the submission schedule established above.

**(F) Review**

Within (60) calendar days after a complete application is submitted, the Stormwater Administrator shall review the application and determine whether the application complies with the standards of this ordinance.

**(1) Approval**

If the Stormwater Administrator finds that the application complies with the standards of this ordinance, the Stormwater Administrator shall approve the application. The Stormwater Administrator may impose conditions of approval as needed to ensure compliance with this ordinance. The conditions shall be included as part of the approval.

**(2) Fails to Comply**

If the Stormwater Administrator finds that the application fails to comply with the standards of this ordinance, the Stormwater Administrator shall notify the applicant and shall indicate how the application fails to comply. The applicant shall have an opportunity to submit a revised application.

**(3) Revision and Subsequent Review**

A complete revised application shall be reviewed by the Stormwater Administrator within (30) calendar days after its re-submittal and shall be approved, approved with conditions or disapproved.

If a revised application is not re-submitted within thirty (30) calendar days from the date the applicant was notified, the application shall be considered withdrawn, and a new submittal for the same or substantially the same project shall be required along with the appropriate fee for a new submittal.

One re-submittal of a revised application may be submitted without payment of an additional permit review fee. Any re-submittal after the first re-submittal

shall be accompanied by a permit review fee additional fee, as established pursuant to this ordinance.

## xx-203 APPLICATIONS FOR APPROVAL

### (A) Concept Plan and Consultation Meeting

Before a stormwater management permit application is deemed complete, the Stormwater Administrator or developer may request a consultation on a concept plan for the post-construction stormwater management system to be utilized in the proposed *development* project. This consultation meeting should take place at the time of the preliminary plan of subdivision or other early step in the *development* process. The purpose of this meeting is to discuss the stormwater management measures necessary for the proposed project, as well as to discuss and assess constraints, opportunities and potential approaches to stormwater management designs before formal site design engineering is commenced. Local watershed plans, open space and natural area protection plans, policies or ordinances, and other relevant resource protection plans should be consulted in the discussion of the concept plan.

To accomplish this goal, the following information should be included in the concept plan, which should be submitted in advance of the meeting:

#### (1) Existing Conditions / Proposed Site Plans

Existing conditions and proposed site layout sketch plans, which illustrate at a minimum: existing and proposed topography; perennial and intermittent streams; mapping of predominant soils from soil surveys (if available); stream and other buffers and features used in designing buffers and meeting any applicable buffer requirements; boundaries of existing predominant vegetation; proposed limits of clearing and grading; and location of existing and proposed roads, buildings, parking areas and other impervious surfaces.

#### (2) Natural Resources Inventory

A written or graphic inventory of natural resources at the site and surrounding area as it exists prior to the commencement of the project. This description should include a discussion of soil conditions, forest cover, geologic features, topography, wetlands, and native vegetative areas on the site, as well as the location and boundaries of other natural feature protection and conservation areas such as lakes, ponds, floodplains, stream buffers and other setbacks (e.g., drinking water well setbacks, septic setbacks, etc.). Particular attention should be paid to environmentally sensitive features that provide particular opportunities or constraints for *development* and stormwater management.

#### (3) Stormwater Management System Concept Plan

A written or graphic concept plan of the proposed post-*development* stormwater management system including: preliminary selection and location of proposed *engineered stormwater controls*; low-impact design elements; location of existing and proposed conveyance systems such as grass channels, swales, and storm drains; flow paths; location of floodplain/floodway limits; relationship of site to

upstream and downstream properties and drainages; and preliminary location of any proposed stream channel modifications, such as bridge or culvert crossings.

**(B) Technical Review Committee Submittal and Approval**

The Stormwater Management System Concept Plan and a separate maintenance plan shall be submitted to the Technical Review Committee (TRC) prior to, or concurrent with, the TRC development plan submittal. The Technical Review Committee shall be authorized to approve the Stormwater Management System Concept Plan and separate maintenance plan if the Concept Plan and maintenance plan are both found to be in conformance with this Ordinance.

**(C) Stormwater Management Permit Application**

The stormwater management permit application shall detail how post-*development* stormwater runoff will be controlled and managed and how the proposed project will meet the requirements of this ordinance, including Section 3, Standards. All such plans shall be prepared by a qualified registered North Carolina professional engineer, surveyor, soil scientist or landscape architect, and the engineer, surveyor, soil scientist or landscape architect shall perform services only in their area of competence, and shall verify that the design of all stormwater management facilities and practices meets the submittal requirements for complete applications, that the designs and plans are sufficient to comply with applicable standards and policies found in the *Design Manual*, and that the designs and plans ensure compliance with this ordinance.

The submittal of the Stormwater Management Plan and permit application shall occur after approval of the Stormwater Management Concept Plan by the Technical Review Committee. The submittal shall include construction drawings and any other information required in the submittal checklist established by the Stormwater Administrator. Incomplete submittals shall be treated pursuant to Section 2-202(E).

**(D) As-Built Plans and Final Approval**

The construction of all stormwater management improvements shown on an approved and permitted Stormwater Management Plan shall be substantially complete prior to final plat recordation or issuance of any certificate of occupancy. Upon approval of the Stormwater Administrator, a final plat may be recorded prior to substantial completion of all structural stormwater measures given a performance security as specified in Section 4-404 is posted.

Upon completion of a project and its associated stormwater management improvements, and before a certificate of occupancy shall be granted, the Design Professional shall certify, under seal, that the completed project is in accordance with the approved Stormwater Management Plan and design and with the requirements of this ordinance.

The Design Professional shall also submit the information required in the As-Built submittal checklist established by the Stormwater Administrator.

As-built submittals shall be certified by a qualified, licensed North Carolina professional engineer, surveyor, soil scientist, or landscape architect. The As-Built drawings shall show the final design specifications for all stormwater management facilities and practices and the field location, size, depth, and planted vegetation of all measures, controls, and devices, as installed. The designer of the stormwater management measures and plans shall certify, under seal, that the as-built stormwater measures, controls, and devices are in compliance with the approved stormwater management plans and designs and with the requirements of this ordinance.

Prior to the release of any performance securities required for the installation of structural BMPs as specified in Sections 4-404(A) & 4-404(B) the following conditions must be satisfied:

- (1) As-Built drawings and submittals must be approved by the Stormwater Administrator;
- (2) Project must be in compliance with the City’s Erosion and Sedimentation Control Ordinance; and
- (3) Project must pass a final inspection and receive approval by the Stormwater Administrator.

**(E) Other Permits**

No certificate of compliance or occupancy shall be issued by the City of Burlington Inspections Department without final as-built plans and a final inspection and approval by the Stormwater Administrator, except when a performance security is posted as required by Sections 4-404, or where multiple units are served by the stormwater practice or facilities, in which case the City of Burlington Inspections Department may elect to withhold a percentage of permits or certificates of occupancy until as-built plans are submitted and final inspection and approval has occurred.

**xx-204 APPROVALS**

**(A) Effect of Approval**

Approval authorizes the applicant to go forward with only the specific plans and activities authorized in the permit. The approval shall not be construed to exempt the applicant from obtaining other applicable approvals from local, state, and federal authorities.

**(B) Time Limit/Expiration**

An approved plan shall become null and void if the applicant fails to make *substantial progress* on the site within one year after the date of approval. The Stormwater Administrator may grant a single, one-year extension of this time limit, for good cause shown, upon receiving a written request from the applicant before the expiration of the approved plan.

In granting an extension, the Stormwater Administrator may require compliance with standards adopted since the original application was submitted unless there has

been substantial reliance on the original permit and the change in standards would infringe the applicant's vested rights.

**xx-205 APPEALS**

**(A) Right of Appeal**

**(1)** Any aggrieved person affected by any decision, order, requirement, or determination relating to the interpretation or application of this ordinance and made by the Stormwater Administrator may file an appeal to the City Council within (30) days after receipt of said written decision, order, requirement, or determination.

**(2)** A public hearing held pursuant to this section shall be conducted by the City Council within (45) days after the date of appeal or request for a hearing.

**(3)** The City Council will render its final decision on any appeal within (20) days of the date of hearing.

**(4)** The decision of the City Council shall be subject to Superior Court review of the proceedings in the nature of certiorari. All Superior Court review of City Council decisions shall be performed by the Superior Court of Alamance County. Petition for review by the Superior Court of Alamance County shall be filed with the Clerk of Superior Court of Alamance County within (30) days after the latter of the following:

- (a) The decision of the City Council is filed; or
- (b) A written copy of the decision is delivered to any aggrieved party that has filed a written request for such copy with the City Council at the time of its hearing of the case.



## SECTION 3: STANDARDS

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### xx-301 GENERAL STANDARDS

All *development* and *redevelopment* to which this ordinance applies shall comply with the standards of this section. The approval of the stormwater permit shall require an enforceable restriction on property usage that runs with the land, such as a recorded deed restriction or protective covenants, to ensure that future *development* and *redevelopment* maintains the site consistent with the approved project plans.

### xx-302 NITROGEN AND PHOSPHORUS LOADING

**Nitrogen and phosphorus loads contributed by the proposed new development shall not exceed the following unit-area mass loading rates: 3.8 and 1.43 pounds per acre per year for nitrogen and phosphorus, respectively.**

- (a) Notwithstanding 15A NCAC 2B.104(q), *redevelopment* subject to this ordinance that would replace or expand existing structures or improvements and would result in a net increase in *built-upon area* shall have the option of either meeting the loading standards identified in subsection (a) or meeting a loading rate that achieves the following nutrient loads compared to the *existing development*: 8 percent and 5 percent reduction for nitrogen and phosphorus, respectively.
- (b) The developer shall determine the need for engineered stormwater controls to meet these loading rate targets by using the approved accounting tool.

### xx-303 NITROGEN AND PHOSPHORUS STANDARD IS SUPPLEMENTAL; TSS REMOVAL

The nitrogen and phosphorus loading standards in this ordinance are supplemental to, not replacements for, stormwater standards otherwise required by federal, state or local law, including without limitation any riparian buffer requirements applicable to the location of the *development*. This includes, without limitation, the riparian buffer protection requirements of 15A NCAC 2B.0267 and .0268.

All *stormwater systems* used to meet these requirements shall be designed to have a minimum of 85% average annual removal for Total Suspended Solids (TSS)<sup>11</sup>.

### xx-304 PROVISIONS FOR PROTECTION OF RIPARIAN BUFFERS

Provisions for protection of buffers adjacent to surface waters (intermittent and perennial streams, lakes, reservoirs, and ponds) are included in the City of Burlington Riparian Buffer Protection Ordinance [for Lands within the Jordan Watershed], herein referred to as the "Buffer Ordinance". Without limitation, adherence to the provisions of the Buffer Ordinance are required for all *development* and *redevelopment*.

### xx-305 CONTROL AND TREATMENT OF RUNOFF VOLUME

*Stormwater systems* shall be designed to control and treat the runoff generated from all surfaces by one inch of rainfall. The treatment volume shall be drawn down pursuant to standards

specific to each practice as provided in the *Design Manual*. To ensure that the integrity and nutrient processing functions of receiving waters and associated riparian buffers are not compromised by erosive flows, stormwater flows from the *development* shall not contribute to degradation of waters of the State. At a minimum, the *development* shall not result in a net increase in peak flow leaving the site from pre-development conditions for the *ten-year, 24-hour storm* event. For design purposes, the *ten-year, 24-hour storm* produces approximately 5.0 inches of rain in the Burlington Area.

In the event that development has, in the opinion of the Stormwater Administrator, the potential to cause increased downstream flooding and erosion, a stormwater system may be required that does not allow stormwater to leave the project site at a rate greater than the predevelopment discharge rate for up to the 100-year, 24 hour storm.

#### xx-306 PARTIAL OFFSET OF NUTRIENT CONTROL REQUIREMENTS

*Development* subject to this ordinance shall attain a maximum nitrogen loading rate on-site of six pounds per acre per year for single-family, detached and duplex residential development and ten pounds per acre per year for other development, including multi-family residential, commercial and industrial and shall meet any requirements for engineered stormwater controls otherwise imposed by this ordinance. A developer subject to this ordinance may achieve the additional reductions in nitrogen and phosphorus loading required by this ordinance by making offset payments to the NC Ecosystem Enhancement Program contingent upon acceptance of payments by that Program. A developer may use an offset option provided by the City of Burlington. A developer may propose other offset measures to the City of Burlington, including providing his or her own offsite offset or utilizing a private seller. All offset measures permitted by this ordinance shall meet the requirements of 15A NCAC 02B .0273 (2) through (4) and 15A NCAC 02B .0240.

#### xx-307 EVALUATION OF STANDARDS FOR STORMWATER CONTROL MEASURES

##### (A) Evaluation According to Contents of Design Manual

All stormwater control measures, *stormwater systems* and stormwater treatment practices (also referred to as Best Management Practices, or BMPs) required under this ordinance shall be evaluated by the Stormwater Administrator according to the policies, criteria, and information, including technical specifications and standards and the specific design criteria for each stormwater practice, in the *Design Manual*. The Stormwater Administrator shall determine whether proposed BMPs will be adequate to meet the requirements of this ordinance.

##### (B) Determination of Adequacy; Presumptions and Alternatives

Stormwater treatment practices that are designed, constructed, and maintained in accordance with the criteria and specifications in the *Design Manual* and the *approved accounting tool* will be presumed to meet the minimum water quality and quantity performance standards of this ordinance. Whenever an applicant proposes to utilize a practice or practices not designed and constructed in accordance with the criteria and specifications in the *Design Manual*, the applicant shall have the burden of demonstrating that the practice(s) will satisfy the minimum water quality and quantity performance standards of this ordinance. The Stormwater Administrator

may require the applicant to provide the documentation, calculations, and examples necessary for the Stormwater Administrator to determine whether such an affirmative showing is made.

**xx-308 DEDICATION OF BMPS, FACILITIES & IMPROVEMENTS**

Unless otherwise approved by City Council, ownership and maintenance responsibility of any existing or future stormwater management facilities shall remain with the owner of the property or a legally established property owner's association. Such facilities shall meet all the requirements of this ordinance and include adequate and perpetual access and sufficient area, by easement or otherwise, for inspection and regular maintenance.

**xx-309 VARIANCES**

(A) Any *person* may petition the City Council for a variance granting permission to use the *person's* land in a manner otherwise prohibited by this ordinance. For all proposed *major* and *minor variances* from the requirements of this ordinance, the City Council shall make findings of fact showing that:

(1) there are practical difficulties or unnecessary hardships that prevent compliance with the strict letter of this ordinance;

(2) the variance is in harmony with the general purpose and intent of this ordinance and preserves its spirit; and

(3) in granting the variance, the public safety and welfare have been assured and substantial justice has been done.

(B) In the case of a request for a *minor variance*, the City of Burlington may vary or modify any of the regulations or provisions of the ordinance so that the spirit of the ordinance shall be observed, public safety and welfare secured, and substantial justice done may impose reasonable and appropriate conditions and safeguards upon any variance it grants.

(C) The City of Burlington may attach conditions to the *major* or *minor variance* approval that support the purpose of this ordinance. If the variance request qualifies as a *major variance*, and the City of Burlington decides in favor of granting the *major variance*, the City Council shall then prepare a preliminary record of the hearing and submit it to the *Commission* for review and approval. If the *Commission* approves the *major variance* or approves with conditions or stipulations added, then the *Commission* shall prepare a *Commission* decision which authorizes City of Burlington to issue a final decision which would include any conditions or stipulations added by the *Commission*. If the *Commission* denies the major variance, then the *Commission* shall prepare a decision to be sent to the City of Burlington. The City Council shall prepare a final decision denying the major variance.

(D) Appeals from the local government decision on a *major* or *minor variance* request are made on certiorari to the local Superior Court. Appeals from the *Commission* decision on a *major variance* request are made on judicial review to Superior Court.

(E) Any *person* who petitions the City of Burlington for a variance under this ordinance shall provide notice to the affected local governments of the variance request as required under

the Jordan Rule, 15A NCAC 2B.0104(r). For purposes of this notice requirement, “affected local governments” means any local governments that withdraw water from Lake Jordan or its tributaries downstream of the site of the proposed variance. If the proposed variance is in a Water Supply Watershed area classified as WS II, WS III or WS IV, “affected local governments” also includes any other local governments in the same water supply watershed as the proposed variance. The notice shall provide a reasonable period for comments and shall direct the comments to be sent to the Stormwater Administrator. The person petitioning for the variance shall supply proof of notification in accordance with this ordinance to the Stormwater Administrator.

**xx-310 ADDITIONAL STANDARDS**

(A) Animal Waste

- (1) It shall be unlawful for the owner or custodian of any animal to take it off the owner’s own property limits without the means to properly remove and dispose of the animal’s feces from any public property.
- (2) It is the responsibility of the animal’s owner or custodian to clean up the animal’s feces from any public property outside of the animal owner’s own property limits. Such property includes, but is not limited to, parks, rightsof- way, paths, and public access areas.
- (3) “Means to properly remove and dispose of feces” shall consist of having on or near one’s person a device such as a plastic bag, or other suitable plastic or paper container that can be used to clean up and contain animal waste until it can be disposed of in an appropriate container. Such a device must be produced and shown, upon request, to anyone authorized to enforce these ordinances.
- (4) This provision shall not apply to handicapped persons assisted by trained guide or assistant dogs, or other animals trained to assist handicapped persons.
- (5) “Public nuisance” is defined to include “an animal which deposits feces on public property, and the person owning, possessing, harboring of having the care, charge, control or custody of the animal fails to remove the feces so deposited. Provided, however, this definition shall not apply to any animal assisting a handicapped person.
- (6) It shall be required of all new residential development and redevelopment projects subject to this Ordinance to develop a means for proper disposal of animal waste. This could include, but is not limited to, installing pet waste stations, constructing dog runs, including restrictions in the Home Owners Association by-laws, etc...

(B) Nutrient Sensitive Waters Program

This section requires both inorganic fertilizer and organic nutrient application to be performed with the most current state-recognized technical guidance on proper nutrient management. Persons applying inorganic fertilizer and organic nutrient application shall comply with 15A NCAC 02B .0272 Jordan Water Supply Nutrient Strategy: Fertilizer Management.

(A) 15A NCAC 02B .0272 Jordan Water Supply Nutrient Strategy: Fertilizer Management applies to the application of nutrients on:

- (1) Cropland areas in the Jordan watershed for commercial purposes,
- (2) Commercial ornamental and floriculture areas and greenhouse production areas in the Jordan watershed,
- (3) Golf courses, public recreational lands, road or utility rights of way, or other commercial or institutional lands where any such land, or a combination of such lands, under common management in the watershed totals at least five acres,
- (4) Any lands in the Jordan watershed where a hired applicator, as defined in 15A NCAC 02B .0202 (4), who does not own or lease the lands applies nutrients to a total of at least five acres per year.

**xx-311 ONSITE WASTEWATER****(A) On-Site Wastewater System Permit**

For new development and redevelopment that utilize the use of on-site wastewater treatment systems, a copy of the approved on-site wastewater system permit issued by the Alamance County Environmental Health Department shall be provided to the Stormwater Administrator as part of the Stormwater Management Permit Application.

**(B) Standards for Operation and Maintenance**

Onsite systems for domestic wastewater shall be operated and maintained so as to avoid adverse effects on surface water and groundwater, including eutrophication of surface water and microbial or nitrate contamination of groundwater. Septic tank residuals shall be pumped whenever necessary to assure the proper operation of the system to meet these standards, and the septage shall be reused or disposed of in a manner that does not present significant risks to human health, surface water or groundwater.

## SECTION 4: MAINTENANCE

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### xx-401 GENERAL STANDARDS FOR MAINTENANCE

#### (A) Function of BMPs As Intended

The *owner* of each *engineered stormwater control* installed pursuant to this ordinance shall maintain and operate it so as to preserve and continue its function in controlling stormwater quality and quantity at the degree or amount of function for which the *engineered stormwater control* was designed.

#### (B) Annual Maintenance Inspection and Report

The *person* responsible for maintenance of any *engineered stormwater control* installed pursuant to this ordinance shall submit to the Stormwater Administrator an inspection report for each engineering stormwater control. The inspection report shall be submitted from one of the following *persons* performing services only in their area of competence: a qualified registered North Carolina professional engineer, surveyor, landscape architect, soil scientist, aquatic biologist, or a *person* certified by the North Carolina Cooperative Extension Service for stormwater treatment practice inspection and maintenance. The inspection report shall contain all of the following:

- (1) The name and address of the land *owner*;
- (2) The recorded book and page number of the lot of each *engineered stormwater control*;
- (3) A statement that an inspection was made of the *engineered stormwater control*;
- (4) The date the inspection was made;
- (5) A statement that the inspected *engineered stormwater control* is performing properly and is in compliance with the terms and conditions of the approved maintenance agreement required by this ordinance; and
- (6) The original signature and seal, if applicable, of the inspector.

All inspection reports shall be on forms supplied by the Stormwater Administrator, or an approved equal as determined by the Stormwater Administrator. An original inspection report shall be provided to the Stormwater Administrator beginning one year from the date of as-built certification and each year thereafter on or before the date of the as-built certification.

### xx-402 OPERATION AND MAINTENANCE AGREEMENT

#### (A) In General

Prior to the conveyance or transfer of any lot or building site to be served by a *engineered stormwater control* pursuant to this ordinance, and prior to issuance of any permit for *development* requiring a *engineered stormwater control* pursuant to this ordinance, the applicant or *owner* of the site must execute an operation and

maintenance agreement that shall be binding on all subsequent *owners* of the site, portions of the site, and lots or parcels served by the *engineered stormwater control*. Until the transference of all property, sites, or lots served by the *engineered stormwater control*, the original *owner* or applicant shall have primary responsibility for carrying out the provisions of the maintenance agreement.

The operation and maintenance agreement shall require the *owner(s)* to maintain, repair and, if necessary, reconstruct the *engineered stormwater control*, and shall state the terms, conditions, and schedule of maintenance for the *engineered stormwater control*. In addition, it shall grant to the City of Burlington a right of entry in the event that the Stormwater Administrator has reason to believe it has become necessary to inspect, monitor, maintain, repair, or reconstruct the *engineered stormwater control*; however, in no case shall the right of entry, of itself, confer an obligation on the City of Burlington to assume responsibility for the *engineered stormwater control*.

The operation and maintenance agreement must be approved by the Stormwater Administrator prior to plan approval, and it shall be referenced on the final plat and shall be recorded with the county Register of Deeds upon final plat approval. A copy of the recorded maintenance agreement shall be given to the Stormwater Administrator within fourteen (14) days following its recordation.

For all *engineered stormwater controls* required pursuant to this ordinance, the required operation and maintenance agreement shall include all of the following provisions:

- (1) Acknowledgment that the OWNER or association shall continuously operate and maintain the stormwater control and management facilities.
- (2) The OWNER, its successors and assigns, including any homeowners association, shall adequately maintain the structural stormwater BMP facilities in accordance with the approved Operation and Maintenance Plan or Manual(s). This includes all pipes and channels built to convey stormwater to the facility, as well as all structures, improvements, and vegetation provided to control the quantity and quality of the stormwater. Adequate maintenance is herein defined as good working condition so that these facilities are performing their design functions.
- (3) The OWNER, its successors and assigns, shall ensure the structural stormwater BMP facility is inspected by a qualified professional and shall submit an annual inspection report to the City of Burlington. The inspection report shall be due annually 30 days from the date of the final structural stormwater Management facilities construction inspection. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire facilities, berms, outlet structure, pond areas, access roads, etc. Deficiencies shall be noted in the inspection report.
- (4) The OWNER, its successors and assigns, hereby grant permission to the City of Burlington, its authorized agents and employees, to enter upon the Property and to inspect the structural stormwater Management facilities whenever the City of Burlington deems necessary. The purpose of inspection is to follow-up on reported deficiencies and/or to respond to citizen complaints. The City of Burlington shall provide the OWNER, its successors and assigns, copies of the inspection findings and a directive to commence with the repairs if necessary.



(5) Before the City of Burlington shall approve the completed facility and issue final certificates of occupancy, the Owner and/or maintaining entity shall furnish the City of Burlington with a financial guarantee insuring future maintenance, operation, and repair of the facility. The financial guarantee shall be in the form of cash or an irrevocable letter of credit and made payable to the City of Burlington. The amount of guarantee shall be 40% of the total cost of constructing the facility based on actual contract prices for said facility.

(6) In the event the OWNER, its successors and assigns, fails to maintain the structural stormwater Management facilities in good working condition acceptable to the City of Burlington or that maintenance and repairs are not being made as required or that any action is not being done in accordance with this agreement, the City of Burlington shall notify the responsible entity who shall be given a reasonable time to correct such deficiencies. Should the responsible entity fail to act in a timely manner, or otherwise fail to correct the deficiencies, the City of Burlington will institute appropriate action to obtain compliance including criminal or civil penalties, or both. In addition, the City of Burlington may declare the responsible entity in default of this agreement and financial guarantee and use part or all of such guarantee funds to correct the deficiencies and may assume actual operation and maintenance. Default of this agreement does not release the responsible entity from liability/responsibility for the deficiencies, nor release the entity from this agreement. Likewise, default of this agreement does not prevent the City of Burlington from taking action against the responsible entity to recover the cost of such actions to correct the deficiencies.

(7) For all structural stormwater Management facilities which are to be or are owned and maintained by a property owner's association or similar entity, the OWNER also agrees to the following provisions:

- a. Acknowledgment that the association shall continuously operate and maintain the structural stormwater Management facilities.
- b. Establish adequate owner/property association dues which are to be spent solely for sediment removal, structural, biological or vegetative replacement, major repair, or reconstruction of the stormwater control measures and devices of the particular site plan or subdivision.
- c. Granting to the City of Burlington a right of entry to inspect, monitor, maintain, repair, and reconstruct structural stormwater Management facilities.
- d. Allow the City of Burlington\_ to recover from the association and its members any and all costs the City of Burlington may expend to maintain or repair the stormwater control and management facility or to correct any operational deficiencies as a result of default by the Owner/association/responsible entity. Failure to pay to the City of Burlington all of its expended costs, after thirty (30) days written notice, shall constitute a breach of the agreement. The City of Burlington shall thereafter be entitled to bring an action against the association and its members to pay, or foreclose upon the lien herein authorized by the agreement against the property, or both in the case of a deficiency. Interest, collection costs, and attorney fees shall be added to the recovery.



(8) The OWNER, its successors and assigns, will perform the work necessary to keep these facilities in good working order as appropriate. In the event a maintenance schedule for the structural stormwater Management facilities (including sediment removal) is outlined on the approved plans, the schedule will be followed.

(9) In the event the City of Burlington, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like, the OWNER, its successors and assigns, shall reimburse the City of Burlington upon demand, within thirty (30) days of receipt thereof for all actual costs incurred by the City of Burlington hereunder.

(10) This Agreement imposes no liability of any kind whatsoever on the City of Burlington and the OWNER agrees to hold the City of Burlington harmless from any liability in the event the structural stormwater Management facilities fail to operate properly.

**xx-403 INSPECTION PROGRAM**

Inspections and inspection programs by the City of Burlington may be conducted or established on any reasonable basis, including but not limited to routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to, reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in BMPs; and evaluating the condition of BMPs.

If the *owner* or occupant of any property refuses to permit such inspection, the Stormwater Administrator 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 the Stormwater Administrator while carrying out his or her official duties.

**xx-404 PERFORMANCE SECURITY FOR INSTALLATION AND MAINTENANCE**

**(A) Performance Security Required**

A performance security or bond with surety, cash escrow, letter of credit or other acceptable legal arrangement shall be required prior to issuance of a permit in order to ensure that the *engineered stormwater controls* are:

- (1) installed by the permit holder as required by the approved stormwater management plan, and/or
- (2) maintained by the *owner* as required by the operation and maintenance agreement.

**(B) Amount**

**(1) Installation**

The amount of an installation performance security shall be the total estimated construction cost of the BMPs approved under the permit, plus 25%.

**(2) Maintenance**

The amount of a maintenance performance security shall be the present value of an annuity of perpetual duration based on a reasonable estimate of the annual cost of inspection, operation and maintenance of the BMPs approved under the permit, at a discount rate that reflects the jurisdiction’s cost of borrowing minus a reasonable estimate of long-term inflation.

**(C) Uses of Performance Security**

**(1) Forfeiture Provisions**

The performance security shall contain forfeiture provisions for failure, after proper notice, to complete work within the time specified, or to initiate or maintain any actions which may be required of the applicant or *owner* in accordance with this ordinance, approvals issued pursuant to this ordinance, or an operation and maintenance agreement established pursuant to this ordinance.

**(2) Default**

Upon default of the *owner* to construct, maintain, repair and, if necessary, reconstruct any *engineered stormwater control* in accordance with the applicable permit or operation and maintenance agreement, the Stormwater Administrator shall obtain and use all or any portion of the security to make necessary improvements based on an engineering estimate. Such expenditure of funds shall only be made after requesting the *owner* to comply with the permit or maintenance agreement. In the event of a default triggering the use of installation performance security, the City of Burlington shall not return any of the unused deposited cash funds or other security, which shall be retained for maintenance.

**(3) Costs in Excess of Performance Security**

If the City of Burlington takes action upon such failure by the applicant or *owner*, the City may collect from the applicant or *owner* the difference between the amount of the reasonable cost of such action and the amount of the security held, in addition to any other penalties or damages due.

**(4) Refund**

Within sixty days of the final approval, the installation performance security shall be refunded to the applicant or terminated, except any amount attributable to the cost (plus 25%) of landscaping installation and ongoing maintenance associated with the BMPs covered by the security. Any such landscaping shall be inspected one (1) year after installation with replacement for compliance with the approved plans and specifications and, if in compliance, the portion of the financial security attributable to landscaping shall be released.

**xx-405 NOTICE TO OWNERS****(A) Deed Recordation and Indications On Plat**

The applicable operations and maintenance agreement, conservation easement, or dedication and acceptance into public maintenance (whichever is applicable) pertaining to every *engineered stormwater control* shall be referenced on the final plat and shall be recorded with the county Register of Deeds upon final plat approval. If no subdivision plat is recorded for the site, then the operations and maintenance agreement, conservation easement, or dedication and acceptance into public maintenance (whichever is applicable) shall be recorded with the county Register of Deeds so as to appear in the chain of title of all subsequent purchasers under generally accepted searching principles.

**(B) Signage**

Where appropriate in the determination of the Stormwater Administrator to assure compliance with this ordinance, *engineered stormwater controls* shall be posted with a conspicuous sign stating who is responsible for required maintenance and annual inspection. The sign shall be maintained so as to remain visible and legible.

Additional signage or information deemed pertinent by the Stormwater Administrator for BMP maintenance may be required. Examples include, but are not limited to: bottom elevation, permanent pool elevation, riser elevation, media thickness, benchmark elevation, etc...

**xx-406 RECORDS OF INSTALLATION AND MAINTENANCE ACTIVITIES**

The *owner* of each *engineered stormwater control* shall keep records of inspections, maintenance, and repairs for at least five years from the date of creation of the record and shall submit the same upon reasonable request to the Stormwater Administrator.

**xx-407 NUISANCE**

The *owner* of each stormwater BMP, whether *engineered stormwater control* or *non-engineered stormwater control*, shall maintain it so as not to create or result in a nuisance condition.

**xx-408 MAINTENANCE EASEMENT**

Every *engineered stormwater control* installed pursuant to this ordinance shall be made accessible for adequate maintenance and repair by a maintenance easement. The easement shall be recorded and its terms shall specify who may make use of the easement and for what purposes.

**xx-409 EXISTING STRUCTURAL BMPS**

Sections 4-401, 4-403, 4-404, 4-405(B), 4-406 and 4-407 of this ordinance shall also apply to structural BMPs that were installed prior to the effective date of this ordinance.

## SECTION 5: ENFORCEMENT AND VIOLATIONS

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### xx-501 GENERAL

#### (A) Authority to Enforce

The provisions of this ordinance shall be enforced by the Stormwater Administrator, his or her designee, or any authorized agent of City of Burlington. Whenever this section refers to the Stormwater Administrator, it includes his or her designee as well as any authorized agent of the City of Burlington.

#### (B) Violation Unlawful

Any failure to comply with an applicable requirement, prohibition, standard, or limitation imposed by this ordinance, or the terms or conditions of any permit or other *development* approval or authorization granted pursuant to this ordinance, is unlawful and shall constitute a violation of this ordinance.

#### (C) Each Day a Separate Offense

Each day that a violation continues shall constitute a separate and distinct violation or offense.

#### (D) Responsible *Persons*/Entities

Any *person* who erects, constructs, reconstructs, alters (whether actively or passively), or fails to erect, construct, reconstruct, alter, repair or maintain any structure, BMP, *engineered stormwater control*, practice, or condition in violation of this ordinance shall be subject to the remedies, penalties, and/or enforcement actions in accordance with this section. *Persons* subject to the remedies and penalties set forth herein may include any architect, engineer, builder, contractor, developer, agency, or any other *person* who participates in, assists, directs, creates, causes, or maintains a condition that results in or constitutes a violation of this ordinance, or fails to take appropriate action, so that a violation of this ordinance results or persists; or an *owner*, any tenant or occupant, or any other *person*, who has control over, or responsibility for, the use or *development* of the property on which the violation occurs.

For the purposes of this article, responsible *person(s)* shall include but not be limited to:

##### (1) *Person* Maintaining Condition Resulting In or Constituting Violation

An architect, engineer, builder, contractor, developer, agency, or any other *person* who participates in, assists, directs, creates, causes, or maintains a condition that constitutes a violation of this ordinance, or fails to take appropriate action, so that a violation of this ordinance results or persists.

##### (2) Responsibility For Land or Use of Land

The *owner* of the land on which the violation occurs, any tenant or occupant of the property, any *person* who is responsible for stormwater controls or practices

pursuant to a private agreement or public document, or any *person*, who has control over, or responsibility for, the use or *development* of the property.

**xx-502 REMEDIES AND PENALTIES**

The remedies and penalties provided for violations of this ordinance, whether civil or criminal, shall be cumulative and in addition to any other remedy provided by law, and may be exercised in any order.

**(A) Remedies****(1) Withholding of Certificate of Occupancy**

The Stormwater Administrator, Building Inspections or other authorized agent may refuse to issue a certificate of occupancy for the building or other improvements constructed or being constructed on the site and served by the stormwater practices in question until the applicant or other responsible *person* has taken the remedial measures set forth in the notice of violation or has otherwise cured the violations described therein.

**(2) Disapproval of Subsequent Permits and Development Approvals**

As long as a violation of this ordinance continues and remains uncorrected, the Stormwater Administrator or other authorized agent may withhold, and the Planning and Zoning Board and/or City Council may disapprove, any request for permit or *development* approval or authorization provided for by this ordinance or the zoning, subdivision, and/or building regulations, as appropriate for the land on which the violation occurs.

**(3) Injunction, Abatements, etc.**

The Stormwater Administrator, with the written authorization of the City Manager, may institute an action in a court of competent jurisdiction for a mandatory or prohibitory injunction and order of abatement to correct a violation of this ordinance. Any *person* violating this ordinance shall be subject to the full range of equitable remedies provided in the General Statutes or at common law.

**(4) Correction as Public Health Nuisance, Costs as Lien, etc.**

If the violation is deemed dangerous or prejudicial to the public health or public safety and is within the geographic limits prescribed by North Carolina G.S. § 160A-193, the Stormwater Administrator, with the written authorization of the City Manager, may cause the violation to be corrected and the costs to be assessed as a lien against the property.

**(5) Stop Work Order**

The Stormwater Administrator may issue a stop work order to the *person(s)* violating this ordinance. The stop work order shall remain in effect until the *person* has taken the remedial measures set forth in the notice of violation or has otherwise cured the violation or violations described therein. The stop work

order may be withdrawn or modified to enable the *person* to take the necessary remedial measures to cure such violation or violations.

**(B) Civil Penalties**

The Stormwater Administrator may assess a civil penalty against any person who violates any provision of this ordinance or of a permit or other requirement pursuant to this ordinance. Civil penalties may be assessed up to the full amount of penalty authorized by G.S. 143-215.6A.

**(C) Criminal Penalties**

Violation of this ordinance may be enforced as a criminal matter under North Carolina law.

**xx-503 PROCEDURES**

**(A) Initiation/Complaint**

Whenever a violation of this ordinance occurs, or is alleged to have occurred, any *person* may file a written complaint. Such complaint shall state fully the alleged violation and the basis thereof, and shall be filed with the Stormwater Administrator, who shall record the complaint. The complaint shall be investigated promptly by the Stormwater Administrator.

**(B) Inspection**

The Stormwater Administrator shall have the authority, upon presentation of proper credentials, to enter and inspect any land, building, structure, or premises to ensure compliance with this ordinance.

**(C) Notice of Violation and Order to Correct**

When the Stormwater Administrator finds that any building, structure, or land is in violation of this ordinance, the Stormwater Administrator shall notify, in writing, the property *owner* or other *person* violating this ordinance. The notification shall indicate the nature of the violation, contain the address or other description of the site upon which the violation is occurring, order the necessary action to abate the violation, and give a deadline for correcting the violation. If civil penalties are to be assessed, the notice of violation shall also contain a statement of the civil penalties to be assessed, the time of their accrual, and the time within which they must be paid or be subject to collection as a debt.

The Stormwater Administrator may deliver the notice of violation and correction order personally, by the Burlington Police Department, by certified or registered mail, return receipt requested, or by any means authorized for the service of documents by Rule 4 of the North Carolina Rules of Civil Procedure.

If a violation is not corrected within a reasonable period of time, as provided in the notification, the Stormwater Administrator may take appropriate action under this ordinance to correct and abate the violation and to ensure compliance with this ordinance.

**(D) Extension of Time**

A *person* who receives a notice of violation and correction order, or the *owner* of the land on which the violation occurs, may submit to the Stormwater Administrator a written request for an extension of time for correction of the violation. On determining that the request includes enough information to show that the violation cannot be corrected within the specified time limit for reasons beyond the control of the *person* requesting the extension, the Stormwater Administrator may extend the time limit as is reasonably necessary to allow timely correction of the violation, up to, but not exceeding 30 days. The Stormwater Administrator may grant 7-day extensions in addition to the foregoing extension if the violation cannot be corrected within the permitted time due to circumstances beyond the control of the *person* violating this ordinance. The Stormwater Administrator may grant an extension only by written notice of extension. The notice of extension shall state the date prior to which correction must be made, after which the violator will be subject to the penalties described in the notice of violation and correction order.

**(E) Enforcement After Time to Correct**

After the time has expired to correct a violation, including any extension(s) if authorized by the Stormwater Administrator, the Stormwater Administrator shall determine if the violation is corrected. The Stormwater Administrator may act to impose one or more of the remedies and penalties authorized by this ordinance whether or not the violation has been corrected.

**(F) Emergency Enforcement**

If delay in correcting a violation would seriously threaten the effective enforcement of this ordinance or pose an immediate danger to the public health, safety, or welfare, then the Stormwater Administrator may order the immediate cessation of a violation. Any *person* so ordered shall cease any violation immediately. The Stormwater Administrator may seek immediate enforcement, without prior written notice, through any remedy or penalty authorized by this article.

## SECTION 6: DEFINITIONS

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### xx-601 TERMS DEFINED

When used in this Ordinance, the following words and terms shall have the meaning set forth in this section, unless other provisions of this Ordinance specifically indicate otherwise.

***Approved accounting tool***

The accounting tool for nutrient loading approved by the *EMC* for the relevant geography and development type under review.

***Built-upon area (BUA)***

That portion of a *development* project that is covered by impervious or partially impervious surface including, but not limited to, buildings; pavement and gravel areas such as roads, parking lots, and paths; and recreation facilities such as tennis courts. “Built-upon area” does not include a wooden slatted deck, the water area of a swimming pool, or pervious or partially pervious paving material to the extent that the paving material absorbs water or allows water to infiltrate through the paving material. The project site or area must exclude any land adjacent to the area disturbed by the project that has been counted as pervious by any other *development* regulated under a federal, state or local stormwater regulation.

***Commission***

The North Carolina Environmental Management Commission, in the *Department*.

***Department***

The North Carolina Department of Environment and Natural Resources.

***Design Manual***

The stormwater design manual approved for use in this part of the Jordan Watershed by the *Department* for the proper implementation of the requirements of the Jordan Watershed stormwater program. All references herein to the *Design Manual* are to the latest published edition or revision.

***Development***

Any *land-disturbing* activity that increases the amount of *built-upon area* or that otherwise decreases the infiltration of precipitation into the soil.

***Division***

The Division of Water Quality in the *Department*.

***Existing development***

*Development* not otherwise exempted by this ordinance that meets one of the following criteria:

- (a) It either is built or has established a statutory or common-law vested right as of the effective date of this ordinance; or
- (b) It occurs after the effective date of this ordinance, but does not result in a net increase in *built-upon area* and does not decrease the infiltration of precipitation into the soil

***Engineered stormwater control***



A physical device designed to trap, settle out, or filter pollutants from stormwater runoff; to alter or reduce stormwater runoff velocity, amount, timing, or other characteristics; to approximate the *pre-development* hydrology on a developed site; or to achieve any combination of these goals. *Engineered stormwater control* includes physical practices such as constructed wetlands, vegetative practices, filter strips, grassed swales, and other methods installed or created on real property. “Engineered stormwater control” is synonymous with “structural practice,” “stormwater control facility,” “stormwater control practice,” “stormwater treatment practice,” “stormwater management practice,” “stormwater control measures,” “structural stormwater treatment systems,” and similar terms used in this ordinance. It is a broad term that may include practices that do not require design by a professionally licensed engineer.

***Land disturbing activity***

Any use of the land that results in a change in the natural cover or topography that may cause or contribute to sedimentation.

***Larger common plan of development or sale***

Any area where multiple separate and distinct construction or *land-disturbing activities* will occur under one plan. A plan is any announcement or piece of documentation (including but not limited to a sign, public notice or hearing, sales pitch, advertisement, loan application, drawing, permit application, zoning request, or computer design) or physical demarcation (including but not limited to boundary signs, lot stakes, or surveyor markings) indicating that construction activities may occur on a specific plot.

***Major variance***

A variance from the minimum statewide watershed protection or Jordan rules that results in the relaxation, by a factor greater than five percent of any buffer, density or built-upon area requirement under the high density option; any variation in the design, maintenance or operation requirements of a wet detention pond or other approved stormwater management system; or relaxation by a factor greater than 10 percent, of any management requirement under the low density option. For provisions in this ordinance that are more stringent than the state's minimum water supply protection rules and Jordan rules, a variance to this ordinance is not considered a *major variance* as long as the result of the variance is not less stringent than the state's minimum requirements.

***Minor variance***

A variance from the minimum statewide watershed protection or Jordan rules that results in a relaxation, by a factor of up to five percent of any buffer, density or built-upon area requirement under the high density option; or that results in a relaxation by a factor up to 10 percent, of any management requirement under the low density option.

***10-year, 24-hour storm***

The surface runoff resulting from a 24-hour rainfall of an intensity expected to be equaled or exceeded, on average, once in 120 months and with a duration of 24 hours.

***Outfall***

A point at which stormwater (1) enters surface water or (2) exits the property of a particular *owner*.

***Owner***

The legal or beneficial owner of land, including but not limited to a mortgagee or vendee in possession, receiver, executor, trustee, or long-term or commercial lessee, or any other *person*

or entity holding proprietary rights in the property or having legal power of management and control of the property. “Owner” shall include long-term commercial tenants; management entities, such as those charged with or engaged in the management of properties for profit; and every *person* or entity having joint ownership of the property. A secured lender not in possession of the property does not constitute an owner, unless the secured lender is included within the meaning of “owner” under another description in this definition, such as a management entity.

***Person***

Includes, without limitation, individuals, firms, partnerships, associations, institutions, corporations, municipalities and other political subdivisions, and governmental agencies.

***Redevelopment***

Any *development* on previously-developed land. *Redevelopment* of structures or improvements that (i) existed prior to December 2001 and (ii) would not result in an increase in *built-upon area* and (iii) provides stormwater control at least equal to the previous development is not required to meet the nutrient loading targets of this ordinance.

***Stormwater system***

All engineered stormwater controls owned or controlled by a *person* that drain to the same *outfall*, along with the conveyances between those controls. A system may be made up of one or more stormwater controls.

***Substantial progress***

For the purposes of determining whether sufficient progress has been made on an approved plan, one or more of the following construction activities toward the completion of a site or subdivision plan shall occur: obtaining a grading permit and conducting grading activity on a continuous basis and not discontinued for more than thirty (30) days; or installation and approval of on-site infrastructure; or obtaining a building permit for the construction and approval of a building foundation. “Substantial progress” for purposes of determining whether an approved plan is null and void is not necessarily the same as “substantial expenditures” used for determining vested rights pursuant to applicable law.

## SECTION 7: ILLICIT DISCHARGES

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### xx-701 ILLICIT DISCHARGES AND CONNECTIONS

#### (A) Illicit Discharges

No person shall cause or allow the discharge, emission, disposal, pouring, or pumping directly or indirectly to any stormwater conveyance, the waters of the State, or upon the land in manner and amount that the substance is likely to reach a stormwater conveyance or the waters of the State, any liquid, solid, gas, or other substance, other than stormwater; provided that non-stormwater discharges associated with the following activities are allowed and provided that they do not significantly impact water quality:

- (1) Water line flushing;
- (2) Landscape irrigation;
- (3) Diverted stream flows;
- (4) Rising ground waters;
- (5) Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20));
- (6) Uncontaminated pumped ground water;
- (7) Discharges from potable water sources;
- (8) Foundation drains;
- (9) Air conditioning condensation;
- (10) Irrigation water;
- (11) Springs;
- (12) Water from crawl space pumps;
- (13) Footing drains;
- (14) Lawn watering;
- (15) Individual residential car washing;
- (16) Flows from riparian habitats and wetlands;
- (17) Dechlorinated swimming pool discharges;
- (18) Street wash water; and
- (19) Flows from emergency firefighting
- (20) Other non-stormwater discharges for which a valid NPDES discharge permit has been approved and issued by the State of North Carolina, and provided that any such discharges to the municipal separate storm sewer system shall be authorized by the City of Burlington.

Prohibited substances include but are not limited to: oil, anti-freeze, chemicals, animal waste, paints, garbage, and litter.

#### (B) Illicit Connections

- (1) Connections to a stormwater conveyance or stormwater conveyance system that allow the discharge of non-stormwater, other than the exclusions described in section (a) above, are unlawful. Prohibited connections include, but are not limited to: floor drains, waste water from washing machines or sanitary sewers, wash water from commercial vehicle washing or steam cleaning, and waste water from septic systems.
- (2) Where such connections exist in violation of this section and said connections were made prior to the adoption of this provision or any other ordinance prohibiting such connections, the property owner or the person using said connection shall remove the

connection within one year following the effective date of this ordinance. However, the one-year 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.

This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

- (3) Where it is determined that said connection:
- (a) 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
  - (b) Was made in violation of any applicable regulation or ordinance, other than this section;

the Stormwater Administrator shall designate the time within which the connection shall be removed. In setting the time limit for compliance, the Stormwater Administrator shall take into consideration:

- i. The quantity and complexity of the work,
- ii. The consequences of delay,
- iii. The potential harm to the environment, to the public health, and to public and private property, and
- iv. The cost of remedying the damage.

**(C) Spills**

Spills or leaks of polluting substances released, discharged to, or having the potential to released or discharged to the stormwater conveyance system, shall be contained, controlled, collected, and properly disposed. All affected areas shall be restored to their preexisting condition. Persons in control of the polluting substances immediately prior to their release or discharge, and persons owning the property on which the substances were released or discharged, shall immediately notify the Emergency Management Coordinator or the Fire Chief of the release or discharge, as well as making any required notifications under state and federal law. 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.

**(D) Industrial or Construction Activity Discharges**

Any person subject to an industrial or construction activity NPDES stormwater discharge permit shall comply with provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the City of Burlington prior to authorization of discharges to the MS4.

**(E) Right of Entry, Inspection, Sampling, and Testing**

(1) Authority to Inspect – Whenever necessary to make an inspection to enforce any provision of this Ordinance, or whenever the Stormwater Administrator has cause to believe that there exists, or potentially exists, in or upon any premise any condition which constitutes a violation of this Ordinance, the Stormwater Administrator may enter such premises at all reasonable times to inspect the same and to inspect and copy records related to stormwater compliance. In the event the owner or occupant refuses entry after a request to enter and inspect has been made, the City of Burlington is hereby empowered to seek assistance from any court of competent jurisdiction in obtaining such entry.

(2) Authority to Sample, Establish Sampling Devices, and Test – During any inspection as provided herein, the Stormwater Administrator may take any samples and perform any testing deemed necessary to aid in the pursuit of the inquiry or to record site activities.

**(F) Enforcement**

Whenever the Stormwater Administrator finds that a person has violated a prohibition or failed to meet a requirement of this Ordinance, the Stormwater Administrator may order compliance by written notice of violation to the responsible person and/or the property owner. Such notice may require without limitation:

- (11) The performance of monitoring, analysis, and reporting;
- (12) The elimination of illicit connections or discharges;
- (13) That violating discharges, practices, or operations shall cease and desist;
- (14) The abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property;
- (15) Payment of a fine to cover administrative and remediation costs; and
- (16) The implementation of source control BMPs.

If abatement of a violation and/or restoration of affected property is required, the notice shall set forth a deadline within which such remediation or restoration must be completed. Said notice shall further advise that, should the violator fail to remediate or restore within the established deadline, the work will be done by the City of Burlington or a contractor designated by the Stormwater Administrator and the expense shall be charged to the violator.

**(G) Violations Deemed a Public Nuisance**

Illicit discharges and illicit connections which exist within the City Limits and the City's Extraterritorial Jurisdiction are hereby found, deemed, and declared to be dangerous or prejudiced to the public health or public safety and are found, deemed, and declared to be public nuisances. Such public nuisances shall be abated in accordance with the procedures set forth in the City of Burlington Code of Ordinances Chapter 22.

*APPENDIX E- ADDITIONAL WATER QUALITY ORDINANCES*

Chapter 31.5

AN ORDINANCE TO PROVIDE FOR THE CONTROL OF SOIL EROSION AND SEDIMENTATION.

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Burlington hereby adopts the following ordinance.

Sec. 31.5-1            Title

This ordinance may be cited as the City of Burlington Soil Erosion and Sedimentation Control Ordinance.

Sec. 31.5-2            Purpose

This ordinance is adopted for the purposes of:

- (a) regulating certain land-disturbing activity to control accelerated erosion and sedimentation in order to prevent the pollution of water and other damage to lakes, watercourses, and other public and private property by sedimentation; and
- (b) establishing procedures through which these purposes can be fulfilled.

Sec. 31.5-3            Definitions

As used in this ordinance, unless the context clearly indicates otherwise, the following definitions apply:

- (a) Accelerated Erosion - means any increase over the rate of natural erosion as a result of land-disturbing activity.
- (b) Act - means the North Carolina Sedimentation Pollution Control Act of 1973, N.C.G.S., SECTION 113A-50 et seq. as amended, and all rules and orders adopted pursuant to it.
- (c) Adequate Erosion Control Measure, Structure, or Device - means one that controls the soil material within the land area under responsible control of the person conducting the land-disturbing activity.
- (d) Affiliate – means a person that directly, or indirectly through one or more intermediaries, controls, is controlled by, or is under common control of another person.

- (e) Being Conducted - means a land-disturbing activity has been initiated and permanent stabilization of the site has not been completed.
- (f) Borrow - means fill material that is required for on-site construction and is obtained from other locations.
- (g) Buffer Zone - means the strip of land adjacent to a lake or natural watercourse.
- (h) Coastal Counties - means the following counties: Beaufort, Bertie, Brunswick, Camden, Carteret, Chowan, Craven, Currituck, Dare, Gates, Hertford, Hyde, New Hanover, Onslow, Pamlico, Pasquotank, Pender, Perquimans, Tyrrell and Washington.
- (i) Commission - means the North Carolina Sedimentation Control Commission.
- (j) Completion of Construction or Development - means that no further land-disturbing activity is required on a phase of a project except that which is necessary for establishing a permanent ground cover.
- (k) Department - means the North Carolina Department of Environment and Natural Resources.
- (l) Director - means the Director of the Division of Land Resources of the Department of Environment and Natural Resources.
- (m) Discharge Point - means that point at which storm water runoff leaves a tract of land.
- (n) District - means the Alamance and Guilford County Soil and Water Conservation Districts created pursuant to Chapter 139, North Carolina General Statutes.
- (o) Energy Dissipator - means a structure or a shaped channel section with mechanical armoring placed at the outlet of pipes or conduits to receive and break down the energy from high velocity flow.
- (p) Erosion - means the wearing away of land surfaces by the action of wind, water, gravity, or any combination thereof.
- (q) Ground Cover - means any natural vegetative growth or other material which renders the soil surface stable against accelerated erosion.
- (r) High Quality Waters - means those classified as such in 15A NCAC 2B.0101(e) (5) - General Procedures, which is incorporated herein by reference to include further amendments pursuant to G.S. 150B-14(c).



- (s) High Quality Water (HQW) Zones –means, for the Coastal Counties, areas within 575 feet of High Quality Waters; and for the remainder of the state, areas within one mile and draining to HQW’s.
- (t) Lake or Natural Watercourse – means any stream, river, brook, swamp, sound, bay, creek, run, branch, canal, waterway, estuary, and any reservoir, lake or pond, natural or impounded in which sediment may be moved or carried in suspension, and which could be damaged by accumulation of sediment.
- (u) Land-disturbing Activity - means any use of the land by any person in residential, industrial, education, institutional, or commercial development, highway and road construction and maintenance that results in a change in the natural cover or topography and that may cause or contribute to sedimentation.
- (v) Local Government - means any county, incorporated village, town or city, or any combination of counties, incorporated villages, towns, and cities, acting through a joint program pursuant to the provisions of the Act.
- (w) Natural Erosion - means the wearing away of the earth’s surface by water, wind, or other natural agents under natural environmental conditions undisturbed by man.
- (x) Parent – means an affiliate that directly, or indirectly through one or more intermediaries, controls another person.
- (y) Person - means any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, interstate body, or other legal entity.
- (z) Person Conducting land-Disturbing Activity - means any person who may be held responsible for violation unless expressly provided otherwise by this Ordinance, the Act, or any order adopted pursuant to this Ordinance or the Act.
- (aa) Person Responsible for the Violation - means:
  - (1) the developer or other person who has or holds himself out as having financial or operation control over the land-disturbing activity; or
  - (2) the landowner or person in possession or control of the land that has directly or indirectly allowed the land-disturbing activity, or benefited from it or failed to comply with a duty imposed by any provision of this Ordinance, the Act, or any order adopted pursuant to this Ordinance or the Act.
- (bb) Phase of Grading - means one of two types of grading: rough or fine.

- (cc) Plan - means an erosion and sedimentation control plan
- (dd) Sediment - means solid particulate matter, both mineral and organic, that has been or is being transported by water, air, gravity, or ice from its site of origin.
- (ee) Sedimentation - means the process by which sediment resulting from accelerated erosion has been or is being transported off the site of the land-disturbing activity or into a lake or natural watercourse.
- (ff) Siltation - means sediment resulting from accelerated erosion which is settleable or removable by properly designed, constructed, and maintained control measures; and which has been transported from its point of origin within the site of a land-disturbing activity; and which has been deposited, or is in suspension in water.
- (gg) Storm Drainage Facilities - means the system of inlets, conduits, channels, ditches and appurtenances which serve to collect and convey storm water through and from a given drainage area.
- (hh) Storm Water Runoff - means the surface flow of water resulting from precipitation in any form and occurring immediately after rainfall or melting.
- (ii) Subsidiary – means an affiliate that is directly, or indirectly through one or more intermediaries, controlled by another person.
- (jj) Ten-Year Storm - means the storm water runoff resulting from precipitation of an intensity expected to be equaled or exceeded, on the average, once in ten years, and of a duration that will produce the maximum peak rate of runoff for the watershed of interest under average antecedent wetness conditions.
- (kk) Tract - means all contiguous land and bodies of water being disturbed or to be disturbed as a unit, regardless of ownership.
- (ll) Twenty-five Year Storm - means the storm water runoff resulting from precipitation of an intensity expected to be equaled or exceeded on the average, once in 25 years, and of a duration which will produce the maximum peak rate of runoff for the watershed of interest under average antecedent wetness conditions.
- (mm) Uncovered - means the removal of ground cover from, on, or above the soil surface.
- (nn) Undertaken - means the initiating of any activity, or phase of activity, which results or will result in a change in the ground cover or topography of a tract of land.

- (oo) Velocity - means the average velocity of flow through the cross section of the main channel at the peak flow of the storm of interest. The cross section of the main channel shall be that area defined by the geometry of the channel plus the area of flow below the flood height defined by vertical lines at the main channel banks. Overload flows are not to be included for the purpose of computing velocity of flow.
- (pp) Waste - means surplus materials resulting from on-site land-disturbing activities and being disposed of at other locations.
- (qq) Working Days - means days exclusive of Saturday and Sunday during which weather conditions or soil conditions permit land-disturbing activity to be undertaken.

Sec. 31.5-4                    Scope and Exclusions

- (a) Geographical Scope of Regulated Land-Disturbing Activity. This ordinance shall apply to land-disturbing activity within the territorial jurisdiction of the City of Burlington and to the extraterritorial jurisdiction of the City of Burlington as allowed by agreement between local governments, the extent of annexation or other appropriate legal instrument or law.
- (b) Exclusions from Regulated Land-Disturbing Activity. Notwithstanding the general applicability of this ordinance to all land-disturbing activity, this ordinance shall not apply to the following types of land-disturbing activity:
  - (1) An activity, including breeding and grazing of livestock, undertaken on agricultural land for the production of plants and animals useful to man, including, but not limited to:
    - (i) forage and sod crops, grain and feed crops, tobacco, cotton, and peanuts.
    - (ii) dairy animals and dairy products.
    - (iii) poultry and poultry products.
    - (iv) livestock, including beef cattle, sheep swine, horses, ponies, mules, and goats.
    - (v) bees and apiary products.
    - (vi) fur producing animals.
  - (2) An Activity undertaken on forestland for the production and harvesting of timber and timber products and conducted in accordance with best management practices set out in Forest Practice Guidelines Related to Water Quality, as adopted by the Department. If land-disturbing activity undertaken on forestland for the production and harvesting of timber and

timber products is not conducted in accordance with Forest Practice Guidelines Related to Water Quality, the provisions of this ordinance shall apply to such activity and any related land-disturbing activity on the tract.

- (3) An activity for which a permit is required under the Mining Act of 1971, Article 7 of Chapter 74 of the General Statutes.
- (4) A land-disturbing activity over which the State has exclusive regulatory jurisdiction as provided in G.S. 113A-56(a).
- (5) An activity which is essential to protect human life during an emergency.
- (c) Plan Approval Requirement for Land-Disturbing Activity. No person shall undertake any land-disturbing activity subject to this ordinance without first obtaining a Plan approval therefore from the City.
- (d) Protection of Property - Persons conducting land-disturbing activity shall take all reasonable measures to protect all public and private property from damage caused by such activity.
- (e) More Restrictive Rules Shall Apply - Whenever conflicts exists between federal, state, or local laws, ordinance, or rules, the more restrictive provision shall apply.
- (f) Plan Approval Exceptions. Notwithstanding the general requirement to obtain a Plan approval prior to undertaking land-disturbing activity, a Plan approval shall not be required for land-disturbing activity that does not exceed 43,560 square feet in surface area. In determining the area, lands under one or diverse ownership being developed as a unit will be aggregated.

Sec. 31.5-5                    Mandatory Standards for Land-Disturbing Activity

No land-disturbing activity subject to the control of this ordinance shall be undertaken except in accordance with the following mandatory standards:

- (a) Buffer zone
  - (1) Standard Buffer. No land-disturbing activity during periods of construction or improvement to land shall be permitted in proximity to a lake or natural watercourse unless a buffer zone is provided along the margin of the watercourse of sufficient width to confine visible siltation within the twenty-five percent (25%) of the buffer zone nearest the land-

disturbing activity.

- (i) Projects On, Over or Under Water. This subdivision shall not apply to a land-disturbing activity in connection with the construction of facilities to be located on, over, or under a lake or natural watercourse.
  - (ii) Buffer Measurement. Unless otherwise provided, the width of a buffer zone is measured horizontally from the edge of the water to the nearest edge of the disturbed area, with the 25 percent of the strip nearer the land-disturbing activity containing natural or artificial means of confining visible siltation.
- (2) Trout Buffer. Waters that have been classified as trout waters by the Environmental Management Commission shall have an undisturbed buffer zone 25 feet wide or of sufficient width to confine visible siltation within the twenty-five percent (25%) of the buffer zone nearest the land-disturbing activity, whichever is greater. Provided, however, that the Commission may approve plans which include land-disturbing activity along trout waters when the duration of said disturbance would be temporary and the extent of said disturbance would be minimal.
- (i) Projects On, Over or Under Water. This subdivision shall not apply to a land-disturbing activity in connection with the construction of facilities to be located on, over, or under a lake or natural watercourse.
  - (ii) Trout Buffer Measurement. The 25-foot minimum width for an undisturbed buffer zone adjacent to designated trout waters shall be measured horizontally from the top of the bank to the nearest edge of the disturbed area.
  - (iii) Limit on Land Disturbance. Where a temporary and minimal disturbance has been permitted as an exception to the trout buffer, land-disturbing activities in the buffer zone adjacent to designated trout waters shall be limited to a maximum of ten percent (10%) of the total length of the buffer zone within the tract to be disturbed such that there is not more than 100 linear feet of disturbance in each 1000 linear feet of buffer zone. Larger areas may be disturbed with the written approval of the Director.
  - (iv) Limit on Temperature Fluctuations. No land-disturbing activity shall be undertaken within a buffer zone adjacent to designated trout waters that will cause adverse temperature fluctuations in the trout waters, as set forth in 15 NCAC 2B.0211 "Fresh surface Water Classification and Standards."
- (b) Graded Slopes and Fills. The angle for graded slopes and fills shall be no greater than the angle which can be retained by vegetative cover or other adequate

erosion control devices or structures. In any event, slopes left exposed will, within 21 calendar days of completion of any phase of grading be planted or otherwise provided with temporary or permanent ground cover, devices, or structures sufficient to restrain erosion. The angle for graded slopes and fills must be demonstrated to be stable. Stable is the condition where the soil remains in its original configuration, with or without mechanical constraints.

- (c) Fill Material. Unless a permit from the Department's Division of Waste Management to operate a landfill is on file for the official site, acceptable fill material shall be free of organic or other degradable materials, masonry, concrete and brick in sizes exceeding twelve (12) inches, and any materials which would cause the site to be regulated as a landfill by the State of North Carolina.
- (d) Ground Cover. Whenever land-disturbing activity is undertaken on a tract comprising more than one acre, if more than one acre is uncovered, the person conducting the land-disturbing activity shall install erosion and sedimentation control devices and practices that are sufficient to retain the sediment generated by the land disturbing activity within the boundaries of the tract during construction upon and development of said tract, and shall plant or otherwise provide a permanent ground cover sufficient to restrain erosion after completion of construction or development. Except as provided in Sec. 31.5-8(b)(5) of this ordinance, provisions for a ground cover sufficient to restrain erosion must be accomplished within 15 working days or 90 calendar days following completion of construction or development, whichever period is shorter.
- (e) Prior Plan Approval. No person shall initiate any land-disturbing activity on a tract if more than one acre is to be uncovered unless, thirty (30) or more days prior to initiating the activity, a Plan for such activity is filed with and approved by the City. The City shall forward to the Director of the Division of Water Quality a copy of each Plan for a land-disturbing activity that involves the utilization of ditches for the purpose of de-watering or lowering the water table of the tract.

Sec. 31.5-6

Erosion and Sedimentation Control Plans

- (a) Plan Submission. A Plan shall be prepared for all land-disturbing activities subject to this ordinance whenever the proposed activity is to be undertaken on a tract comprising more than one acre, if more than one acre is to be uncovered. The plan shall be prepared by and bear the signature of a registered professional engineer, surveyor, architect, or landscape architect to the extent permitted by North Carolina laws. Three (3) copies of the Plan shall be filed with the City; a copy shall be simultaneously submitted to the Alamance or Guilford County Soil and Water Conservation District at least 30 days prior to the commencement of the proposed activity.

- (b) Financial Responsibility and Ownership. Plans may be disapproved unless accompanied by an authorized statement of financial responsibility and ownership. This statement shall be signed by the person financially responsible for the land-disturbing activity or his attorney in fact. The statement shall include the mailing and street addresses of the principal place of business of (1) the person financially responsible, (2) the owner of the land, and (3) any registered agents. If the person financially responsible is not a resident of North Carolina, a North Carolina agent must be designated in the statement for the purpose of receiving notice of compliance or non-compliance with the Plan, the Act, this ordinance, or rules or orders adopted or issued pursuant to this ordinance.
- (c) Environmental Policy Act Document. Any Plan submitted for a land-disturbing activity for which an environmental document is required by the North Carolina Environment Policy Act (G.S. 113A-1, et seq.) shall be deemed incomplete until a complete environmental document is available for review. The City shall promptly notify the person submitting the Plan that the 30-day time limit for review of the Plan pursuant to this ordinance shall not begin until a complete environmental document is available for review.
- (d) Content. The Plan required by this section shall contain architectural and engineering drawings, maps, assumptions, calculations, and narrative statements as needed to adequately described the proposed development of the tract and the measures planned to comply with the requirements of this ordinance. Plan content may vary to meet the needs of specific site requirements. Detailed guidelines for Plan preparation may be obtained from the City on request.
- (f) Soil and Water Conservation District Comments. The District shall review the Plan and submit any comments and recommendations to the City within 20 days after the District received the Plan, or within any shorter period of time as may be agreed upon by the District and the City. Failure of the District to submit its comments and recommendations within 20 days or within any agreed-upon shorter period of time shall not delay final action on the Plan.
- (f) Timeline for Decisions on Plans. The City will review each complete Plan submitted to them and within 30 days of receipt thereof will notify the person submitting the Plan that it has been approved, approved with modifications, approved with performance reservations, or disapproved. Failure to approve, approve with modifications, or disapprove a complete Plan within 30 days of receipt shall be deemed approval. The City will review each revised Plan submitted to them and within 15 days of receipt thereof will notify the person submitting the Plan that it has been approved, approved with modifications, approved with performance reservations, or disapproved. Failure to approve, approve with modifications, or disapprove a revised Plan within 15 days of receipt shall be deemed approval.

- (g) Approval. The City shall only approve a Plan upon determining that it complies with all applicable State and local regulations for erosion and sedimentation control. Approval assumes the applicant's compliance with the federal and state water quality laws, regulations and rules. The City shall condition approval of Plans upon the applicant's compliance with federal and state water quality laws, regulations and rules. The City may establish an expiration date, not to exceed three (3) years, for Plans approved under this ordinance.
- (h) Disapproval for Content. The City shall disapprove a Plan or draft Plan based on its content. A disapproval based upon a Plan's content must specifically state in writing the reasons for disapproval.
- (i) Other Disapprovals. The City may disapprove a Plan or draft Plans if implementation of the Plan would result in a violation of the rules adopted by the Environmental Management Commission to protect riparian buffers along surface waters. A local government may disapprove a Plan upon finding that an applicant, or a parent, subsidiary, or other affiliate of the applicant:
- (i) Is conducting or has conducted land-disturbing activity without an approved Plan, or has received notice of violation of a Plan previously approved by the Commission or a local government pursuant to the Act and has not complied with the notice within the time specified in the notice;
  - (ii) Has failed to pay a civil penalty assessed pursuant to the Act or a local ordinance adopted pursuant to the Act by the time the payment is due.
  - (iii) Has been convicted of a misdemeanor pursuant to G. S. 113A-64(b) or any criminal provision of a local ordinance adopted pursuant to the Act or;
  - (iv) Has failed to substantially comply with State rules or local ordinances and regulations adopted pursuant to the Act.

For purposes of this subsection, an applicant's record may be considered for only the two years prior to the application date.

In the event that a Plan is disapproved pursuant to this subsection, the City shall notify the Director of such disapproval within ten (10) days. The City shall advise the applicant and the Director in writing as to the specific reasons that the Plan was disapproved.

- (j) Notice of Activity Initiation. No person may initiate a land-disturbing activity before notifying the agency that issued the Plan approval of the date that land-disturbing activity will begin.



- (k) Preconstruction Conference. When deemed necessary by the approving authority a preconstruction conference may be required.
- (l) Display of Plan Approval. A Plan approval issued under this article shall be prominently displayed until all construction is complete, all permanent sedimentation and erosion control measures are installed and the site has been stabilized. A copy of the approved plan shall be kept on file at the job site.
- (m) Required Revisions. After approving a Plan, if the City, either upon review of such Plan or on inspection of the job site, determines that a significant risk of accelerated erosion or off-site sedimentation exists, the City shall require a revised Plan. Pending the preparation of the revised Plan, work shall cease or shall continue under conditions outlined by the appropriate authority. If following commencement of a land-disturbing activity pursuant to an approved Plan, the City determines that the Plan is inadequate to meet the requirements of this ordinance, the City may require any revision of the Plan that is necessary to comply with this ordinance.
- (n) Amendment to a Plan. Applications for amendment of a Plan in written and/or graphic form may be made at any time under the same conditions as the original application. Until such time as said amendment is approved by the City, the land-disturbing activity shall not proceed except in accordance with the Plan as originally approved.
- (o) Failure to File a Plan. Any person engaged in land-disturbing activity who fails to file a Plan in accordance with this ordinance, or who conducts a land-disturbing activity except in accordance with provisions of an approved Plan shall be deemed in violation of this ordinance.

Sec. 31.5-7                      Basic Control Objectives

An erosion and sedimentation control Plan may be disapproved if the Plan fails to address the following control objectives:

- (a) Identify Critical Areas - On-site areas that are subject to severe erosion, and off-site areas that are especially vulnerable to damage from erosion and/or sedimentation, are to be identified and receive special attention.
- (b) Limit Time of Exposure - All land-disturbing activities are to be planned and conducted to limit exposure to the shortest feasible time.
- (c) Limit Exposed Areas - All land-disturbing activity is to be planned and conducted

to minimize the size of the area to be exposed at any one time.

- (d) Control Surface Water - Surface water runoff originating upgrate of exposed areas should be controlled to reduce erosion and sediment loss during the period of exposure.
- (e) Control Sedimentation - All land-disturbing activity is to be planned and conducted so as to prevent off-site sedimentation damage.
- (j) Manage Storm Water Runoff - When the increase in the velocity of storm water runoff resulting from a land-disturbing activity is sufficient to cause accelerated erosion of the receiving watercourse, a Plan is to include measures to control the velocity to the point of discharge so as to minimize accelerated erosion of the site and increased sedimentation of the stream.

Sec. 31.5-8                    Design and Performance Standards

- (a) Except as provided in Sec. 31.5-8(b)(2) of this ordinance, erosion and sedimentation control measures, structures, and devices shall be planned, designed, and constructed to provide protection from the calculated maximum peak rate of runoff from the ten-year storm. Runoff rates shall be calculated using the procedures in the USDA, Soil Conservation Service’s “National Engineering Field Manual for Conservation Practices”, or other acceptable calculation procedures.
- (b) HQW Zones. In High Quality Water (HQW) zones the following design standards shall apply:
  - (1) Limit on Uncovered Area. Uncovered areas in HQW zones shall be limited at any time to a maximum total area of twenty acres within the boundaries of the tract. Only the portion of the land-disturbing activity within a HQW zone shall be governed by this section. Larger areas may be uncovered within the boundaries of the tract with the written approval of the Director.
  - (2) Maximum Peak Rate of Runoff Protection. Erosion and sedimentation control measures, structures, and devices within HQW zones shall be planned, designed and constructed to provide protection from the runoff of the twenty-five year storm which produces the maximum peak rate of runoff as calculated according to procedures in the United States Department of Agriculture Soil Conservation Service’s “National Engineering Field Manual for Conservation Practices” or according to procedures adopted by any other agency of this state or the United States or any generally recognized organization or association.

- (3) Settling Efficiency. Sediment basins within HQW zones shall be designed and constructed such that the basin will have a settling efficiency of at least 70% for the 40 micron (0.04 millimeter) size soil particle transported into the basin by the runoff of that two year storm which produces the maximum peak rate of runoff as calculated according to procedures in the United States Department of Agriculture Soil Conservation Service's "National Engineering Field Manual for Conservation Practices" or according to procedures adopted by any other agency of this state or the United States or any generally recognized organization or association.
- (4) Grade. Newly constructed open channels in HQW zones shall be designed and constructed with side slopes no steeper than two horizontal to one vertical if a vegetative cover is used for stabilization unless soil conditions permit a steeper slope or where the slopes are stabilized by using mechanical devices, structural devices or other acceptable ditch liners. In any event, the angle for side slopes shall be sufficient to restrain accelerated erosion.
- (5) Ground Cover. Ground cover sufficient to restrain erosion must be provided for any portion of a land-disturbing activity in a HQW zone within 15 working days or 60 calendar days following completion of construction or development, whichever period is shorter.

## Sec. 31.5-9

Storm Water Outlet Protection

- (a) Intent. Stream banks and channels downstream from any land disturbing activity shall be protected from increased degradation by accelerated erosion caused by increased velocity of runoff from the land disturbing activity.
- (b) Performance standard. Persons shall conduct land-disturbing activity so that the post construction velocity of the 10-year storm runoff in the receiving watercourse to the discharge point does not exceed the greater of:
  - (1) the velocity established by the Maximum Permissible Velocities Table set out within this subsection; or
  - (2) the velocity of the ten-year storm runoff in the receiving watercourse prior to development.

If condition (1) or (2) of this Paragraph cannot be met, then the receiving watercourse to and including the discharge point shall be designed and constructed to withstand the expected velocity anywhere the velocity exceeds the "prior to development" velocity by 10%.

Maximum Permissible Velocities Table

The following is a table for maximum permissible velocity for storm water discharges in feet per second (F.P.S.) and meters per second (M.P.S.):

Material	F.P.S.	M.P.S.
Fine sand (noncolloidal)	2.5	.8
Sandy loam (noncolloidal)	2.5	.8
Silt loam (noncolloidal)	3.0	.9
Ordinary firm loam	3.5	1.1
Fine gravel	5.0	1.5
Stiff clay (very colloidal)	5.0	1.5
Graded, loam to cobbles (noncolloidal)	5.0	1.5
Graded, silt to cobbles (Colloidal)	5.5	1.7
Alluvial silts (noncolloidal)	3.5	1.1
Alluvial silts (colloidal)	5.0	1.5
Coarse gravel (noncolloidal)	6.0	1.8
Cobbles and shingles	5.5	1.7
Shales and hard pans	6.0	1.8

Source - Adapted from recommendations by Special Committee on Irrigation Research, American Society of Civil Engineers, 1926, for channels with straight alignment. For sinuous channels, multiply allowable velocity by 0.95 for slightly sinuous, by 0.9 for moderately sinuous channels, and by 0.8 for highly sinuous channels.

- (c) Acceptable Management Measures - Measures applied alone or in combination to satisfy the intent of this section are acceptable if there are no objectionable secondary consequences. The City recognizes that the management of storm water runoff to minimize or control downstream channel and bank erosion is a developing technology. Innovative techniques and ideas will be considered and may be used when shown to have the potential to produce successful results. Some alternatives, while not exhaustive, are to:
  - (1) Avoid increases in surface runoff volume and velocity by including measures to promote infiltration to compensate for increased runoff from areas rendered impervious;
  - (2) Avoid increases in storm water discharge velocities by using vegetated or roughened swales and waterways in place of closed drains and high velocity paved sections:

- (3) Provide energy dissipators at outlets of storm drainage facilities to reduce flow velocities to the point of discharge;
  - (4) Protect watercourses subject to accelerated erosion by improving cross sections and/or providing erosion-resistant lining; and
  - (5) Upgrade or replace the receiving device structure, or watercourse such that it will receive and conduct the flow to a point where it is no longer subject to degradation from the increased rate of flow or increased velocity.
- (d) Exceptions - This rule shall not apply where it can be demonstrated to the City that storm water discharge velocities will not create an erosion problem in the receiving watercourse.

#### Sec. 31.5-10 Borrow and Waste Areas

When the person conducting the land-disturbing activity is also the person conducting the borrow or waste disposal activity, areas from which borrow is obtained and which are not regulated by the provisions of the Mining Act of 1971, and waste areas for surplus materials other than landfills regulated by the Department's Division of Waste Management shall be considered as part of the land-disturbing activity where the borrow material is being used or from which the waste material originated. When the person conducting the land-disturbing activity is not the person obtaining the borrow and/or disposing of the waste, these areas shall be considered a separate land-disturbing activity.

#### Sec. 31.5-11 Access and Haul Roads

Temporary access and haul roads, other than public roads, constructed or used in connection with any land-disturbing activity shall be considered a part of such activity.

#### Sec. 31.5-12 Operations in Lakes or Natural Watercourses

Land disturbing activity in connection with construction in, on, over, or under a lake or natural watercourse shall minimize the extent and duration of disruption of the stream channel. Where relocation of a stream forms an essential part of the proposed activity, the relocation shall minimize unnecessary changes in the stream flow characteristics.

#### Sec. 31.5-13 Responsibility for Maintenance

During the development of a site, the person conducting the land-disturbing activity shall install and maintain all temporary and permanent erosion and sedimentation control measures as required by the approved plan or any provision of this Ordinance, the Act, or any order adopted pursuant to this ordinance or the Act. After site development, the landowner or person in possession or control of the land shall install and/or maintain all necessary permanent erosion

and sediment control measures, except those measures installed within a road or street right-of-way or easement accepted for maintenance by a governmental agency.

Sec. 31.5-14 Additional Measures

Whenever the City determines that significant erosion and sedimentation is occurring as a result of land-disturbing activity, despite application and maintenance of protective practices, the person conducting the land-disturbing activity will be required to and shall take additional protective action.

Sec. 31.5-15 Existing Uncovered Areas

- (a) All uncovered areas existing on the effective date of this ordinance which resulted from land-disturbing activity, exceed one acre, are subject to continued accelerated erosion, and are causing off-site damage from sedimentation, shall be provided with a ground cover or other protective measures, structures, or devices sufficient to restrain accelerated erosion and control off-site sedimentation.
- (b) The City shall serve upon the landowner or other person in possession or control of the land a written notice to comply with the Act, this ordinance, a rule or order adopted or issued pursuant to the Act by the Commission or by the City. The notice to comply shall be sent by registered or certified mail, return receipt requested, or other means provided in GS 1A-1, Rule 4. The notice will set forth the measures needed to comply and will state the time within which such measures must be completed. In determining the measures required and the time allowed for compliance, the authority serving notice shall take into consideration the economic feasibility, technology, and quantity of work required, and shall set reasonable and attainable time limits of compliance.
- (c) The City reserves the right to require preparation and approval of a Plan in any instance where extensive control measures are required.
- (d) This rule shall not require ground cover on cleared land forming the future basin of a planned reservoir.

Sec. 31.5-16 Fees

- (a) The City may establish a fee schedule for the review and approval of Plans.
- (b) In establishing the fee schedule, the City shall consider the administrative and personnel costs incurred for reviewing the Plans and for related compliance activities.

Sec. 31.5-17 Plan Appeals

- (a) Except as provided in Sec. 31.5-17(b) of this ordinance, the appeal of a disapproval or approval with modifications of a Soil Erosion and Sedimentation Control Plan shall be governed by the following provisions:
- (1) The disapproval or modification of any proposed Plan by the City shall entitle the person submitting the Plan to a public hearing if such person submits written demand for a hearing within 15 days after receipt of written notice of disapproval or modifications.
  - (2) A hearing held pursuant to this section shall be conducted by the City Council within 45 days after the date of the appeal or request for a hearing.
  - (3) The City Council will render its final decision on any Plan within 20 days of the date of the hearing.
  - (4) If the City Council upholds the disapproval or modification of a proposed Plan following the hearing, the person submitting the Plan shall then be entitled to appeal the City's decision to the Commission as provided in G.S. 113A-61(c) and 15A NCAC 4B .0118(d)
- (b) In the event that a Plan is disapproved pursuant to Sec. 31.5-6(i) of this ordinance, the applicant may appeal the City's disapproval of the Plan directly to the Commission.

Sec. 31.5-18 Inspections and Investigations

- (a) Inspection. Agents, officials, or other qualified persons authorized by the City will periodically inspect land-disturbing activities to ensure compliance with the Act, this ordinance, or rules or orders adopted or issued pursuant to this ordinance, and to determine whether the measures required in the Plan are effective in controlling erosion and sedimentation resulting from land-disturbing activity. Notice of the right to inspect shall be included in the certificate of approval of each Plan.
- (b) Willful Resistance, Delay or Obstruction. No person shall willfully resist, delay, or obstruct an authorized representative, employee, or agent of the City while that person is inspecting or attempting to inspect a land-disturbing activity under this section.
- (c) Notice of Violation. If the City determines that a person engaged in land-disturbing activity has failed to comply with the Act, this ordinance, or rules, or

orders adopted or issued pursuant to this ordinance, a notice of violation shall be served upon that person. The notice may be served by any means authorized under GS 1A-1, Rule 4. The notice shall specify a date by which the person must comply with the Act, or this ordinance, or rules, or orders adopted pursuant to this ordinance, and inform the person of the actions that need to be taken to comply with the Act, this ordinance, or rules or orders adopted pursuant to this ordinance. Any person who fails to comply within the time specified is subject to additional civil and criminal penalties for a continuing violation as provided in G.S. 113A-64 and this ordinance.

- (d) Investigation. The City shall have the power to conduct such investigation as it may reasonably deem necessary to carry out its duties as prescribed in this ordinance, and for this purpose to enter at reasonable times upon any property, public or private, for the purpose of investigating and inspecting the sites of any land-disturbing activity.
- (e) Statements and Reports. The City shall also have the power to require written statements, or filing of reports under oath, with respect to pertinent questions relating to land-disturbing activity.

Sec. 31.5-19 Penalties

(a) Civil Penalties

- (1) Civil Penalty for a Violation. Any person who violates any of the provisions of this ordinance, or rule or order adopted or issued pursuant to this ordinance, or who initiates or continues a land-disturbing activity for which a Plan is required except in accordance with the terms, conditions, and provisions of an approved Plan, is subject to a civil penalty. The maximum civil penalty amount that the City Council may assess per violation is five thousand dollars (\$5,000.00). A civil penalty may be assessed from the date of the violation. Each day of a continuing violation shall constitute a separate violation.
- (2) Civil Penalty Assessment Factors. The City Council of the City shall determine the amount of the civil penalty based upon the following factors:
  - (i) the degree and extent of harm caused by the violation,
  - (ii) the cost of rectifying the damage,
  - (iii) the amount of money the violator saved by noncompliance,
  - (iv) whether the violation was committed willfully, and
  - (v) the prior record of the violator in complying or failing to comply with this ordinance.
- (3) Notice of Civil Penalty Assessment. The City Council of the City shall



provide notice of the civil penalty amount and basis for assessment to the person assessed. The notice of assessment shall be served by any means authorized under G.S. 1A-1, Rule 4, and shall direct the violator to either pay the assessment or contest the assessment, within 30 days after receipt of the notice of assessment, by written demand for a hearing.

- (4) Hearing. A hearing on a civil penalty shall be conducted by the City Council within 45 days after the date of the written demand for the hearing.
  - (5) Final Decision. The City Council shall render its final decision on the civil penalty within 20 days of the receipt of the recommendation from the agency.
  - (6) Appeal of Final Decision. Appeal from the final decision of the City Council shall be to the Superior Court of the county where the violation occurred.
  - (7) Collection. If payment is not received within 30 days after it is due, the City may institute a civil action to recover the amount of the assessment. The civil action may be brought in the Superior Court of the county where the violation occurred. Such civil actions must be filed within three (3) years of the date the assessment was due. An assessment that is not contested is due when the violator is served with a notice of assessment. An assessment that is contested is due at the conclusion of the administrative and judicial review of the assessment.
  - (8) Credit of Civil Penalties. Civil penalties collected pursuant to this ordinance shall be credited to the general fund of the City as nontax revenue.
- (b) Criminal Penalties. Any person who knowingly or willfully violates any provision of this ordinance, or rule or order adopted or issued pursuant to this ordinance, or who knowingly or willfully initiates or continues a land-disturbing activity for which a Plan is required except in accordance with the terms, conditions, and provisions of an approved Plan, shall be guilty of a Class 2 misdemeanor which may included a fine not to exceed \$5,000 as provided in G.S. § 113A-64.

Sec. 31.5-20 Injunctive Relief

- (a) Violation of Local Program. Whenever the City Council has reasonable cause to believe that any person is violating or threatening to violate any ordinance, rule, regulation or order adopted or issued by the City, or any term, condition, or provision of an approved Plan, it may, either before or after the institution of any

other action or proceeding authorized by this ordinance, institute a civil action in the name of the City for injunctive relief to restrain the violation or threatened violation. The action shall be brought in the superior court of the county in which the violation is occurring or is threatened.

- (b) Abatement of Violation. Upon determination by a court that an alleged violation is occurring or is threatened, the court shall enter any order or judgment that is necessary to abate the violation, to ensure that restoration is performed, or to prevent the threatened violation. The institution of an action for injunctive relief under this section shall not relieve any party to the proceedings from any civil or criminal penalty prescribed for violations of this ordinance.

Sec. 31.5-21 Restoration After Non-Compliance

The City may require a person who engaged in a land-disturbing activity and failed to retain sediment generated by the activity, as required by G.S. 113A-57 (3), to restore the waters and land affected by the failure so as to minimize the detrimental effects of the resulting pollution by sedimentation. This authority is in addition to any other civil or criminal penalty or injunctive relief authorized under this ordinance.

Sec. 31.5-22 Severability

If any section or section or sections of this ordinance is/are held to be invalid or unenforceable, all other sections shall nevertheless continue in full force and effect.

Sec. 31.5-23 Effective Date

This ordinance becomes effective on July 18, 2006.

**Q. Water Supply Watershed Protection Regulations: (Amendment adopted March 5, 1996)**

1. Purpose

In order to protect the watershed areas and water supply lakes for the City of Burlington and to provide for a safe and potable water supply for present and future generations of Burlington residents, this subsection "Q" is hereby adopted as the Watershed Protection Regulations (hereinafter referred to as "the Regulations") of the City of Burlington.

2. Definitions

For the purpose of these Watershed Regulations in Section 32.2:Q, the following definitions shall apply:

Balance of Watershed (BOW) – The entire land area contributing surface drainage to a specific point, the public water supply intake, minus the watershed critical area.

Buffer – An area of natural or planted vegetation through which stormwater runoff flows in a diffuse manner so that the runoff does not become channelized and which provides for infiltration of the runoff and filtering of pollutants. The buffer is measured landward from the normal pool elevation of impounded structures and from the bank of each side of streams or rivers.

Built-Upon Area – A surface area composed of any material that impedes or prevents natural infiltration of water into the soil. Built-upon areas shall include that portion of a development project that is covered by impervious or partially impervious cover including buildings, pavement, gravel areas (e.g., roads, parking lots, paths), decks, swimming pools, tennis courts, etc.

Chief Building Inspector – An official or designated person of the City of Burlington responsible for administration and enforcement of these Regulations.

Cluster Development – The grouping of buildings in any order to conserve land resources and provide innovation in the design of the project including minimizing stormwater runoff impacts. This term includes non-residential development as well as single-family residential and multifamily developments. For the purpose of this definition, Planned Unit Developments and mixed-use developments are considered as cluster development.

Critical Area - See Watershed Critical Area.

Development – Any land-disturbing activity that adds to or changes the amount of impervious or partially impervious cover on a land area or that otherwise decreases the infiltration of precipitation into the soil.

Existing Development – Those projects that are built or those projects that at a minimum have established a vested right under North Carolina zoning law as of the effective date of this overlay district, based on at least one of the following criteria:

- a. Substantial expenditures of resources (time, labor, money) based on a good faith reliance upon having received a valid local government approval to proceed with the project; or,
- b. having an outstanding valid building permit as authorized by the North Carolina General Statutes (G.S. 153A-344.1 and G.S. 160A-385.1); or,
- c. having an approved site specific site or phased development plan as authorized by the North Carolina General Statutes (G.S. 153A-344.1 and G.S. 160A-385.1).

Existing Lot (Lot of Record) – A lot or tract of land that is part of a subdivision, a plat that has been recorded in the office of the Alamance County Register of Deeds prior to the adoption of this ordinance, or a lot on tract of land described by metes and bounds, the description of which has been so recorded prior to the adoption of this overlay district.

Hazardous Production Material (HPM) – A solid, liquid or gas that has a degree rating in health, flammability or reactivity of Class 3 or 4 as ranked by NFIPA 704 and that is used directly in research, laboratory or production processes that have as their end product materials that are not hazardous, as defined in the North Carolina State Building Code, Volume V – Fire Prevention.

Highly Toxic Material (HTM) – A material that produces a lethal dose or lethal concentration within those categories as defined by the Code of Federal Regulations (CFR): Title 29, CFR 1910.1200, as defined in the North Carolina State Building Code, Volume V – Fire Prevention.

Impervious Surface – Any material that reduces and prevents absorption of stormwater into previously undeveloped land.

Landfill – A facility for the disposal of solid waste on land in a sanitary manner in accordance with Chapter 130A, Article 9, of the North Carolina General Statutes. For the purpose of this overlay district, this term does not include composting facilities.

Major Variance – A variance from the minimum statewide watershed protection rules that results in the relaxation by a factor of greater than 10 percent of any of the management requirements. Major variances shall be approved by the North Carolina Environmental Management Commission after initial review and recommendation from the City of Burlington. The Planning Department shall notify in writing each local government having jurisdiction in the watershed and the entity using the water supply for consumption.

Minor Variance – A variance from the minimum statewide watershed protection rules that results in a relaxation by a factor of up to 10 percent of any management requirements.

Non-Residential Development – All development other than residential development.

Perennial Streams – Streams located on United States Geological Survey (USCG) maps shown as solid blue lines.

Residential Development – Buildings for residence such as attached and detached single-family dwellings, apartment complexes, condominiums, townhouses and cottages and their associated outbuildings such as garages, storage buildings and gazebos and customary home occupations.

Residuals – Any solid or semi-solid waste generated from a wastewater treatment plant, water treatment plant or air pollution control facility permitted under the authority of the Environmental Management Commission.

Solid Waste Management Facility – Land, personnel and equipment used in the management of solid waste as defined in Title 15A of the North Carolina Administrative Code.

Stormwater Program Manager - An official or designated person of the City of Burlington responsible for the compliance and maintenance of all stormwater regulations. **(Amendment adopted June 17, 2003)**

Structure – Anything constructed or erected including but not limited to buildings that requires location on the land or attachment to something having permanent location on the land.

Toxic Substance – Any substance or combination of substances (including disease-causing agents), that after discharge and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, has the potential to cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions or suppression in reproduction or growth) or physical deformities in such organisms or their off-spring or other adverse health effects.

Vested Right – A right pursuant to North Carolina General Statutes 153A-344.1 and 160A-385.1 to undertake and complete the development and use of property under the terms and conditions of an approved site-specific development plan.

Water Dependent Structure – Any structure for which the use requires access to or proximity to or citing within surface waters to fulfill its basic purpose, such as boat ramps, boat houses, docks and bulkheads. Ancillary facilities such as restaurants, outlets for boat supplies, parking lots and commercial boat storage areas are not water-dependent structures.

Watershed – The entire land area contributing surface drainage to a specific point (e.g., the water supply intake).

Watershed Critical Area (WCA) – The area adjacent to a water supply intake or reservoir where risk associated with pollution is greater than from the remaining portions of the watershed. The critical area is defined as extending one mile from the normal pool elevation of a water supply reservoir or to the ridge line of the watershed (whichever comes first); or one mile upstream from the intake located directly in the stream or river (run of the river), or the ridge line of the watershed (whichever comes first).

Watershed Management Plan – A plan that documents industries that are located within watershed boundaries that use, store or manufacture chemicals that could potentially pose a threat to water quality and the response procedures for handling spills and/or discharges.

### 3. Authority and General Regulations

- a. Authority and Enactment – The Legislature of the State of North Carolina has in Chapter 160A, Article 19, Section 381 (Planning and Regulation of Development, Zoning) directed local government units to adopt regulations designed to promote the public health, safety, and general welfare of the community. The City Council for the City of Burlington does hereby ordain and enact into law that City Ordinance Section 32.2:Q is hereby repealed and deleted in its entirety and a new Section 32.2:Q is written to read as follows:

b. Jurisdiction – The provisions of these Regulations shall apply to the areas designated as a Public Water Supply Watershed by the N.C. Environmental Management Commission and shall be defined and established on the map entitled “Watershed Protection Map of Burlington, North Carolina” (“the Watershed Map”), that is adopted simultaneously herewith. The Watershed Map and all explanatory matter contained thereon accompany and are hereby made a part of these Regulations. Watershed Critical Area boundaries are delineated on the following Alamance County Tax Maps: 2-1, 2-2, 2-3, 2-3A, 2-9, 3-22F, 3-23, 3-23A, 3-23B. These Regulations shall be permanently kept on file in the office of the City Clerk for the City of Burlington.

c. Exceptions to Applicability

- (1) Nothing contained herein shall repeal, modify or amend any Federal or State law or regulation or any ordinance or regulation pertaining thereto except any ordinance that these Regulations specifically replace.
- (2) It is not intended that these Regulations interfere with any easement, covenants or other agreements between parties. However, if the provisions of these Regulations impose greater restrictions or higher standards for the use of a building or land, then the provisions of these Regulations shall control.
- (3) Existing development, as defined in these Regulations, is regulated under the provisions as stated in 4.a.(3)(m).  
**(Amendment adopted June 17, 2003)**
- (4) An existing lot owned by an individual prior to the effective date of these Regulations, regardless of whether or not a vested right has been established, may be developed for single-family residential purposes without being subject to the restrictions of these Regulations.

d. Repeal of Existing Watershed Regulations – These Regulations in part carry forward by re-enactment some of the Watershed Protection Regulations of the County of Alamance, North Carolina, adopted by the Board of County Commissioners on September 20, 1993, and it is not the intention to repeal but rather to re-enact and continue in force such existing provisions so that all rights and liabilities that have accrued thereunder are preserved and may be enforced. All provisions of the Watershed Regulations that are not re-enacted herein are hereby repealed. All suits at law or in equity and/or all prosecutions resulting from the violation of any regulatory provisions heretofore in effect that are now pending in any court of this State or of the United States, shall not be abated or abandoned by reason of the adoption of these Regulations, but shall be prosecuted to their finality the same as if these Regulations had not been adopted; and any and all violations of the existing Watershed Protection Regulations, prosecutions for which have not yet been instituted, may be hereafter filed and prosecuted; and nothing in these Regulations shall be so construed as to abandon, abate or dismiss any litigation or prosecution now pending and/or that may heretofore have been instituted or prosecuted.

e. Remedies

- (1) If any subdivision, development and/or land use is found to be in violation of these Regulations, the City Manager may initiate an action in the name of the City of Burlington, in addition to all other remedies available either at law or in equity, institute an action or proceedings to restrain or correct the violation; an action to prevent occupancy of the building, structure, or land; or an action to prevent any illegal act, conduct, business or use in or about the premises. No activity, situation, structure or land use shall be allowed within the watershed area that poses a threat to water quality and the public health, safety and welfare. Such conditions may arise from inadequate on-site sewage systems that utilize ground absorption; inadequate sedimentation and erosion control measures; the improper storage and disposal of junk, trash or other refuse within a buffer area; the absence or improper implementation of a spill containment plan for toxic and hazardous materials; the improper management of stormwater runoff or any other situation found to pose a threat to water quality. All remedies as outlined in Section 32.18 of this ordinance are available to address public health violations as specified above. In addition to all local remedies, the North Carolina Environmental Management Commission may assess civil penalties in accordance with North Carolina General Statute 143-215.6 (A).



(2) If the Chief Building Inspector of the City of Burlington finds that any of the provisions of these Regulations are being violated, the administrator shall notify in writing the person responsible for such violations, indicating the nature of the violations and ordering the action necessary to correct it. He shall order discontinuance of the illegal use of land, buildings or structures; removal of illegal buildings or structures or of additions, alterations or structural changes thereto; discontinuance of any illegal work being done; or shall take any action authorized by these Regulations to ensure compliance with or to prevent violation of its provisions. If a ruling of the Chief Building Inspector is questioned, the aggrieved party or parties may appeal such a ruling to the Board of Adjustment within 30 days of such ruling.

- f. Severability – Should any section or provision of these Regulations be declared invalid or unconstitutional by any court or competent jurisdiction, the declaration shall not affect the validity of these Regulations as a whole or any part thereof that is not specifically declared to be invalid or unconstitutional.
- g. Effective Date – These Regulations shall take effect and be in force on March 5, 1996.

4. Development Regulations

- a. Watershed Areas Described and Identified – For purposes of these Regulations, watersheds in the City of Burlington, including the area within the extraterritorial jurisdiction (ETJ), are identified as well as a WS-IV-CA Watershed Critical Area (WCA). The Great Alamance Creek Watershed is identified as a WCA. The WCA is the area extending either one mile from the normal pool elevation of a water supply reservoir or to the ridge line of the watershed (whichever comes first); or one mile up stream from the intake located directly in the stream or river (run of the river), or the ridge line of the watershed (whichever comes first). The Balance of Watershed (BOW) is defined as the entire land area contributing surface drainage to a specific point, the public water supply intake, minus the Watershed Critical Area. In order to maintain a predominantly undeveloped land use density pattern in the Watershed Critical Area, single-family residential uses shall be allowed at a maximum of one dwelling unit per two acres (one dwelling unit/two acres). All other residential and non-residential development shall be allowed at a maximum six percent built-upon area. A high-density option exists when water and sewer services are available. **(Amendment adopted September 2, 2003)**

(1) Allowed Uses:

- Agriculture, subject to the provisions of the Food Security Act of 1985 and the Food, Agricultural, Conservation and Trade Act of 1990. Agricultural activities conducted after January 1, 1993, shall maintain a minimum 10-foot vegetative buffer or equivalent control as determined by the Soil and Water Conservation Commission along all perennial waters indicated on the most recent versions of the United States Geological Survey (USGS) 1:24,000 (7.5 minute) scale topo maps or as determined by local government studies. Animal operations deemed permitted under state law 15A NCAC 211.02171 as recommended by the Soil and Water Conservation Commission.
- Single-family residential development.
- Multifamily residential development.
- Non-residential development:
  - Institutional
  - Educational
  - Religious
  - Office
  - Recreational

(2) Prohibited Uses:

- Sites for land application of residuals or petroleum contaminated soils.
- Landfills, incinerators and waste processors.
- Commercial use that sells, stores or distributes motor fuel or other hazardous materials.
- Solid waste management facilities.
- Airports.
- Industry.
- Metal salvage facilities including junkyards.
- Manufacturing, use, or storage of any hazardous production material (HPM) or highly toxic material (HTM) or any material or substance determined by the City Council of the City of Burlington to be injurious to the health, safety or welfare of the City's residents due to the explosive, flammable or toxic characteristics of the materials.
- Package treatment plants and community sewage facilities, except for subsurface septic tanks. These facilities are allowed only if the Alamance County Health Department determines that a public health problem can be alleviated by constructing such facilities. Note: This provision does not prohibit the extension of municipal sewer lines (public) into the watershed critical area.
- Underground fuel or chemical storage tanks.

(3) Density and Built-Upon Limits: (Amendment adopted June 17, 2003)

<b>Watershed</b>	<b>Low Density Option</b>	<b>High Density Option*</b>
<b>Lake Mackintosh</b>	<b>1 DU/2 acres or 6%</b>	<b>1.5 DU/1 acre or 24%</b>
<b>* Requires public water, sewer and engineered storm water controls for 1" rainfall</b>		

**Notes: DU = Dwelling unit(s); percentage (%) refers to built-upon area of the lot, parcel or tract.**

(a) Single-Family Residential -  
**Low-Density Option:** Development shall not exceed one dwelling unit of single-family detached residential development per two acres (1 dwelling unit/2 acres) on a project-by-project basis. No residential lot shall be less than two acres (80,000 square feet excluding roadway right-of-way) except within an approved, planned cluster development.

**High-Density Option:** Development shall not be allowed to exceed one and half dwelling units of single-family detached residential development per one acre (1.5 dwelling unit/1 acre) on a project-by-project basis. In order to allow the high-density option to be utilized, the following requirements must be met: **(Amendment adopted June 17, 2003)**

- Requires public water
- Requires public sewer
- Requires engineered stormwater controls

Minimum Lot Size - Within 400 feet of the normal pool level, a minimum lot size of one acre is required under the high-density option. **(Amendment adopted June 17, 2003)**

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- (b) All Other Residential and Non-Residential – Development shall not exceed six percent built-upon area on a project-by-project basis under a low-density option or 24 percent built-upon area under the high-density option. For the purpose of calculating a built-upon area, total project area shall include total acreage in the tract on which the project is to be developed. **(Amendment adopted June 17, 2003)**
- (c) Existing Development – Existing development is regulated under the provisions as stated in 4.a.(3)(m). **(Amendment adopted June 17, 2003)**
- (d) Above-Ground Storage Tanks: A spill containment plan is required for all new above-ground storage tanks with accumulative capacity of over 250 gallons.
- (e) Runoff Control: Runoff control is required for development using the high-density option. The runoff control shall be by use of a wet detention pond or other best management practice (i.e., retention pond, natural infiltration area, filter basin, etc.) meeting the performance standards of control of the first one inch of rainfall and removal of 85 percent total suspended solids (TSS) and meeting the guidelines in the North Carolina Department of Environment and Natural Resources (NCDENR) Stormwater Best Management Practices Guide. A North Carolina registered professional with qualifications appropriate for the type of system required shall design all stormwater control structures. These professionals are defined as professional engineers, landscape architect, to the extent that the North Carolina General Statutes, Chapter 89A, allow and land surveyors, to the extent that the design represents incidental drainage within a subdivision as provided in N.C.G.S. 89 (C)-3(7). **(Amendment adopted June 17, 2003)**
- (f) Maintenance Responsibilities: **(Amendment adopted June 17, 2003)**
  - 1) When runoff control structures serve more than one lot, a homeowners' association or binding contract for the purpose of maintenance shall be required.

## D-231

- 2) Maintenance of runoff control structures shall be performed at such time as the designated sediment storage volume of the structure has been lost to sediment or a part of the installation is not functioning as originally designed. The Enforcement Officer shall have the responsibility to inspect runoff control structures annually, to record the results on forms approved or supplied by the North Carolina Division of Water Quality and to notify the responsible property owner of homeowners' association when maintenance or repairs are required.

All required repairs and maintenance shall be performed within 90 days after such notice. In case of failure by the responsible party to perform the required maintenance or repairs within the stated period, the jurisdiction may perform such maintenance or repairs and recover all costs plus an additional 10 percent from the property owner or homeowners' association.

- (g) Stream Buffer – A 50-foot stream buffer measured from each bank is required along all perennial streams when utilizing the low-density option. A 100-foot stream buffer measured from each bank is required along all perennial streams when utilizing the high-density option. **(Amendment adopted September 2, 2003)**
- (h) Lake Buffer – A 100-foot wide natural buffer shall be maintained around all water supply reservoirs, measured from the normal pool elevation outward. Desirable artificial streambank or shoreline stabilization is permitted. No new development is allowed in the buffer except for water dependent structures and public projects such as road crossings and greenways where no practical alternative exists. These activities should minimize built-upon surface area, direct runoff away from the surface waters and maximize the utilization of North Carolina Department of Environment and Natural Resources (NCDENR) Stormwater Best Management Practices.
- (i) Cluster Development – Clustering of development is encouraged and allowed in the watershed under the following conditions:

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- 1) Minimum lot sizes are not applicable to single-family cluster development projects; however, the total number of lots shall not exceed the number of lots allowed for single-family detached development in 4.a.(3)(a) above. Density or built-upon areas for the project shall not exceed that allowed for the critical area. **(Amendment adopted June 17, 2003)**
  - 2) All built-upon areas shall be designed and located to minimize runoff impact to the receiving waters and minimize concentrated stormwater flow.
  - 3) The remainder of the tract shall remain in a vegetated or natural state. The title to the open space area shall be conveyed to an incorporated homeowners' association for management; to a local government for preservation as a park or open space; or to a conservation organization for preservation in a permanent easement. Where a property association is not incorporated, a maintenance agreement shall be filed with the property deeds.
- (j) Site Plan Requirements – Site plans are required for all development, including single-family residences. Site plans should be submitted to the Chief Building Inspector or Planning Department of the City of Burlington for approval. A permit will not be issued until the site plan is approved. Site plans for development within the Watershed Critical Area shall meet the following requirements:
- 1) Five copies of site plans shall be submitted on 18" x 24" sheets.
  - 2) Plan shall be to scale no smaller than 1" = 100'.
  - 3) Plan shall show the following:
    - Title block (development name, owner/developer, township, scale and tax map number).
    - Property lines.

- North arrow.
- Vicinity map.
- Legend.
- Location of existing and proposed structures and all other impervious improvements.
- Site data (total acres, total impervious area, total number of lots, etc.)
- Easements – location width and purpose.
- Location of ponds, lakes and perennial streams.
- Location and elevation of 100-year flood plain and marginal land.
- Location of septic tank and drainage field or public utilities.
- Location of well(s) and public utilities.
- Sedimentation and erosion control measures.
- Representative topography (City of Burlington topographic maps).
- Front, side and rear yard requirements.
- Surveyor or engineer’s seal.
- Lake and stream buffers.
- Date.

(k) Rules Governing the Interpretation of Watershed Area Boundaries – Where uncertainty exists as to the boundaries of the watershed areas, as shown on the Watershed Map, the following rules shall apply:

- 1) Where area boundaries are indicated as approximately following either street, alley, railroad or highway lines or centerlines thereof, such lines shall be construed to be said boundaries.
- 2) Where area boundaries are indicated as approximately following lot lines, such lot lines shall be construed to be said boundaries. However, a surveyed plat prepared by a registered land surveyor may be submitted to the City as evidence that one or more properties along these boundaries do not lie within the watershed area.

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- 3) Where the watershed area boundaries lie at a scaled distance more than 25 feet from any parallel lot line, the location of watershed area boundaries shall be determined by use of the scale appearing on the Watershed Map.
- 4) Where the watershed area boundaries lie at a scaled distance less than 25 feet from any parallel lot line, the location of watershed area boundaries shall be construed to be the lot line.

### (l) Application of Regulations

- 1) No building or land shall hereafter be used and no development shall take place except in conformity with the Regulations herein specified for the watershed area in which it is located.
- 2) No area required for the purpose of complying with the provisions of these Regulations shall be included in the area determining compliance required for another building.
- 3) Every residential building hereafter erected, moved or structurally altered shall be located on a lot that conforms to the Regulations herein specified, except as permitted in 4.a.(3)(m).  
**(Amendment adopted June 17, 2003)**
- 4) If a use or class of use is not specifically indicated as being allowed in a watershed area, such use or class of use is prohibited.

### (m) Existing Development – Any existing development, as defined in these Regulations, may be continued and maintained subject to the provisions provided herein:

- 1) Expansion of Existing Development – Expansions to structures classified as existing development must meet the requirements of this ordinance. The total built-upon area added to a lot after the effective date of these Regulations may not exceed the built-upon requirements of the Watershed Critical Area (WCA) zone. The built-upon area of the existing development is not required to be included in the built-upon area calculations.



## D-235

- 2) Reconstruction of Buildings or Built-Upon Areas – Any existing building or built-upon area not in conformance with the restrictions of these Regulations that have been damaged or removed may be repaired and/or reconstructed in accordance with the provisions of Section 32.14 of this ordinance. Additionally, the total amount of space devoted to a built-upon area may not be increased unless the additional built-upon area meets the expansion requirements of 4.a.(3)(m) of these Regulations. **(Amendment adopted June 17, 2003)**
  - 3) Uses of Land – This category consists of uses existing at the time of adoption of these Regulations where such use of the land is not permitted to be established hereafter in the watershed area in which it is located. Such uses may be continued except as regulated in Section 32.14:E of this ordinance.
  - 4) Vacant Lots – This category consists of vacant lots for which plats or deeds have been recorded in accordance with the City of Burlington Subdivision Regulations in the office of the Alamance County Register of Deeds. A lot may be used for any of the uses allowed in the watershed area in which it is located.
- (n) Watershed Protection Permit
- 1) No building or built-upon area shall be erected, moved, enlarged or structurally altered, nor shall any building permit be issued nor shall any change in the use of any building or land be made until a Watershed Protection Permit has been issued by the Chief Building Inspector or Code Enforcement Officer.
  - 2) No Watershed Protection Permit shall be issued except in conformity with the provisions of these Regulations.

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- 3) Watershed Protection Permit applications shall be filed with the Chief Building Inspector. The application shall include a completed application form and supporting documentation.
  - 4) Prior to the issuance of a Watershed Protection Permit, the Chief Building Inspector may consult with qualified personnel for assistance to determine if the application meets the requirements of these Regulations.
  - 5) A Watershed Protection Permit shall expire if a building permit or Watershed Occupancy Permit for such use is not obtained by the applicant within 12 months from the date of issuance.
- (o) Building Permit Required – No permit required under the North Carolina State Building Code shall be issued for any activity until a Watershed Protection Permit is issued.
- (p) Watershed Protection Occupancy Permit
- 1) The Chief Building Inspector in the Inspections Department shall issue a Watershed Protection Occupancy Permit certifying that all requirements of these Regulations have been met prior to the occupancy or use of a building hereafter erected, altered or moved and/or prior to the change of use of any building or land.
  - 2) A Watershed Protection Occupancy Permit, either for the whole or part of a building, shall be applied for coincident with the application for a Watershed Protection Permit and shall be issued or denied within 10 days after construction is approved by the Inspections Department.
  - 3) When a change in the use of land or use of an existing building occurs, the Chief Building Inspector shall issue a Watershed Protection Occupancy Permit certifying that all requirements of these Regulations have been met coincident with the Watershed Protection Permit.

- 4) No building or structure that has been erected, moved, or structurally altered may be occupied until the Chief Building Inspector in the Inspections Department has approved and issued a Watershed Protection Occupancy Permit.
- 5) If the Watershed Protection Occupancy Permit is denied, the Chief Building Inspector in the Inspections Department shall notify the applicant in writing within 30 days stating the reasons for denial.

## 5. Administration

- a. Chief Building Inspector, Planning Department and Duties Thereof – It shall be the duty of the Chief Building Inspector to administer and enforce the provisions of these Regulations as follows:
  - (1) The Chief Building Inspector shall issue Watershed Protection Permits and Watershed Protection Occupancy Permits as prescribed herein. A record of all permits shall be kept on file and shall be available for public inspection during regular office hours.
  - (2) The Planning Department shall keep records of all amendments to the local Water Supply Watershed Protection Regulations and shall provide copies of all amendments upon adoption to the Water Quality Section of the Division of Environmental Management.
  - (3) The Chief Building Inspector is granted the authority to administer and enforce the provisions of these Regulations, exercising in the fulfillment of his responsibility the full police power of the City of Burlington. The Chief Building Inspector, or his duly authorized representative, may enter any building, structure or premises as provided by law to perform any duty imposed upon him by these Regulations.
  - (4) The Chief Building Inspector shall keep a record of variances to the local Water Supply Watershed Protection Regulations. This record shall be submitted for each calendar year to the Water Quality Section of the Division of Environmental Management on or before January 1<sup>st</sup> of the following year.

## **APPENDIX B - FLOOD DAMAGE PREVENTION ORDINANCE <sup>[114]</sup>**

<sup>(114)</sup> **Editor's note**— Appendix B is derived from Ord. No. 06-38, enacted August 15, 2006, such ordinance being treated as a replacement of former app. B, arts. 1—6, which pertained to the National Flood Insurance Flood Damage Prevention Ordinance. For derivation of former app. B, please see the Code Comparative Table. Words appearing in brackets [] have been added by the editor for clarity; obvious misspellings have been corrected without comment. Amendments to Ord. No. 07-25 will be indicated by history notes in parentheses following the affected sections. Additionally, a system of numbering and lettering to distinguish articles, sections and subsections has been employed at the editor's discretion. It is the editor's intention to match as closely as possible the style of the previous appendix.

### **Non-Coastal Regular Phase**

ARTICLE 1. - STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE AND OBJECTIVES  
ARTICLE 2. - DEFINITIONS.  
ARTICLE 3. - GENERAL PROVISIONS  
ARTICLE 4. - ADMINISTRATION  
ARTICLE 5. - PROVISIONS FOR FLOOD HAZARD REDUCTION.  
ARTICLE 6. - LEGAL STATUS PROVISIONS

## **ARTICLE 1. - STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE AND OBJECTIVES**

[Section A. - Statutory authorization.](#)

[Section B. - Findings of fact.](#)

[Section C. - Statement of purpose.](#)

[Section D. - Objectives.](#)

### **Section A. - Statutory authorization.**

Municipal: The Legislature of the State of North Carolina has in Part 6, Article 21 of Chapter 143; Parts 3, 5, and 8 of Article 19 of Chapter 160A; and Article 8 of Chapter 160A of the North Carolina General Statutes, delegated to local governmental units the responsibility to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the City of Burlington, North Carolina, does ordain as follows:

### **Section B. - Findings of fact.**

The flood prone areas within the jurisdiction of the City of Burlington are subject to periodic inundation

which results in loss of life, property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures of flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities and by the occupancy in flood prone areas of uses vulnerable to floods or other hazards.

**Section C. - Statement of purpose.**

It is the purpose of this article to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions within flood prone areas by provisions designed to:

- (1) Restrict or prohibit uses that are dangerous to health, safety, and property due to water or erosion hazards or that result in damaging increases in erosion, flood heights or velocities;
- (2) Require that uses vulnerable to floods, including facilities that serve such uses, be protected against flood damage at the time of initial construction;
- (3) Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of floodwaters;
- (4) Control filling, grading, dredging, and all other development that may increase erosion or flood damage; and
- (5) Prevent or regulate the construction of flood barriers that will unnaturally divert flood waters or which may increase flood hazards to other lands.

**Section D. - Objectives.**

The objectives of this ordinance are:

- (1) To protect human life and health;
- (2) To minimize expenditure of public money for costly flood control projects;
- (3) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (4) To minimize prolonged business losses and interruptions;
- (5) To minimize damage to public facilities and utilities (i.e. water and gas mains, electric, telephone, cable and sewer lines, streets, and bridges) that are located in flood prone areas;
- (6) To help maintain a stable tax base by providing for the sound use and development of flood prone areas; and
- (7) To ensure that potential buyers are aware that property is in a Special Flood Hazard Area.

## **ARTICLE 2. - DEFINITIONS.**

Unless specifically defined below, words or phrases used in this ordinance shall be interpreted so as to give them the meaning they have in common usage and to give this ordinance its most reasonable application.

*Accessory Structure (Appurtenant Structure)* means a structure located on the same parcel of property as the principal structure and the use of which is incidental to the use of the principal structure. Garages, carports and storage sheds are common urban accessory structures. Pole barns, hay sheds and the like qualify as accessory structures on farms, and may or may not be located on the same parcel as the farm dwelling or shop building.

*Addition (to an existing building)* means an extension or increase in the floor area or height of a building or structure.

*Appeal* means a request for a review of the floodplain administrator's interpretation of any provision of this ordinance.

*Area of Shallow Flooding* means a designated Zone AO on a community's Flood Insurance Rate Map (FIRM) with base flood depths determined to be from one (1) to three (3) feet. These areas are located where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.

*Area of Special Flood Hazard.* See "Special Flood Hazard Area (SFHA)."

*Basement* means any area of the building having its floor subgrade (below ground level) on all sides.

*Base Flood* means the flood having a one (1) percent chance of being equaled or exceeded in any given year.

*Base Flood Elevation (BFE)* means a determination of the water surface elevations of the base flood as published in the Flood Insurance Study. When the BFE has not been provided in a "Special Flood Hazard Area", it may be obtained from engineering studies available from a Federal or State or other source using FEMA approved engineering methodologies. This elevation, when combined with the "Freeboard", establishes the "Regulatory Flood Protection Elevation".

*Building.* See "Structure."

*Chemical Storage Facility* means a building, portion of a building, or exterior area adjacent to a building used for the storage of any chemical or chemically reactive products.

*Development* means any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

*Disposal* means, as defined in NCGS 130A-290(a)(6), the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste into or on any land or water so that the solid waste or any constituent part of the solid waste may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.

*Elevated Building* means a non-basement building which has its lowest elevated floor raised above

ground level by foundation walls, shear walls, posts, piers, pilings, or columns.

*Encroachment* means the advance or infringement of uses, fill, excavation, buildings, structures or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

*Existing Manufactured Home Park or Manufactured Home Subdivision* means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) was completed before the original effective date of the floodplain management regulations adopted by the community.

*Flood or Flooding* means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland or tidal waters; and/or
- (2) The unusual and rapid accumulation of runoff of surface waters from any source.

*Flood Boundary and Floodway Map (FBFM)* means an official map of a community, issued by the Federal Emergency Management Agency, on which the Special Flood Hazard Areas and the floodways are delineated. This official map is a supplement to and shall be used in conjunction with the Flood Insurance Rate Map (FIRM).

*Flood Hazard Boundary Map (FHBM)* means an official map of a community, issued by the Federal Emergency Management Agency, where the boundaries of the Special Flood Hazard Areas have been defined as Zone A.

*Flood Insurance* means the insurance coverage provided under the National Flood Insurance Program.

*Flood Insurance Rate Map (FIRM)* means an official map of a community, issued by the Federal Emergency Management Agency, on which both the Special Flood Hazard Areas and the risk premium zones applicable to the community are delineated.

*Flood Insurance Study (FIS)* means an examination, evaluation, and determination of flood hazards, corresponding water surface elevations (if appropriate), flood hazard risk zones, and other flood data in a community issued by the Federal Emergency Management Agency. The Flood Insurance Study report includes Flood Insurance Rate Maps (FIRMs) and Flood Boundary and Floodway Maps (FBFMs), if published.

*Flood Prone Area.* See "Floodplain."

*Floodplain* means any land area susceptible to being inundated by water from any source.

*Floodplain Administrator* is the individual appointed to administer and enforce the floodplain management regulations.

*Floodplain Development Permit* means any type of permit that is required in conformance with the provisions of this ordinance, prior to the commencement of any development activity.

*Floodplain Management* means the operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing, where possible, natural resources in the floodplain, including, but not limited to, emergency preparedness plans, flood control works,

floodplain management regulations, and open space plans.

*Floodplain Management Regulations* means this ordinance and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances, and other applications of police power which control development in flood-prone areas. This term describes federal, state or local regulations, in any combination thereof, which provide standards for preventing and reducing flood loss and damage.

*Floodproofing* means any combination of structural and nonstructural additions, changes, or adjustments to structures, which reduce or eliminate flood damage to real estate or improved real property, water and sanitation facilities, structures, and their contents.

*Floodway* means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot.

*Flood Zone* means a geographical area shown on a Flood Hazard Boundary Map or Flood Insurance Rate Map that reflects the severity or type of flooding in the area.

*Freeboard* means the height added to the Base Flood Elevation (BFE) to account for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization on the watershed. The Base Flood Elevation plus the freeboard establishes the "Regulatory Flood Protection Elevation".

*Functionally Dependent Facility* means a facility which cannot be used for its intended purpose unless it is located in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, or ship repair. The term does not include long-term storage, manufacture, sales, or service facilities.

*Hazardous Waste Facility* means, as defined in NCGS 130A, Article 9, a facility for the collection, storage, processing, treatment, recycling, recovery, or disposal of hazardous waste.

*Highest Adjacent Grade (HAG)* means the highest natural elevation of the ground surface, prior to construction, immediately next to the proposed walls of the structure.

*Historic Structure* means any structure that is:

- (a) Listed individually in the National Register of Historic Places (a listing maintained by the US Department of Interior) or preliminarily determined by the Secretary of Interior as meeting the requirements for individual listing on the National Register;
- (b) Certified or preliminarily determined by the Secretary of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- (c) Individually listed on a local inventory of historic landmarks in communities with a "Certified Local Government (CLG) Program"; or
- (d) Certified as contributing to the historical significance of a historic district designated by a community with a "Certified Local Government (CLG) Program"



Certified Local Government (CLG) Programs are approved by the US Department of the Interior in cooperation with the North Carolina Department of Cultural Resources through the State Historic Preservation Officer as having met the requirements of the National Historic Preservation Act of 1966 as amended in 1980.

*Lowest Adjacent Grade (LAG)* means the elevation of the ground, sidewalk or patio slab immediately next to the building, or deck support, after completion of the building.

*Lowest Floor* means lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or limited storage in an area other than a basement area is not considered a building's lowest floor, provided that such an enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance.

*Manufactured Home* means a structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle".

*Manufactured Home Park or Subdivision* means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

*Market Value* means the building value, not including the land value and that of any accessory structures or other improvements on the lot. Market value may be established by independent certified appraisal; replacement cost depreciated for age of building and quality of construction (Actual Cash Value); or adjusted tax assessed values.

*Mean Sea Level* means, for purposes of this ordinance, the National Geodetic Vertical Datum (NGVD) as corrected in 1929, the North American Vertical Datum (NAVD) as corrected in 1988, or other vertical control datum used as a reference for establishing varying elevations within the floodplain, to which Base Flood Elevations (BFEs) shown on a FIRM are referenced. Refer to each FIRM panel to determine datum used.

*New Construction* means structures for which the "start of construction" commenced on or after the effective date of the original version of the community's Flood Damage Prevention Ordinance and includes any subsequent improvements to such structures.

*Non-Encroachment Area* means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot as designated in the Flood Insurance Study report.

*Post-FIRM* means construction or other development for which the "start of construction" occurred on or after the effective date of the initial Flood Insurance Rate Map for the area.

*Pre-FIRM* means construction or other development for which the "start of construction" occurred before the effective date of the initial Flood Insurance Rate Map for the area.

*Principally Above Ground* means that at least 51% of the actual cash value of the structure is above ground.

*Public Safety and/or Nuisance* means anything which is injurious to the safety or health of an entire community or neighborhood, or any considerable number of persons, or unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, or river, bay, stream, canal, or basin.

*Recreational Vehicle (RV)* means a vehicle, which is:

- (1) Built on a single chassis;
- (2) 400 square feet or less when measured at the largest horizontal projection;
- (3) Designed to be self-propelled or permanently towable by a light duty truck; and
- (4) Designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel, or seasonal use.

*Reference Level* is the top of the lowest floor for structures within Special Flood Hazard Areas designated as Zone A1-A30, AE, A, A99 or AO.

*Regulatory Flood Protection Elevation* means the "Base Flood Elevation" plus the "Freeboard". In "Special Flood Hazard Areas" where Base Flood Elevations (BFEs) have been determined, this elevation shall be the BFE plus two ( 2 ) feet of freeboard. In "Special Flood Hazard Areas" where no BFE has been established, this elevation shall be at least two ( 2 ) feet above the highest adjacent grade.

*Remedy a Violation* means to bring the structure or other development into compliance with State and community floodplain management regulations, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of the ordinance or otherwise deterring future similar violations, or reducing Federal financial exposure with regard to the structure or other development.

*Riverine* means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

*Salvage Yard* means any non-residential property used for the storage, collection, and/or recycling of any type of equipment, and including but not limited to vehicles, appliances and related machinery.

*Solid Waste Disposal Facility* means, as defined in NCGS 130A-290(a)(35), any facility involved in the disposal of solid waste.

*Solid Waste Disposal Site* means, as defined in NCGS 130A-290(a)(36), any place at which solid wastes are disposed of by incineration, sanitary landfill, or any other method.

*Special Flood Hazard Area (SFHA)* means the land in the floodplain subject to a one (1%) percent or greater chance of being flooded in any given year, as determined in Article 3, Section B of this ordinance.

*Start of Construction* includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For

a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of the building, whether or not that alteration affects the external dimensions of the building.

*Structure* means a walled and roofed building, a manufactured home, or a gas, liquid, or liquefied gas storage tank that is principally above ground.

*Substantial Damage* means damage of any origin sustained by a structure during any one-year period whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. See definition of "substantial improvement". Substantial damage also means flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.

*Substantial Improvement* means any combination of repairs, reconstruction, rehabilitation, addition, or other improvement of a structure, taking place during any one-year period for which the cost equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage", regardless of the actual repair work performed. The term does not, however, include either:

- (a) Any correction of existing violations of State or community health, sanitary, or safety code specifications which have been identified by the community code enforcement official and which are the minimum necessary to assure safe living conditions; or,
- (b) Any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure.

*Variance* is a grant of relief from the requirements of this ordinance.

*Violation* means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in Articles 4 and 5 is presumed to be in violation until such time as that documentation is provided.

*Water Surface Elevation (WSE)* means the height, in relation to mean sea level, of floods of various magnitudes and frequencies in the floodplains of riverine areas.

*Watercourse* means a lake, river, creek, stream, wash, channel or other topographic feature on or over which waters flow at least periodically. Watercourse includes specifically designated areas in which substantial flood damage may occur.

### **ARTICLE 3. - GENERAL PROVISIONS**

[Section A. - Lands to which this ordinance applies.](#)

[Section B. - Basis for establishing the Special Flood Hazard Areas.](#)

[Section C. - Establishment of Floodplain Development Permit.](#)

[Section D. - Compliance.](#)  
[Section E. - Abrogation and greater restrictions.](#)  
[Section F. - Interpretation.](#)  
[Section G. - Warning and disclaimer of liability.](#)  
[Section H. - Penalties for violation.](#)

**Section A. - Lands to which this ordinance applies.**

This ordinance shall apply to all Special Flood Hazard Areas within the jurisdiction, including the Extra-Territorial Jurisdiction (ETJ) of the City of Burlington and within the jurisdiction of any other community whose governing body agrees, by resolution, to such applicability.

**Section B. - Basis for establishing the Special Flood Hazard Areas.**

The Special Flood Hazard Areas are those identified under the Cooperating Technical State (CTS) agreement between the State of North Carolina and FEMA in its Flood Insurance Study (FIS) and its accompanying Flood Insurance Rate Maps (FIRM), for Alamance County dated September 6, 2006, which are adopted by reference and declared to be a part of this ordinance.

**Section C. - Establishment of Floodplain Development Permit.**

A Floodplain Development Permit shall be required in conformance with the provisions of this ordinance prior to the commencement of any development activities within Special Flood Hazard Areas determined in accordance with Article 3, Section B of this ordinance.

**Section D. - Compliance.**

No structure or land shall hereafter be located, extended, converted, altered, or developed in any way without full compliance with the terms of this ordinance and other applicable regulations.

**Section E. - Abrogation and greater restrictions.**

This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

**Section F. - Interpretation.**

In the interpretation and application of this ordinance, all provisions shall be:

- (1) Considered as minimum requirements;
- (2) Liberally construed in favor of the governing body; and
- (3) Deemed neither to limit nor repeal any other powers granted under State statutes.

**Section G. - Warning and disclaimer of liability.**

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur. Actual flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the Special Flood Hazard Areas or uses permitted within such areas will be free from

flooding or flood damages. This ordinance shall not create liability on the part of the City of Burlington or by any officer or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

**Section H. - Penalties for violation.**

Any person who shall fail to comply with this ordinance and with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not exceeding five hundred dollars (\$500) as provided by North Carolina General Statutes, Section 14-4. Additionally, any violation of this section shall subject violators to a civil penalty in the amount of five hundred dollars (\$500) per day. Violators shall pay the penalty to the City Tax Collector's office within ten (10) days of receipt. The failure of such violators to pay the civil penalty within the specified time shall subject such violators to a civil action to collect all penalties and costs for said violation, and any civil penalty not timely paid shall carry an additional late payment penalty of one hundred dollars (\$100). Continuing violations shall subject violators to separate, distinct and successive civil penalties.

**ARTICLE 4. - ADMINISTRATION**

[Section A. - Designation of Floodplain Administrator.](#)

[Section B. - Floodplain Development Application, Permit and Certification requirements.](#)

[Section C. - Duties and Responsibilities of the Floodplain Administrator.](#)

[Section D. - Corrective Procedures.](#)

[Section E. - Variance Procedures.](#)

**Section A. - Designation of Floodplain Administrator.**

The Director of Inspections, hereinafter referred to as the "Floodplain Administrator," is hereby appointed to administer and implement the provisions of this ordinance.

**Section B. - Floodplain Development Application, Permit and Certification requirements.**

(a) *Application requirements.* Application for a Floodplain Development Permit shall be made to the floodplain administrator prior to any development activities located within Special Flood Hazard Areas. The following items shall be presented to the floodplain administrator to apply for a floodplain development permit:

- (1) A plot plan drawn to scale which shall include, but shall not be limited to, the following specific details of the proposed floodplain development:
  - a. The nature, location, dimensions, and elevations of the area of development/disturbance; existing and proposed structures, utility systems, grading/pavement areas, fill materials, storage areas, drainage facilities, and other development;
  - b. The boundary of the Special Flood Hazard Area as delineated on the FIRM or other

- flood map as determined in Article 3, Section B, or a statement that the entire lot is within the Special Flood Hazard Area;
- c. Flood zone(s) designation of the proposed development area as determined on the FIRM or other flood map as determined in Article 3, Section B;
  - d. The boundary of the floodway(s) or non-encroachment area(s) as determined in Article 3, Section B;
  - e. The Base Flood Elevation (BFE) where provided as set forth in Article 3, Section B; Article 4, Section C(11 & 12); or Article 5, Section D;
  - f. The old and new location of any watercourse that will be altered or relocated as a result of proposed development;
  - g. Certification of the plot plan by a registered land surveyor or professional engineer.
- (2) Proposed elevation, and method thereof, of all development within a Special Flood Hazard Area including but not limited to:
- a. Elevation in relation to mean sea level of the proposed reference level (including basement) of all structures;
  - b. Elevation in relation to mean sea level to which any non-residential structure in Zone AE, A or AO will be flood-proofed; and
  - c. Elevation in relation to mean sea level to which any proposed utility systems will be elevated or floodproofed;
- (3) If floodproofing, a Floodproofing Certificate (*FEMA Form 81-65*) with supporting data and an operational plan that includes, but is not limited to, installation, exercise, and maintenance of floodproofing measures.
- (4) A Foundation Plan, drawn to scale,, which shall include details of the proposed foundation system to ensure all provisions of this ordinance are met. These details include but are not limited to:
- a. The proposed method of elevation, if applicable (i.e., fill, solid foundation perimeter wall, solid backfilled foundation, open foundation on columns/posts/piers/piles/shear walls);
  - b. Openings to facilitate equalization of hydrostatic flood forces on walls in accordance with Article 5, Section B(4)(d), when solid foundation perimeter walls are used in Zones A, AO, AE, and A1-30;
- (5) Usage details of any enclosed areas below the regulatory flood protection elevation.
- (6) Plans and/or details for the protection of public utilities and facilities such as sewer, gas, electrical, and water systems to be located and constructed to minimize flood damage;
- (7) Copies of all other Local, State and Federal permits required prior to floodplain development permit issuance (Wetlands, Endangered Species, Erosion and Sedimentation Control, Riparian Buffers, Mining, etc.)

(8) Documentation for placement of Recreational Vehicles and/or Temporary Structures, when applicable, to ensure Article 5, Sections B(6 & 7) of this ordinance are met.

(9) A description of proposed watercourse alteration or relocation, when applicable, including an engineering report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream; and a map (if not shown on plot plan) showing the location of the proposed watercourse alteration or relocation.

(b) *Permit requirements.* The Floodplain Development Permit shall include, but not be limited to:

(1) A description of the development to be permitted under the floodplain development permit.

(2) The Special Flood Hazard Area determination for the proposed development per available data specified in Article 3, Section B.

(3) The regulatory flood protection elevation required for the reference level and all attendant utilities.

(4) The regulatory flood protection elevation required for the protection of all public utilities.

(5) All certification submittal requirements with timelines.

(6) A statement that no fill material or other development shall encroach into the floodway or non-encroachment area of any watercourse, as applicable.

(7) The flood openings requirements, if in Zones A, AO, AE or A1-30.

(8) Limitations of below BFE enclosure uses (if applicable). (i.e., Parking, Building Access and Limited Storage only).

(c) *Certification requirements.*

(1) *Elevation Certificates.* An Elevation Certificate (FEMA Form 81-31) is required prior to the actual start of any new construction. It shall be the duty of the permit holder to submit to the floodplain administrator a certification of the elevation of the reference level, in relation to mean sea level. The floodplain administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder prior to the beginning of construction. Failure to submit the certification or failure to make required corrections shall be cause to deny a floodplain development permit.

An Elevation Certificate (FEMA Form 81-31) is required after the reference level is established. Within seven (7) calendar days of establishment of the reference level elevation, it shall be the duty of the permit holder to submit to the floodplain administrator a certification of the elevation of the reference level, in relation to mean sea level. Any work done within the seven (7) day calendar period and prior to submission of the certification shall be at the permit holder's risk. The floodplain administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further work being permitted to proceed. Failure to submit the certification or failure to make required corrections shall be cause to issue a stop-work order for the project.

A final as-built Elevation Certificate (*FEMA Form 81-31*) is required after construction is completed and prior to Certificate of Compliance/Occupancy issuance. It shall be the duty of

the permit holder to submit to the floodplain administrator a certification of final as-built construction of the elevation of the reference level and all attendant utilities. The floodplain administrator shall review the certificate data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to Certificate of Compliance/Occupancy issuance. In some instances, another certification may be required to certify corrected as-built construction. Failure to submit the certification or failure to make required corrections shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy.

(2) *Floodproofing Certificate.* If non-residential floodproofing is used to meet the regulatory flood protection elevation requirements, a Floodproofing Certificate (FEMA Form 81-65), with supporting data and an operational plan, is required prior to the actual start of any new construction. It shall be the duty of the permit holder to submit to the floodplain administrator a certification of the floodproofed design elevation of the reference level and all attendant utilities, in relation to mean sea level. Floodproofing certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. The floodplain administrator shall review the certificate data and plan. Deficiencies detected by such review shall be corrected by the applicant prior to permit approval. Failure to submit the certification or failure to make required corrections shall be cause to deny a floodplain development permit. Failure to construct in accordance with the certified design shall be cause to withhold the issuance of a Certificate of Compliance/Occupancy.

If a manufactured home is placed within Zone A, AO, AE, or A1-30 and the elevation of the chassis is more than 36 inches in height above grade, an engineered foundation certification is required per Article 5, Section B(3).

If a watercourse is to be altered or relocated, a description of the extent of watercourse alteration or relocation; a professional engineer's certified report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream; and a map showing the location of the proposed watercourse alteration or relocation shall all be submitted by the permit applicant prior to issuance of a floodplain development permit.

(3) *Certification Exemptions.* The following structures, if located within Zone A, AO, AE or A1-30, are exempt from the elevation/floodproofing certification requirements specified in items (a) and (b) of this subsection:

- a. Recreational Vehicles meeting requirements of Article 5, Section B(6)(a);
- b. Temporary Structures meeting requirements of Article 5, Section B(7); and
- c. Accessory Structures less than 150 square feet meeting requirements of Article 5, Section B(8).

### **Section C. - Duties and Responsibilities of the Floodplain Administrator.**

The Floodplain Administrator shall perform, but not be limited to, the following duties:

(1) Review all floodplain development applications and issue permits for all proposed development within Special Flood Hazard Areas to assure that the requirements of this ordinance have been satisfied.



- (2) Advise permittee that additional Federal or State permits (Wetlands, Endangered Species, Erosion and Sedimentation Control, Riparian Buffers, Mining, etc.) may be required, and require that copies of such permits be provided and maintained on file with the floodplain development permit.
- (3) Notify adjacent communities and the North Carolina Department of Crime Control and Public Safety, Division of Emergency Management, State Coordinator for the National Flood Insurance Program prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency (FEMA).
- (4) Assure that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.
- (5) Prevent encroachments into floodways and non-encroachment areas unless the certification and flood hazard reduction provisions of Article 5, Section E are met.
- (6) Obtain actual elevation (in relation to mean sea level) of the reference level (including basement) and all attendant utilities of all new or substantially improved structures, in accordance with Article 4, Section B(3).
- (7) Obtain actual elevation (in relation to mean sea level) to which all new and substantially improved structures and utilities have been floodproofed, in accordance with Article 4, Section B(3).
- (8) Obtain actual elevation (in relation to mean sea level) of all public utilities in accordance with Article 4, Section B(3).
- (9) When floodproofing is utilized for a particular structure, obtain certifications from a registered professional engineer or architect in accordance with Article 4, Section B(3) and Article 5, Section B(2).
- (10) Where interpretation is needed as to the exact location of boundaries of the Special Flood Hazard Areas (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this article.
- (11) When Base Flood Elevation (BFE) data has not been provided in accordance with Article 3, Section B, obtain, review, and reasonably utilize any Base Flood Elevation (BFE) data, along with floodway data or non-encroachment area data available from a Federal, State, or other source, including data developed pursuant to Article 5, Section D(2)(b), in order to administer the provisions of this ordinance.
- (12) When Base Flood Elevation (BFE) data is provided but no floodway nor non-encroachment area data has been provided in accordance with Article 3, Section B, obtain, review, and reasonably utilize any floodway data or non-encroachment area data available from a Federal, State, or other source in order to administer the provisions of this ordinance.
- (13) When the lowest ground elevation of a parcel or structure in a Special Flood Hazard Area is above the Base Flood Elevation, advise the property owner of the option to apply for a Letter of Map Amendment (LOMA) from FEMA. Maintain a copy of the Letter of Map Amendment (LOMA)

issued by FEMA in the floodplain development permit file.

(14) Permanently maintain all records that pertain to the administration of this ordinance and make these records available for public inspection.

(15) Make on-site inspections of work in progress. As the work pursuant to a floodplain development permit progresses, the floodplain administrator shall make as many inspections of the work as may be necessary to ensure that the work is being done according to the provisions of the local ordinance and the terms of the permit. In exercising this power, the floodplain administrator has a right, upon presentation of proper credentials, to enter on any premises within the jurisdiction of the community at any reasonable hour for the purposes of inspection or other enforcement action.

(16) Issue stop-work orders as required. Whenever a building or part thereof is being constructed, reconstructed, altered, or repaired in violation of this ordinance, the floodplain administrator may order the work to be immediately stopped. The stop-work order shall be in writing and directed to the person doing the work. The stop-work order shall state the specific work to be stopped, the specific reason(s) for the stoppage, and the condition(s) under which the work may be resumed. Violation of a stop-work order constitutes a misdemeanor.

(17) Revoke floodplain development permits as required. The floodplain administrator may revoke and require the return of the floodplain development permit by notifying the permit holder in writing stating the reason(s) for the revocation. Permits shall be revoked for any substantial departure from the approved application, plans, or specifications; for refusal or failure to comply with the requirements of State or local laws; or for false statements or misrepresentations made in securing the permit. Any floodplain development permit mistakenly issued in violation of an applicable State or local law may also be revoked.

(18) Make periodic inspections throughout all special flood hazard areas within the jurisdiction of the community. The floodplain administrator and each member of his or her inspections department shall have a right, upon presentation of proper credentials, to enter on any premises within the territorial jurisdiction of the department at any reasonable hour for the purposes of inspection or other enforcement action.

(19) Follow through with corrective procedures of Article 4, Section D.

(20) Review, provide input, and make recommendations for variance requests.

(21) Maintain a current map repository to include, but not limited to, the FIS Report, FIRM and other official flood maps and studies adopted in accordance with Article 3, Section B of this ordinance, including any revisions thereto including Letters of Map Change, issued by FEMA. Notify State and FEMA of mapping needs.

(22) Coordinate revisions to FIS reports and FIRMs, including Letters of Map Revision Based on Fill (LOMR-F) and Letters of Map Revision (LOMR).

#### **Section D. - Corrective Procedures.**

(1) *Violations to be Corrected:* When the floodplain administrator finds violations of applicable State and local laws, it shall be his or her duty to notify the owner or occupant of the building of the violation. The owner or occupant shall immediately remedy each of the violations of law cited in such notification.

(2) *Actions in Event of Failure to Take Corrective Action:* If the owner of a building or property shall fail to take prompt corrective action, the floodplain administrator shall give the owner written notice, by certified or registered mail to the owner's last known address or by personal service, stating:

- (a) That the building or property is in violation of the Flood Damage Prevention Ordinance;
- (b) That a hearing will be held before the floodplain administrator at a designated place and time, not later than ten (10) days after the date of the notice, at which time the owner shall be entitled to be heard in person or by counsel and to present arguments and evidence pertaining to the matter; and,
- (c) That following the hearing, the floodplain administrator may issue an order to alter, vacate, or demolish the building; or to remove fill as appears appropriate.

(3) *Order to Take Corrective Action:* If, upon a hearing held pursuant to the notice prescribed above, the floodplain administrator shall find that the building or development is in violation of the Flood Damage Prevention Ordinance, they shall issue an order in writing to the owner, requiring the owner to remedy the violation within a specified time period, not less than sixty (60) calendar days, nor more than one-hundred-eighty (180) calendar days. Where the floodplain administrator finds that there is imminent danger to life or other property, they may order that corrective action be taken in such lesser period as may be feasible.

(4) *Appeal:* Any owner who has received an order to take corrective action may appeal the order to the local elected governing body by giving notice of appeal in writing to the floodplain administrator and the clerk within ten (10) days following issuance of the final order. In the absence of an appeal, the order of the floodplain administrator shall be final. The local governing body shall hear an appeal within a reasonable time and may affirm, modify and affirm, or revoke the order.

(5) *Failure to Comply with Order:* If the owner of a building or property fails to comply with an order to take corrective action for which no appeal has been made or fails to comply with an order of the governing body following an appeal, the owner shall be guilty of a misdemeanor and shall be punished at the discretion of the court.

#### **Section E. - Variance Procedures.**

(1) The City Council of the City of Burlington, hereinafter referred to as the "appeal board", shall hear and decide requests for variances from the requirements of this ordinance.

(2) Any person aggrieved by the decision of the appeal board may appeal such decision to the Court, as provided in Chapter 7A of the North Carolina General Statutes.

(3) Variances may be issued for:

- (a) the repair or rehabilitation of historic structures upon the determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and that the variance is the minimum necessary to preserve the historic character and design of the structure.
- (b) functionally dependant facilities if determined to meet the definition as stated in Article 2 of this ordinance, provided provisions of Article 4, Section E(9)(b), (c), and (e) have been satisfied, and such facilities are protected by methods that minimize flood damages.

(c) any other type of development, provided it meets the requirements stated in this section.

(4) In passing upon variances, the appeal board shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this ordinance, and:

- (a) The danger that materials may be swept onto other lands to the injury of others;
- (b) The danger to life and property due to flooding or erosion damage;
- (c) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- (d) The importance of the services provided by the proposed facility to the community;
- (e) The necessity to the facility of a waterfront location as defined under Article 2 of this ordinance as a functionally dependant facility, where applicable;
- (f) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
- (g) The compatibility of the proposed use with existing and anticipated development;
- (h) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
- (i) The safety of access to the property in times of flood for ordinary and emergency vehicles;
- (j) The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and
- (k) The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.

(5) A written report addressing each of the above factors shall be submitted with the application for a variance.

(6) Upon consideration of the factors listed above and the purposes of this ordinance, the appeal board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this ordinance.

(7) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the Base Flood Elevation (BFE) and the elevation to which the structure is to be built and that such construction below the Base Flood Elevation increases risks to life and property, and that the issuance of a variance to construct a structure below the Base Flood Elevation will result in increased premium rates for flood insurance up to \$25 per \$100 of insurance coverage. Such notification shall be maintained with a record of all variance actions, including justification for their issuance.

(8) The floodplain administrator shall maintain the records of all appeal actions and report any variances to the Federal Emergency Management Agency and the State of North Carolina upon request.

(9) Conditions for Variances:

- (a) Variances shall not be issued when the variance will make the structure in violation of other Federal, State, or local laws, regulations, or ordinances.
- (b) Variances shall not be issued within any designated floodway or non-encroachment area if the variance would result in any increase in flood levels during the base flood discharge.
- (c) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- (d) Variances shall only be issued prior to development permit approval.
- (e) Variances shall only be issued upon:
  - 1. A showing of good and sufficient cause;
  - 2. A determination that failure to grant the variance would result in exceptional hardship; and
  - 3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, or extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.

(10) A variance may be issued for solid waste disposal facilities, hazardous waste management facilities, salvage yards, and chemical storage facilities that are located in Special Flood Hazard Areas provided that all of the following conditions are met.

- (a) The use serves a critical need in the community.
- (b) No feasible location exists for the use outside the Special Flood Hazard Area.
- (c) The reference level of any structure is elevated or floodproofed to at least the regulatory flood protection elevation.
- (d) The use complies with all other applicable Federal, State and local laws.
- (e) The City of Burlington has notified the Secretary of the North Carolina Department of Crime Control and Public Safety of its intention to grant a variance at least thirty (30) calendar days prior to granting the variance.

## **ARTICLE 5. - PROVISIONS FOR FLOOD HAZARD REDUCTION.**

[Section A. - General Standards.](#)

[Section B. - Specific Standards.](#)

[Section C. - Standards for Floodplains without Established Base Flood Elevations.](#)

[Section D. - Standards for Riverine Floodplains with BFE but without Established Floodways or Non-Encroachment Areas.](#)

[Section E. - Floodways and Non-Encroachment Areas.](#)

[Section F. - Standards for Areas of Shallow Flooding \(Zone AO\).](#)

[Section G. - Unmapped Streams where Regulatory Flood Elevations or Floodways have not been provided.](#)

[Section H. - Exceptions.](#)

**Section A. - General Standards.**

In all Special Flood Hazard Areas the following provisions are required:

- (1) All new construction and substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse, and lateral movement of the structure.
- (2) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- (3) All new construction and substantial improvements shall be constructed by methods and practices that minimize flood damages.
- (4) Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding. These include, but are not limited to, HVAC equipment, water softener units, bath/kitchen fixtures, ductwork, electric/gas meter panels/boxes, utility/cable boxes, appliances (washers, dryers, refrigerators, freezers, etc.), hot water heaters, and electric outlets/switches.
- (5) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.
- (6) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into flood waters.
- (7) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.
- (8) Any alteration, repair, reconstruction, or improvements to a structure, which is in compliance with the provisions of this ordinance, shall meet the requirements of "new construction" as contained in this ordinance.
- (9) Nothing in this ordinance shall prevent the repair, reconstruction, or replacement of a building or structure existing on the effective date of this ordinance and located totally or partially within the floodway, non-encroachment area, or stream setback, provided there is no additional encroachment below the regulatory flood protection elevation in the floodway, non-encroachment area, or stream setback, and provided that such repair, reconstruction, or replacement meets all of the other requirements of this ordinance.
- (10) New solid waste disposal facilities and sites, hazardous waste management facilities, salvage yards, and chemical storage facilities shall not be permitted, except by variance as specified in Article 4, Section E(10). A structure or tank for chemical or fuel storage incidental to an allowed use or to the operation of a water treatment plant or wastewater treatment facility may be located in a Special Flood Hazard Area only if the structure or tank is either elevated or floodproofed to at least the regulatory flood protection elevation and certified according to Article 4, Section B(3) of this ordinance.
- (11) All subdivision proposals and other development proposals shall be consistent with the need

to minimize flood damage.

(12) All subdivision proposals and other development proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.

(13) All subdivision proposals and other development proposals shall have adequate drainage provided to reduce exposure to flood hazards.

(14) All subdivision proposals and other development proposals shall have received all necessary permits from those governmental agencies for which approval is required by Federal or State law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334.

### **Section B. - Specific Standards.**

In all Special Flood Hazard Areas where Base Flood Elevation (BFE) data has been provided, as set forth in Article 3, Section B, or Article 4, Section C(11 & 12), the following provisions, in addition to Article 5, Section A, are required:

(1) *Residential Construction.* New construction and substantial improvement of any residential structure (including manufactured homes) shall have the reference level, including basement, elevated no lower than the regulatory flood protection elevation, as defined in Article 2 of this ordinance.

(2) *Non-Residential Construction.* New construction and substantial improvement of any commercial, industrial, or other non-residential structure shall have the reference level, including basement, elevated no lower than the regulatory flood protection elevation, as defined in Article 2 of this ordinance. Structures located in A, AE and A1-30 Zones may be floodproofed to the regulatory flood protection elevation in lieu of elevation provided that all areas of the structure, together with attendant utility and sanitary facilities, below the regulatory flood protection elevation are watertight with walls substantially impermeable to the passage of water, using structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. For AO Zones, the floodproofing elevation shall be in accordance with Article 5, Section H(3). A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the Floodplain Administrator as set forth in Article 4, Section B(3), along with the operational and maintenance plans.

(3) *Manufactured Homes.*

(a) New or replacement manufactured homes shall be elevated so that the reference level of the manufactured home is no lower than the regulatory flood protection elevation, as defined in Article 2 of this ordinance.

(b) Manufactured homes shall be securely anchored to an adequately anchored foundation to resist flotation, collapse, and lateral movement, either by engineer certification, or in accordance with the most current edition of the State of North Carolina Regulations for Manufactured Homes adopted by the Commissioner of Insurance pursuant to NCGS 143-143.15. Additionally, when the elevation would be met by an elevation of the chassis thirty-six (36) inches or less above the grade at the site, the chassis shall be supported by reinforced piers or engineered foundation. When the elevation of the chassis is above

thirty-six (36) inches in height, an engineering certification is required.

(c) All enclosures or skirting below the lowest floor shall meet the requirements of Article 5, Section B(4)(a), (b), and (c)..

(d) An evacuation plan must be developed for evacuation of all residents of all new, substantially improved or substantially damaged manufactured home parks or subdivisions located within flood prone areas. This plan shall be filed with and approved by the floodplain administrator and the local Emergency Management coordinator.

(4) *Elevated Buildings.*

(a) Fully enclosed area, of new construction and substantially improved structures, which is below the lowest floor:

1. Shall not be designed or used for human habitation, but shall only be used for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment (standard exterior door), or entry to the living area (stairway or elevator). The interior portion of such enclosed area shall not be finished or partitioned into separate rooms, except to enclose storage areas;

2. Shall be constructed entirely of flood resistant materials below the regulatory flood protection elevation;

3. Shall include, in Zones A, AO, AE, and A1-30, flood openings to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters. To meet this requirement, the openings must either be certified by a professional engineer or architect or meet or exceed the following minimum design criteria;

(b) A minimum of two flood openings on different sides of each enclosed area subject to flooding;

(c) The total net area of all flood openings must be at least one (1) square inch for each square foot of enclosed area subject to flooding;

(d) If a building has more than one enclosed area, each enclosed area must have flood openings to allow floodwaters to automatically enter and exit;

(e) The bottom of all required flood openings shall be no higher than one (1) foot above the adjacent grade;

(f) Flood openings may be equipped with screens, louvers, or other coverings or devices, provided they permit the automatic flow of floodwaters in both directions; and

(g) Enclosures made of flexible skirting are not considered enclosures for regulatory purposes, and, therefore, do not require flood openings. Masonry or wood underpinning, regardless of structural status, is considered an enclosure and requires flood openings as outlined above.



(5) *Additions/Improvements.*

(a) Additions and/or improvements to pre-FIRM structures when the addition and/or improvements in combination with any interior modifications to the existing structure are:

1. Not a substantial improvement, the addition and/or improvements must be designed to minimize flood damages and must not be any more non-conforming than the existing structure.
2. A substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction.

(b) Additions to post-FIRM structures with no modifications to the existing structure other than a standard door in the common wall shall require only the addition to comply with the standards for new construction.

(c) Additions and/or improvements to post-FIRM structures when the addition and/or improvements in combination with any interior modifications to the existing structure are:

1. Not a substantial improvement, the addition and/or improvements only must comply with the standards for new construction.
2. A substantial improvement, both the existing structure and the addition and/or improvements must comply with the standards for new construction.

(d) Where an independent perimeter load-bearing wall is provided between the addition and the existing building, the addition(s) shall be considered a separate building and only the addition must comply with the standards for new construction.

(6) *Recreational Vehicles.* Recreational vehicles shall either:

- (a) Be on site for fewer than 180 consecutive days and be fully licensed and ready for highway use (a recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities, and has no permanently attached additions); or
- (b) Meet all the requirements for new construction.

(7) *Temporary Non-Residential Structures.* Prior to the issuance of a floodplain development permit for a temporary structure, the applicant must submit to the floodplain administrator a plan for the removal of such structure(s) in the event of a hurricane, flash flood or other type of flood warning notification. The following information shall be submitted in writing to the floodplain administrator for review and written approval:

- (a) A specified time period for which the temporary use will be permitted. Time specified may not exceed three months, renewable up to one year;
- (b) The name, address, and phone number of the individual responsible for the removal of the temporary structure;
- (c) The time frame prior to the event at which a structure will be removed (i.e., minimum of 72 hours before landfall of a hurricane or immediately upon flood warning notification);

- (d) A copy of the contract or other suitable instrument with the entity responsible for physical removal of the structure; and
  - (e) Designation, accompanied by documentation, of a location outside the Special Flood Hazard Area, to which the temporary structure will be moved.
- (8) *Accessory Structures.* When accessory structures (sheds, detached garages, etc.) are to be placed within a Special Flood Hazard Area, the following criteria shall be met:
- (a) Accessory structures shall not be used for human habitation (including working, sleeping, living, cooking or restroom areas);
  - (b) Accessory structures shall not be temperature-controlled;
  - (c) Accessory structures shall be designed to have low flood damage potential;
  - (d) Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters;
  - (e) Accessory structures shall be firmly anchored in accordance with Article 5, Section A(1);
  - (f) All service facilities such as electrical shall be installed in accordance with Article 5, Section A(4); and
  - (g) Flood openings to facilitate automatic equalization of hydrostatic flood forces shall be provided below regulatory flood protection elevation in conformance with Article 5, Section B(4)(c)..
  - (h) An accessory structure with a footprint less than 150 square feet that satisfies the criteria outlined above does not require an elevation or floodproofing certificate. Elevation or floodproofing certifications are required for all other accessory structures in accordance with Article 4, Section B(3).

**Section C. - Standards for Floodplains without Established Base Flood Elevations.**

Within the Special Flood Hazard Areas designated as Approximate Zone A and established in Article 3, Section B, where no Base Flood Elevation (BFE) data has been provided by FEMA, the following provisions, in addition to Article 5, Sections A and B, shall apply:

- (1) No encroachments, including fill, new construction, substantial improvements or new development shall be permitted within a distance of twenty (20) feet each side from top of bank or five times the width of the stream, whichever is greater, unless certification with supporting technical data by a registered professional engineer is provided demonstrating that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- (2) The BFE used in determining the regulatory flood protection elevation shall be determined based on one of the following criteria set in priority order:
  - (a) If Base Flood Elevation (BFE) data is available from other sources, all new construction and substantial improvements within such areas shall also comply with all applicable provisions of this ordinance and shall be elevated or floodproofed in accordance with

standards in Article 4, Section C(11 & 12).

(b) All subdivision, manufactured home park and other development proposals shall provide Base Flood Elevation (BFE) data if development is greater than five (5) acres or has more than fifty (50) lots/manufactured home sites. Such Base Flood Elevation (BFE) data shall be adopted by reference per Article 3, Section B to be utilized in implementing this ordinance.

(c) When Base Flood Elevation (BFE) data is not available from a Federal, State, or other source as outlined above, the reference level shall be elevated to or above the regulatory flood protection elevation, as defined in Article 2.

**Section D. - Standards for Riverine Floodplains with BFE but without Established Floodways or Non-Encroachment Areas.**

Along rivers and streams where BFE data is provided but neither floodway nor non-encroachment areas are identified for a Special Flood Hazard Area on the FIRM or in the FIS report, the following requirements shall apply to all development within such areas:

- (1) Standards outlined in Article 5, Sections A and B; and
- (2) Until a regulatory floodway or non-encroachment area is designated, no encroachments, including fill, new construction, substantial improvements, or other development, shall be permitted unless certification with supporting technical data by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.

**Section E. - Floodways and Non-Encroachment Areas.**

Areas designated as floodways or non-encroachment areas are located within the Special Flood Hazard Areas established in Article 3, Section B. The floodways and non-encroachment areas are extremely hazardous areas due to the velocity of floodwaters that have erosion potential and carry debris and potential projectiles. The following provisions, in addition to standards outlined in Article 5, Sections A and B, shall apply to all development within such areas:

- (1) No encroachments, including fill, new construction, substantial improvements and other developments shall be permitted unless it has been demonstrated that: The proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood, based on hydrologic and hydraulic analyses performed in accordance with standard engineering practice and presented to the floodplain administrator prior to issuance of floodplain development permit, or a Conditional Letter of Map Revision (CLOMR) has been approved by FEMA. A Letter of Map Revision (LOMR) must also be obtained upon completion of the proposed encroachment.
- (2) If Article 5, Section F(1) is satisfied, all development shall comply with all applicable flood hazard reduction provisions of this ordinance.
- (3) No manufactured homes shall be permitted, except replacement manufactured homes in an existing manufactured home park or subdivision, provided the following provisions are met:
  - (a) The anchoring and the elevation standards of Article 5, Section B(3); and

- (b) The no encroachment standard of Article 5, Section F(1).

**Section F. - Standards for Areas of Shallow Flooding (Zone AO).**

Located within the Special Flood Hazard Areas established in Article 3, Section B, are areas designated as shallow flooding areas. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate. In addition to Article 5, Section A, all new construction and substantial improvements shall meet the following requirements:

- (1) The reference level shall be elevated at least as high as the depth number specified on the Flood Insurance Rate Map (FIRM), in feet, plus a freeboard of two (2) feet, above the highest adjacent grade; or at least two feet above the highest adjacent grade plus a freeboard of two (2) feet if no depth number is specified.
- (2) Non-residential structures may, in lieu of elevation, be floodproofed to the same level as required in Article 5, Section H(1) so that the structure, together with attendant utility and sanitary facilities, below that level shall be watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. Certification is required as per Article 4, Section B(3) and Article 5, Section B(2).
- (3) Adequate drainage paths shall be provided around structures on slopes, to guide floodwaters around and away from proposed structures.

**Section G. - Unmapped Streams where Regulatory Flood Elevations or Floodways have not been provided.**

The following governs setbacks for planned construction activities adjacent to small, unmapped streams. Provisions of the stormwater and floodplain ordinances overlap, and both ordinances may apply to development and/or construction along small unmapped streams.

The stormwater ordinance, adopted on May 31, 2007, requires compliance with the federal Phase II Stormwater regulations promulgated pursuant to the Federal Water Pollution Control Act of 1972.

Said stormwater ordinance provides for special setbacks from small unmapped streams if new development and/or construction activities will result in a disturbed area of one acre or more. Under the provisions of the stormwater ordinance, a thirty feet wide undisturbed buffer area shall be maintained along each side of small unmapped streams, and structures and/or impervious surfaces cannot be constructed for a perpendicular distance of twenty feet from the said buffer line.

For new development where the total area of disturbance is less than one acre and the drainage area for the creek or stream adjacent to the planned construction is greater than 25 acres, the following requirements shall apply:

- (1) No building or fill material shall be located closer to the centerline of the adjacent streambed than the distance determined by adding the distance "x" from Table A below to the average width of the streambed adjacent to the site.

TABLE A

Area of Drainage Basin (Acres)	Distance "X" (Feet)
25 to 100	15
101 to 200	20
201 to 400	25
400 to 640*	30

\*Or limits of detailed flood study by FEMA

(2) The lowest floor, including basement, of residential structures shall be elevated not less than two (2) feet above a reference elevation that is to be determined as follows:

a. The elevation of the lowest point where stormwater would overtop the curb, pavement, fill material, etc. above the nearest downstream culvert pipe, bridge, dam, etc. that crosses the adjacent stream shall be determined.

b. The reference elevation shall be the sum of the elevation determined in (a) above plus the amount of the change in elevation of the streambed between a point adjacent and perpendicular to the most downstream point of the proposed structure and the streambed at the downstream location used in (a) above.

(3) The lowest floor, including basement, of nonresidential structures shall be elevated not less than two (2) feet above a reference elevation that is determined as follows, or together with attendant utility and sanitary facilities be flood proofed to this required elevation.

a. The elevation of the lowest point where stormwater would overtop the curb, pavement, fill material, etc. above the nearest downstream culvert pipe, bridge, dam, etc. that crosses the adjacent stream shall be determined.

b. The reference elevation shall be the sum of the elevation determined in (a) above plus the amount of the change in elevation of the streambed between a point adjacent and perpendicular to the most downstream point of the proposed structure and the streambed at the downstream location used in (a) above.

(4) This section shall not apply to streams, channels or drainage ways that serve as an outlet for drainage basins that have a drainage area upstream from the proposed site of less than twenty-five (25) acres.

(Ord. No. 08-10, § 2, 2-19-08)

**Section H. - Exceptions.**

Exceptions to the provisions of Section H may be granted provided the following conditions are met:

(1) The proposed project involves the expansion of an existing building.

(2) No part of the proposed expansion shall be closer to the adjacent streambed than the perpendicular distance between the closest point of the existing structure and the adjacent streambed.

(Ord. No. 08-10, § 2, 2-19-08)

## **ARTICLE 6. - LEGAL STATUS PROVISIONS**

[Section A. - Effect on Rights and Liabilities under the Existing Flood Damage Prevention Ordinance.](#)

[Section B. - Effect upon Outstanding Floodplain Development Permits.](#)

[Section C. - Effective Date.](#)

### **Section A. - Effect on Rights and Liabilities under the Existing Flood Damage Prevention Ordinance.**

This ordinance in part comes forward by re-enactment of some of the provisions of the flood damage prevention ordinance enacted on April 4, 1981, as amended, and it is not the intention to repeal but rather to re-enact and continue to enforce without interruption of such existing provisions, so that all rights and liabilities that have accrued thereunder are reserved and may be enforced. The enactment of this ordinance shall not affect any action, suit or proceeding instituted or pending. All provisions of the flood damage prevention ordinance of the City of Burlington enacted on April 4, 1981, as amended, which are not reenacted herein are repealed.

### **Section B. - Effect upon Outstanding Floodplain Development Permits.**

Nothing herein contained shall require any change in the plans, construction, size, or designated use of any development or any part thereof for which a floodplain development permit has been granted by the floodplain administrator or his or her authorized agents before the time of passage of this ordinance; provided, however, that when construction is not begun under such outstanding permit within a period of six (6) months subsequent to the date of issuance of the outstanding permit, construction or use shall be in conformity with the provisions of this ordinance.

### **Section C. - Effective Date.**

This ordinance shall become effective on September 6, 2006.

**CITY OF BURLINGTON**  
**Riparian Buffer Protection Ordinance**

City of Burlington, North Carolina

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**Section 1. Authority**

This Ordinance is adopted pursuant to the authority vested in City of Burlington, hereinafter referred to as the “City”, by the Session Laws and the General Statutes of North Carolina, particularly Session Law 2009-216 (House Bill 239), Session Law 2009-484 (Senate Bill 838), N.C. Gen. Stat §160A-174, 160A-193, Chapter 160A, Article 19, and any special legislation enacted by the General Assembly for the City.

**Section 2. Purpose and Intent**

The purposes of the City of Burlington in adopting the following Ordinance is to protect and preserve existing riparian buffers throughout the Jordan Watershed as generally described in Rule 15A NCAC 02B .0262 (Jordan Water Supply Nutrient Strategy: Purpose and Scope), in order to maintain their nutrient removal and stream protection functions. Additionally this Ordinance will help protect the water supply uses of Jordan Reservoir and of designated water supplies throughout the Jordan watershed.

Buffers adjacent to streams provide multiple environmental protection and resource management benefits. Forested buffers enhance and protect the natural ecology of stream systems, as well as water quality through bank stabilization, shading, and nutrient removal. They also help to minimize flood damage in flood prone areas. Well-vegetated streamside riparian areas help to remove nitrogen and prevent sediment and sediment-bound pollutants such as phosphorous from reaching the streams.

**Section 3. Title**

This Ordinance shall be known as the *City of Burlington Riparian Buffer Protection Ordinance [for Lands within the Jordan Watershed]*.

**Section 4. Jurisdiction**

This Ordinance shall be applied to all land within the planning jurisdiction of the City of Burlington that is located within the Jordan Reservoir Watershed.

**Section 5. Applicability**

This Ordinance applies to all landowners and other persons conducting activities in the area described in Section 4, with the exception of activities conducted under the authority of the State, the United States, multiple jurisdictions, or local units of government, and forest harvesting and agricultural activities. The NC Division of Water Quality shall administer the requirements of Rule 15A NCAC 02B .0267 and .0268 (Jordan Water Supply Nutrient Strategy: Protection of Existing Riparian Buffers and Mitigation of Existing Riparian Buffers, respectively) for these activities.

**Section 6. Relation to Other Ordinances**

The requirements of this Ordinance shall supersede all locally implemented buffer requirements stated in Rules 15A NCAC 02B .0214 through .0216 as applied to WS-II, WS-III, and WS-IV waters in the Jordan watershed. If the provisions of this ordinance otherwise conflict with the provisions of any other validly enforceable ordinance(s) or laws, the most stringent provisions shall control. This Ordinance is not intended to

interfere with, abrogate, or annul any other ordinance, rule, regulation, or other provision of law.

**Section 7. Interpretation****A. Meaning and Intent**

All provisions, terms, phrases, and expressions contained in this ordinance shall be construed according to the general and specific purposes set forth in Section 2, Purpose and Intent. If a different or more specific meaning is given for a term defined elsewhere in the Code of Ordinances of the City of Burlington, North Carolina, the meaning and application of the term in this ordinance shall control for purposes of application of this ordinance.

**B. Text Controls in Event of Conflict.**

In the event of a conflict or inconsistency between the text of this ordinance and any heading, caption, figure, illustration, table, or map, the text shall control.

**C. Authority for Interpretation**

The Stormwater Administrator has authority to determine the interpretation of this ordinance. Any person may request an interpretation by submitting a written request to the Stormwater Administrator who shall respond in writing within 30 days. The Stormwater Administrator shall keep on file a record of all written interpretations of this ordinance.

**D. References to Statutes, Regulations, and Documents.**

Whenever reference is made to a resolution, ordinance, statute, regulation, manual, or document, it shall be construed as a reference to the most recent edition of such that has been finalized and published with due provision for notice and comment, unless otherwise specifically stated.

**E. Computation of Time.**

The time in which an act is to be done shall be computed by excluding the first day and including the last day. If a deadline or required date of action falls on a Saturday, Sunday, or holiday observed by the City, the deadline or required date of action shall be the next day that is not a Saturday, Sunday or holiday observed by the City. References to days are calendar days unless otherwise stated.

**F. Delegation of Authority.**

Any act authorized by this Ordinance to be carried out by the Stormwater Administrator of the City of Burlington may be carried out by his or her designee.

**G. Usage**

(1) *Mandatory and Discretionary Terms.* The words "shall," "must," and "will" are mandatory in nature, establishing an obligation or duty to comply with the particular provision. The words "may" and "should" are permissive in nature.

(2) *Conjunctions.* Unless the context clearly indicates the contrary, conjunctions shall be interpreted as follows: The word "and" indicates that all connected items, conditions, provisions and events apply. The word "or" indicates that one or more of the connected items, conditions, provisions or events apply.

(3) *Tense, Plurals, and Gender.* Words used in the present tense include the future tense. Words used in the singular number include the plural number and the plural number includes the singular number, unless the context of the particular usage clearly indicates otherwise. Words used in the masculine gender include the feminine gender, and vice versa.

## **Section 8. Riparian Area Protection within the Jordan Reservoir Watershed**

### **A. Buffers Protected**

The following minimum criteria shall be used for identifying regulated buffers:

1. This Ordinance shall apply to activities conducted within, or outside of with hydrologic impacts in violation of the diffuse flow requirements set out in Section 8.(E) upon, 50-foot wide riparian buffers directly adjacent to surface waters in the Jordan watershed (intermittent streams, perennial streams, lakes, reservoirs and ponds), excluding wetlands.
2. Wetlands adjacent to surface waters or within 50 feet of surface waters shall be considered as part of the riparian buffer but are regulated pursuant to Rules 15A NCAC 2B .0230 and .0231, Rules 15A NCAC 2H .0500, 15A NCAC 2H .1300, and Sections 401 and 404 of the Federal Water Pollution Control Act.
3. For the purpose of this Ordinance, only one of the following types of maps shall be used for purposes of identifying a water body subject to the requirements of this ordinance:
  - a. The most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture.
  - b. The most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geologic Survey (USGS).
  - c. A map approved by the Geographic Information Coordinating Council and by the NC Environmental Management Commission. Prior to approving a map under this Item, the Commission shall provide a 30-day public notice and opportunity for comment. Alternative maps approved by the Commission shall not be used for buffer delineation on projects that are existing and ongoing within the meaning of Section 8.(C) of this Ordinance.
4. Where the specific origination point of a stream regulated under this Item is in question, upon request of the NC Division of Water Quality or another party, the Stormwater Administrator shall make an on-site determination. The Stormwater Administrator, or his designee, who has successfully completed the Division's *Surface Water Identification Training Certification* course, its successor, or other equivalent training curriculum approved by the Division, shall establish that point using the latest version of the Division publication, *Identification Methods for the Origins of Intermittent and Perennial Streams*, available at [http://h2o.enr.state.nc.us/nwetlands/documents/NC\\_Stream\\_ID\\_Manual.pdf](http://h2o.enr.state.nc.us/nwetlands/documents/NC_Stream_ID_Manual.pdf) or from the NC Division of Water Quality

- 401 Oversight Express Permitting Unit, or its successor. The Stormwater Administrator may accept the results of a site assessment made by another party who meets these criteria. Any disputes over on-site determinations made according to this Item shall be referred to the Director of the Division of Water Quality c/o the 401 Oversight Express Permitting Unit, or its successor, in writing. The Director's determination is subject to review as provided in Articles 3 and 4 of G.S. 150B.

5. Riparian buffers protected by this Ordinance shall be measured pursuant to Section 8.(D) of this Ordinance.
6. Parties subject to this Ordinance shall abide by all State rules and laws regarding waters of the state including but not limited to Rules 15A NCAC 2B .0230 and .0231, Rules 15A NCAC 2H .0500, 15A NCAC 2H .1300, and Sections 401 and 404 of the Federal Water Pollution Control Act.
7. No new clearing, grading, or development shall take place nor shall any new building permits be issued in violation of this Ordinance.

**B. Exemption Based on On-site Determination**

When a landowner or other affected party including the Division believes that the maps have inaccurately depicted surface waters, he or she shall consult the Stormwater Administrator. Upon request, the Stormwater Administrator, or his designee, who has successfully completed the Division of Water Quality's *Surface Water Identification Training Certification* course, its successor, or other equivalent training curriculum approved by the Division, shall make an on-site determination. The Stormwater Administrator may also accept the results of site assessments made by other parties who have successfully completed such training. Any disputes over on-site determinations shall be referred to the Director of the Division of Water Quality c/o the 401 Oversight Express Permitting Unit, or its successor, in writing. A determination of the Director as to the accuracy or application of the maps is subject to review as provided in Articles 3 and 4 of G.S. 150B. Surface waters that appear on the maps shall not be subject to these buffer requirements if a site evaluation reveals any of the following cases:

1. Man-made ponds and lakes that are not part of a natural drainage way that is classified in accordance with 15A NCAC 2B .0100, including ponds and lakes created for animal watering, irrigation, or other agricultural uses. (A pond or lake is part of a natural drainage way when it is fed by an intermittent or perennial stream or when it has a direct discharge point to an intermittent or perennial stream.)
2. Ephemeral streams.
3. The absence on the ground of a corresponding intermittent or perennial stream, lake, reservoir, or pond.
4. Ditches or other man-made water conveyances, other than modified natural streams.

**C. Exemption when Existing Uses are Present and Ongoing**

This Ordinance shall not apply to uses that are existing and ongoing; however, this Ordinance shall apply at the time an existing, ongoing use is changed to

another use. Change of use shall involve the initiation of any activity that does not meet either of the following criteria for existing, ongoing activity:

1. It was present within the riparian buffer as of the effective date of this Ordinance and has continued to exist since that time. Existing uses shall include agriculture, buildings, industrial facilities, commercial areas, transportation facilities, maintained lawns, utility lines and on-site sanitary sewage systems, any of which involve either specific, periodic management of vegetation or displacement of vegetation by structures or regular activity. Only the portion of the riparian buffer occupied by the footprint of the existing use is exempt from this Ordinance. Change of ownership through purchase or inheritance is not a change of use. Activities necessary to maintain uses are allowed provided that the site remains similarly vegetated, no impervious surface is added within 50 feet of the surface water where it did not previously exist as of the effective date of this Ordinance, and existing diffuse flow is maintained. Grading and revegetating Zone Two is allowed provided that the health of the vegetation in Zone One is not compromised, the ground is stabilized and existing diffuse flow is maintained.
2. Projects or proposed development that are determined by the City to meet at least one of the following criteria:
  - a. Project requires a 401 Certification/404 Permit and these were issued prior to the effective date this Ordinance.
  - b. Projects that require a state permit, such as landfills, NPDES wastewater discharges, land application of residuals and road construction activities, have begun construction or are under contract to begin construction and had received all required state permits and certifications prior to the effective date of this Ordinance;
  - c. Projects that are being reviewed through the Clean Water Act Section 404/National Environmental Policy Act Merger 01 Process (published by the US Army Corps of Engineers and Federal Highway Administration, 2003) or its immediate successor and that have reached agreement with DENR on avoidance and minimization by the effective date of this Ordinance; or
  - d. Projects that are not required to be reviewed by the Clean Water Act Section 404/National Environmental Policy Act Merger 01 Process (published by the US Army Corps of Engineers and Federal Highway Administration, 2003) or its immediate successor if a Finding of No Significant Impact has been issued for the project and the project has the written approval of the City prior to the effective date of this Ordinance.
  - e. Projects that have a vested right per North Carolina General Statute §160A-385.1.

**D. Zones of the Riparian Buffer**

The protected riparian buffer shall have two zones as follows:

1. Zone One shall consist of a vegetated area that is undisturbed except for uses provided for in the Table of Uses, Section 9.(B) of this Ordinance. The location of Zone One shall be as follows:
    - a. For intermittent and perennial streams, Zone One shall begin at the top of the bank and extend landward a distance of 30 feet on all sides of the surface water, measured horizontally on a line perpendicular to a vertical line marking the top of the bank.
    - b. For ponds, lakes and reservoirs located within a natural drainage way, Zone One shall begin at the normal water level and extend landward a distance of 30 feet, measured horizontally on a line perpendicular to a vertical line marking the normal water level.
  2. Zone Two shall consist of a stable, vegetated area that is undisturbed except for uses provided for in the Table of Uses, Section 9.(B) of this Ordinance. Grading and revegetating in Zone Two is allowed provided that the health of the vegetation in Zone One is not compromised. Zone Two shall begin at the outer edge of Zone One and extend landward 20 feet as measured horizontally on a line perpendicular to the surface water. The combined width of Zones One and Two shall be 50 feet on all sides of the surface water.
- E. Diffuse Flow Requirements
- Diffuse flow of runoff shall be maintained in the riparian buffer by dispersing concentrated flow prior to its entry into the buffer and reestablishing vegetation as follows:
1. Concentrated runoff from new ditches or man-made conveyances shall be converted to diffuse flow at non-erosive velocities before the runoff enters Zone Two of the riparian buffer;
  2. Periodic corrective action to restore diffuse flow shall be taken as necessary and shall be designed to impede the formation of erosion gullies; and
  3. As set out in Sections 8.(D) and 9.(B) of this Ordinance, The Zones of the Riparian Buffer and Table of Uses respectively, no new stormwater conveyances are allowed through the buffers except for those specified in the Table of Uses, Section 9.(B) of this Ordinance, addressing stormwater management ponds, drainage ditches, roadside ditches, and stormwater conveyances.

### **Section 9. Potential Uses and Associated Requirements**

- A. Approval for New Development
- The Stormwater Administrator shall issue an approval for new development only if the development application proposes to avoid impacts to riparian buffers defined in Section 8.(A) of this Ordinance, or where the application proposes to impact such buffers, it demonstrates that the applicant has done the following, as applicable:
1. Determined the activity is exempt from requirements of this Ordinance;
  2. Received an Authorization Certificate from the City pursuant to Section 10.A of this Ordinance;



3. For uses designated as Allowable with Mitigation in the Table of Uses in Section 9.(B), received approval of mitigation plan pursuant to Section 10.(C) of this Ordinance; and
4. Received a variance pursuant to Section 10.(B).

**B. Table of Uses**

The following chart sets out potential new uses within the buffer, or outside the buffer with impacts on the buffer, and categorizes them as exempt, allowable, or allowable with mitigation. All uses not categorized as exempt, allowable, or allowable with mitigation are considered prohibited and may not proceed within the riparian buffer or outside the buffer if the use would impact the buffer, unless a variance is granted pursuant to Section 10.(C) of this Ordinance, Variances. The requirements for each category are given in Section 9.(C) of this Section following the Table of Uses.

Use	Exempt *	Allowable *	Allowable with Mitigation*
<p>Access trails: Pedestrian access trails leading to the surface water, docks, fishing piers, boat ramps and other water dependent activities:</p> <ul style="list-style-type: none"> <li>• Pedestrian access trails that are restricted to the minimum width practicable and do not exceed 4 feet in width of buffer disturbance, and provided that installation and use does not result in removal of trees as defined in this Ordinance and no impervious surface is added to the riparian buffer</li> <li>• Pedestrian access trails that exceed 4 feet in width of buffer disturbance, the installation or use results in removal of trees as defined in this Ordinance or impervious surface is added to the riparian buffer</li> </ul>	X	X	
<p>Airport facilities:</p> <ul style="list-style-type: none"> <li>• Airport facilities that impact equal to or less than 150 linear feet or one-third of an acre of riparian buffer</li> <li>• Airport facilities that impact greater than 150 linear feet or one-third of an acre of riparian buffer</li> <li>• Activities necessary to comply with FAA requirements (e.g. radar uses or landing strips)<sup>1</sup></li> </ul>		X	X
<p>Archaeological activities</p>	X		
<p>Bridges</p>		X	
<p>Canoe Access provided that installation and use does not result in removal of trees as defined in this Ordinance and no impervious surface is added to the buffer.</p>	X		
<p>Dam maintenance activities:</p> <ul style="list-style-type: none"> <li>• Dam maintenance activities that do not cause additional buffer disturbance beyond the footprint of the existing dam or those covered under the U.S. Army Corps of Engineers Nationwide Permit No. 3</li> <li>• Dam maintenance activities that do cause additional buffer disturbance beyond the footprint of the existing dam or those not covered under the U.S. Army Corps of Engineers Nationwide Permit No.3</li> </ul>	X	X	



Use	Exempt *	Allowable *	Allowable with Mitigation*
Driveway crossings of streams and other surface waters subject to this Ordinance: <ul style="list-style-type: none"> <li>• Driveway crossings on single family residential lots that disturb equal to or less than 25 linear feet or 2,500 square feet of riparian buffer</li> <li>• Driveway crossings on single family residential lots that disturb greater than 25 linear feet or 2,500 square feet of riparian buffer</li> <li>• In a subdivision that cumulatively disturb equal to or less than 150 linear feet or one-third of an acre of riparian buffer</li> <li>• In a subdivision that cumulatively disturb greater than 150 linear feet or one-third of an acre of riparian buffer</li> </ul>	X	X  X	X
Driveway impacts other than crossing of a stream or other surface waters subject to this Ordinance			X
Fences: <ul style="list-style-type: none"> <li>• Fences provided that disturbance is minimized and installation does not result in removal of trees as defined in this Ordinance</li> <li>• Fences provided that disturbance is minimized and installation results in removal of trees as defined in this Ordinance</li> </ul>	X	X	
Fertilizer application: one-time application to establish vegetation	X		
Grading and revegetation in Zone Two provided that diffuse flow and the health of existing vegetation in Zone One is not compromised and disturbed areas are stabilized until they are revegetated.	X		

\* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 9.(C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Greenway / hiking trails designed, constructed and maintained to maximize nutrient removal and erosion protection, minimize adverse effects on aquatic life and habitat, and protect water quality to the maximum extent practical.		X	
Historic preservation	X		
Maintenance access on modified natural streams: a grassed travel way on one side of the water body when less impacting alternatives are not practical. The width and specifications of the travel way shall be only that needed for equipment access and operation. The travel way shall be located to maximize stream shading.		X	
<p>Mining activities:</p> <ul style="list-style-type: none"> <li>• Mining activities that are covered by the Mining Act provided that new riparian buffers that meet the requirements of Sections 8.(D) and 8.(E) of this Ordinance are established adjacent to the relocated channels</li> <li>• Mining activities that are not covered by the Mining Act OR where new riparian buffers that meet the requirements of Sections 8.(D) and 8.(E) of this Ordinance are not established adjacent to the relocated channels</li> <li>• Wastewater or mining dewatering wells with approved NPDES permit</li> </ul>	X	X	X
<p>Playground equipment:</p> <ul style="list-style-type: none"> <li>• Playground equipment on single family lots provided that installation and use does not result in removal of vegetation</li> <li>• Playground equipment installed on lands other than single-family lots or that requires removal of vegetation</li> </ul>	X	X	

\* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 9.(C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Ponds created by impounding streams and not used as stormwater BMPs: <ul style="list-style-type: none"> <li>• New ponds provided that a riparian buffer that meets the requirements of Sections 8.(D) and 8.(E) of this Ordinance is established adjacent to the pond</li> <li>• New ponds where a riparian buffer that meets the requirements of Sections 8.(D) and 8.(E) of this Ordinance is NOT established adjacent to the pond</li> </ul>		X	X
Protection of existing structures, facilities and stream banks when this requires additional disturbance of the riparian buffer or the stream channel		X	
Railroad impacts other than crossings of streams and other surface waters subject to this Ordinance.			X
Railroad crossings of streams and other surface waters subject to this Ordinance: <ul style="list-style-type: none"> <li>• Railroad crossings that impact equal to or less than 40 linear feet of riparian buffer</li> <li>• Railroad crossings that impact greater than 40 linear feet but equal to or less than 150 linear feet or one-third of an acre of riparian buffer</li> <li>• Railroad crossings that impact greater than 150 linear feet or one-third of an acre of riparian buffer</li> </ul>	X	X	X

\* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 9.(C) of this Ordinance.



Use	Exempt *	Allowable *	Allowable with Mitigation*
Road relocation: Relocation of existing private access roads associated with public road projects where necessary for public safety: <ul style="list-style-type: none"> <li>• Less than or equal to 2,500 square feet of buffer impact</li> <li>• Greater than 2,500 square feet of buffer impact</li> </ul>		X	X
Stormwater BMPs: <ul style="list-style-type: none"> <li>• Wet detention, bioretention, and constructed wetlands in Zone Two if diffuse flow of discharge is provided into Zone One</li> <li>• Wet detention, bioretention, and constructed wetlands in Zone One</li> </ul>		X	X
Scientific studies and stream gauging	X		
Streambank or shoreline stabilization		X	
Temporary roads, provided that the disturbed area is restored to pre-construction topographic and hydrologic conditions immediately after construction is complete and replanted immediately with comparable vegetation, except that tree planting may occur during the dormant season. A one-time application of fertilizer may be used to establish vegetation: At the end of five years the restored buffer shall comply with the restoration criteria in Section 10.(C)(7) of this Ordinance: <ul style="list-style-type: none"> <li>• Less than or equal to 2,500 square feet of buffer disturbance</li> <li>• Greater than 2,500 square feet of buffer disturbance</li> <li>• Associated with culvert installation or bridge construction or replacement.</li> </ul>	X	X X	

\* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 9.(C) of this Ordinance.





Use	Exempt *	Allowable *	Allowable with Mitigation*
Utility, electric, aerial, other than perpendicular crossings <sup>5</sup> : <ul style="list-style-type: none"> <li>• Impacts in Zone Two</li> <li>• Impacts in Zone One<sup>2,3</sup></li> </ul>		X	X
Utility, electric, underground, perpendicular crossings <sup>3,4,5</sup> : <ul style="list-style-type: none"> <li>• Disturb less than or equal to 40 linear feet of riparian buffer</li> <li>• Disturb greater than 40 linear feet of riparian buffer</li> </ul>	X	X	
Utility, electric, underground, other than perpendicular crossings <sup>4</sup> : <ul style="list-style-type: none"> <li>• Impacts in Zone Two</li> <li>• Impacts in Zone One<sup>1</sup></li> </ul>	X X		
Utility, non-electric, perpendicular crossings of streams and other surface waters subject to this Ordinance <sup>3,5</sup> : <ul style="list-style-type: none"> <li>• Disturb equal to or less than 40 linear feet of riparian buffer with a maintenance corridor equal to or less than 10 feet in width</li> <li>• Disturb equal to or less than 40 linear feet of riparian buffer with a maintenance corridor greater than 10 feet in width</li> <li>• Disturb greater than 40 linear feet but equal to or less than 150 linear feet of riparian buffer with a maintenance corridor equal to or less than 10 feet in width</li> <li>• Disturb greater than 40 linear feet but equal to or less than 150 linear feet of riparian buffer with a maintenance corridor greater than 10 feet in width</li> <li>• Disturb greater than 150 linear feet of riparian buffer</li> </ul>	X	X  X	X  X

\* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 9.(C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Utility, non-electric, other than perpendicular crossings <sup>4,5</sup> : <ul style="list-style-type: none"> <li>• Impacts in Zone Two</li> <li>• Impacts in Zone One<sup>1</sup></li> </ul>		X	X
Vegetation management: <ul style="list-style-type: none"> <li>• Emergency fire control measures provided that topography is restored</li> <li>• Mowing or harvesting of plant products in Zone Two</li> <li>• Planting vegetation to enhance the riparian buffer</li> <li>• Pruning forest vegetation provided that the health and function of the forest vegetation is not compromised</li> <li>• Removal of individual trees that are in danger of causing damage to dwellings, other structures or human life, or are imminently endangering stability of the streambank.</li> <li>• Removal of individual trees which are dead, diseased or damaged.</li> <li>• Removal of poison ivy</li> <li>• Removal of invasive exotic vegetation as defined in: <i>Smith, Cherri L. 1998. Exotic Plant Guidelines. Dept. of Environment and Natural Resources. Division of Parks and Recreation. Raleigh, NC. Guideline #30</i></li> </ul>	X  X X X  X  X X		
<ul style="list-style-type: none"> <li>• Vehicular access roads leading to water-dependent structures as defined in 15A NCAC 02B .0202, provided they do not cross the surface water and have minimum practicable width not exceeding ten feet.</li> </ul>		X	
<ul style="list-style-type: none"> <li>• Water dependent structures as defined in 15A NCAC 02B .0202 where installation and use result in disturbance to riparian buffers.</li> </ul>		X	

\* To qualify for the designation indicated in the column header, an activity must adhere to the limitations defined for it in a given listing as well as the requirements established in Section 9.(C) of this Ordinance.

Use	Exempt *	Allowable *	Allowable with Mitigation*
Water supply reservoirs: <ul style="list-style-type: none"> <li>• New reservoirs where a riparian buffer that meets the requirements of Sections 8.(D) and 8.(E) of this Ordinance is established adjacent to the reservoir</li> <li>• New reservoirs where a riparian buffer that meets the requirements of Sections 8.(D) and 8.(E) of this Ordinance is not established adjacent to the reservoir</li> </ul>		X	X
Water wells <ul style="list-style-type: none"> <li>• Single family residential water wells</li> <li>• All other water wells</li> </ul>	X	X	
Wetland, stream and buffer restoration that results in impacts to the riparian buffers: <ul style="list-style-type: none"> <li>• Wetland, stream and buffer restoration that requires NC Division of Water Quality approval for the use of a 401 Water Quality Certification</li> <li>• Wetland, stream and buffer restoration that does not require Division of Water Quality approval for the use of a 401 Water Quality Certification</li> </ul>	X	X	
Wildlife passage structures		X	

<sup>1</sup>Provided that:

- No heavy equipment is used in Zone One.
- Vegetation in undisturbed portions of the buffer is not compromised.
- Felled trees are removed by chain.
- No permanent felling of trees occurs in protected buffers or streams.
- Stumps are removed only by grinding.
- At the completion of the project the disturbed area is stabilized with native vegetation.
- Zones one and two meet the requirements of Sections 8.(D) and 8.(E)

<sup>2</sup>Provided that, in Zone One, all of the following BMPs for overhead utility lines are used. If all of these BMPs are not used, then the overhead utility lines shall require a no practical alternative evaluation by the City, as defined in Section 10.(A).

- A minimum zone of 10 feet wide immediately adjacent to the water body shall be managed such that only vegetation that poses a hazard or has the potential to grow tall enough to interfere with the line is removed.
- Woody vegetation shall be cleared by hand. No land grubbing or grading is allowed.
- Vegetative root systems shall be left intact to maintain the integrity of the soil. Stumps shall remain where trees are cut.
- Riprap shall not be used unless it is necessary to stabilize a tower.
- No fertilizer shall be used other than a one-time application to re-establish vegetation.

- Construction activities shall minimize the removal of woody vegetation, the extent of the disturbed area, and the time in which areas remain in a disturbed state.
- Active measures shall be taken after construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer.
- In wetlands, mats shall be utilized to minimize soil disturbance.

<sup>3</sup>Provided that poles or aerial infrastructure shall not be installed within 10 feet of a water body unless the City completes a no practical alternative evaluation as defined in Section 10.(A).

<sup>4</sup>Provided that, in Zone One, all of the following BMPs for underground utility lines are used. If all of these BMPs are not used, then the underground utility line shall require a no practical alternative evaluation by the City, as defined in Section 10.(A).

- Woody vegetation shall be cleared by hand. No land grubbing or grading is allowed.
- Vegetative root systems shall be left intact to maintain the integrity of the soil. Stumps shall remain, except in the trench where trees are cut.
- Underground cables shall be installed by vibratory plow or trenching.
- The trench shall be backfilled with the excavated soil material immediately following cable installation.
- No fertilizer shall be used other than a one-time application to re-establish vegetation.
- Construction activities shall minimize the removal of woody vegetation, the extent of the disturbed area, and the time in which areas remain in a disturbed state.
- Measures shall be taken upon completion of construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer.
- In wetlands, mats shall be utilized to minimize soil disturbance.

<sup>5</sup>Perpendicular crossings are those that intersect the surface water at an angle between 75 degrees and 105 degrees.

### C. Requirements for Categories of Uses

Uses designated in Section 9.(B) of this Section as exempt, allowable, and allowable with mitigation within a riparian buffer shall have the following requirements:

#### 1. Exempt.

Uses designated as exempt are permissible without authorization by the City provided that they adhere to the limitations of the activity as defined in Section 9.(B) of this Section, the Table of Uses. In addition, exempt uses shall be designed, constructed and maintained to minimize soil disturbance and to provide the maximum water quality protection practicable, including construction, monitoring, and maintenance activities.

#### 2. Allowable.

Uses designated as allowable may proceed provided that there are no practical alternatives to the requested use pursuant to Section 10.(A) of this Section. This includes construction, monitoring, and maintenance activities. These uses require written authorization from the City.

#### 3. Allowable with Mitigation.

Uses designated as allowable with mitigation may proceed provided that there are no practical alternatives to the requested use pursuant to Section 10.(A) of this Section and an appropriate mitigation strategy

has been approved pursuant to Section 10.(C). These uses require written authorization from the City.

### **Section 10. Permits Procedures, Requirements, and Approvals**

#### **A. Determination of No Practical Alternatives / Request for Authorization Certificate**

1. Persons who wish to undertake uses designated as allowable or allowable with mitigation shall submit a request for a “no practical alternatives” determination to the Stormwater Administrator. The applicant shall certify that the project meets all the following criteria for finding “no practical alternatives”:
  - a. The basic project purpose cannot be practically accomplished in a manner that would better minimize disturbance, preserve aquatic life and habitat, and protect water quality;
  - b. The use cannot practically be reduced in size or density, reconfigured or redesigned to better minimize disturbance, preserve aquatic life and habitat, and protect water quality; and
  - c. Best management practices shall be used if necessary to minimize disturbance, preserve aquatic life and habitat, and protect water quality.
2. The applicant shall also submit at least the following information in support of their assertion of “no practical alternatives”:
  - a. The name, address and phone number of the applicant;
  - b. The nature of the activity to be conducted by the applicant;
  - c. The location of the activity, including the jurisdiction;
  - d. A map of sufficient detail to accurately delineate the boundaries of the land to be utilized in carrying out the activity, the location and dimensions of any disturbance in riparian buffers associated with the activity, and the extent of riparian buffers on the land;
  - e. An explanation of why this plan for the activity cannot be practically accomplished, reduced or reconfigured to better minimize disturbance to the riparian buffer, preserve aquatic life and habitat and protect water quality; and
  - f. Plans for any best management practices proposed to be used to control the impacts associated with the activity.
3. Within 60 days of a submission that addresses Section 10.(A)(2) , the Stormwater Administrator shall review the entire project and make a finding of fact as to whether the criteria in Section 10.(A)(1) of this Section have been met. A finding of “no practical alternatives” shall result in issuance of an Authorization Certificate. Failure to act within 60 days shall be construed as a finding of “no practical alternatives” and an Authorization Certificate shall be issued to the applicant unless one of the following occurs:
  - a. The applicant agrees, in writing, to a longer period;
  - b. The Stormwater Administrator determines that the applicant has failed to furnish requested information necessary to the Stormwater Administrator’s decision;
  - c. The final decision is to be made pursuant to a public hearing; or

- d. The applicant refuses access to its records or premises for the purpose of gathering information necessary to the Stormwater Administrator's decision.
4. The Stormwater Administrator may attach conditions to the Authorization Certificate that support the purpose, spirit and intent of this Ordinance.
5. Any appeals of determinations regarding Authorization Certificates shall be referred to the Director of the Division of Water Quality, c/o the 401 Oversight Express Permitting Unit, or its successor. The Director's decision is subject to review as provided in G.S. 150B Articles 3 and 4.

#### B. Variances

##### 1. Requirements for Variances.

Persons who wish to undertake prohibited uses may pursue a variance. The City Council may grant minor variances. For major variances, the Stormwater Administrator shall prepare preliminary findings and submit them to the Division of Water Quality, 401 Oversight Express Permitting Unit, or its successor for approval by the Environmental Management Commission. The variance request procedure shall be as follows:

- a. For any variance request, the City Council shall make a finding of fact as to whether there are practical difficulties or unnecessary hardships that prevent compliance with the riparian buffer protection requirements. A finding of practical difficulties or unnecessary hardships shall require that the following conditions are met:
  - i. If the applicant complies with the provisions of this Ordinance, he/she can secure no reasonable return from, nor make reasonable use of, his/her property. Merely proving that the variance would permit a greater profit from the property shall not be considered adequate justification for a variance. Moreover, the City Council shall consider whether the variance is the minimum possible deviation from the terms of this Ordinance that shall make reasonable use of the property possible;
  - ii. The hardship results from application of this Ordinance to the property rather than from other factors such as deed restrictions or other hardship;
  - iii. The hardship is due to the physical nature of the applicant's property, such as its size, shape, or topography, such that compliance with provisions of this ordinance would not allow reasonable use of the property;
  - iv. The applicant did not cause the hardship by knowingly or unknowingly violating this Ordinance;
  - v. The applicant did not purchase the property after the effective date of this Ordinance, and then request a variance; and
  - vi. The hardship is rare or unique to the applicant's property.

- b. The variance is in harmony with the general purpose and intent of the State’s riparian buffer protection requirements and this Ordinance and preserves its spirit; and
- c. In granting the variance, the public safety and welfare have been assured, water quality has been protected, and substantial justice has been done.

2. Minor Variances

A minor variance request pertains to activities that will impact only Zone Two of the riparian buffer. Minor variance requests shall be reviewed and approved based on the criteria in Section 10.(B)(1) by the City Council pursuant to G.S. 160A-Article 19. The City Council may attach conditions to the variance approval that support the purpose, spirit and intent of the riparian buffer protection program. Request for appeals to decisions made by the City Council shall be made in writing to the Director of the Division of Water Quality c/o the 401 Oversight Express Permitting Unit, or its successor. The Director’s decision is subject to review as provided in G.S. 150B Articles 3 and 4.

3. Major Variances

A major variance request pertains to activities that will impact any portion of Zone One or any portion of both Zones One and Two of the riparian buffer. If the City has determined that a major variance request meets the requirements in Section 9.(C)(3) through 10.(B)(1), then it shall prepare a preliminary finding and submit it to the NC Environmental Management Commission c/o the Division of Water Quality, 401 Oversight Express Permitting Unit, or its successor, for approval. Within 90 days after receipt by the City, the Commission shall review preliminary findings on major variance requests and take one of the following actions: approve, approve with conditions and stipulations, or deny the request. Appeals from a Commission decision on a major variance request are made on judicial review to Superior Court.

C. Mitigation

- 1. This item shall apply to persons who wish to impact a riparian buffer in the Jordan watershed when one of the following applies:
  - d. A person has received an Authorization Certificate pursuant to Section 10.(A) of this Ordinance for a proposed use that is designated as “allowable with mitigation;” or
  - e. A person has received a variance pursuant to Section 10.(B) of this Ordinance and is required to perform mitigation as a condition of a variance approval.
- 2. Issuance of the Mitigation Approval  
The Stormwater Administrator shall issue a mitigation approval upon determining that a proposal meets the requirements set out in this Ordinance. The approval shall identify at a minimum the option chosen, the required and proposed areas, and either the mitigation location or offset payment amount as applicable.
- 3. Options for Meeting the Mitigation Requirement



The mitigation requirement may be met through one of the following options:

- a. Payment of a compensatory mitigation fee to the Riparian Buffer Restoration Fund pursuant to 15A NCAC 02B .0269 (Jordan Water Supply Nutrient Strategy: Riparian Buffer Mitigation Fees to the NC Ecosystem Enhancement Program) contingent upon acceptance of payments by the NC Ecosystem Enhancement Program, or to a private mitigation bank that complies with banking requirements of the US Army Corps of Engineers, currently set out at <http://www.saw.usace.army.mil/WETLANDS/Mitigation/mitbanks.html> or from the US Army Corps of Engineers, P.O. Box 1890, Wilmington, NC, 28402-1890, and the applicable trading criteria in Rule 15A NCAC 02B .0273;
- b. Donation of real property or of an interest in real property pursuant to Section 10.(C)(6) of this Ordinance; or
- c. Restoration or enhancement of a non-forested riparian buffer pursuant to the requirements of Section 10.(C)(7) of this Ordinance.

4. The Area of Mitigation

The Stormwater Administrator shall determine the required area of mitigation, which shall apply to all mitigation options identified in Section 10.(C)(3) of this Ordinance and as further specified in the requirements for each option set out in this Section, according to the following:

- a. The impacts in square feet to each zone of the riparian buffer shall be determined by the Stormwater Administrator by adding the following:
  - i. The area of the footprint of the use causing the impact to the riparian buffer;
  - ii. The area of the boundary of any clearing and grading activities within the riparian buffer necessary to accommodate the use; and
  - iii. The area of any ongoing maintenance corridors within the riparian buffer associated with the use.
- b. The required area of mitigation shall be determined by applying the following multipliers to the impacts determined in Section 10.(4)(a) of this Ordinance to each zone of the riparian buffer:
  - i. Impacts to Zone One of the riparian buffer shall be multiplied by three;
  - ii. Impacts to Zone Two of the riparian buffer shall be multiplied by one and one-half; and
  - iii. Impacts to wetlands within Zones One and Two of the riparian buffer that are subject to mitigation under 15A NCAC 2H .0506 shall comply with the mitigation ratios in 15A NCAC 2H .0506.

5. The Location of Mitigation

For any option chosen, the mitigation effort shall be located within the same subwatershed of the Jordan watershed, as defined in 15A NCAC 02B.0262, and the same distance from the Jordan Reservoir as the proposed impact, or closer to the Reservoir than the impact, and as close to the location of the impact as feasible. Alternatively, the applicant may propose mitigation anywhere within the same subwatershed of the Jordan watershed, as defined in 15A NCAC 02B.0262, provided that the mitigation proposal accounts for differences in delivery of nutrients to the affected arm of Jordan Reservoir resulting from differences between the locations of the buffer impact and mitigation. Additional location requirements for the property donation option are enumerated in Section 10.(C)(6)(c)(i) of this Ordinance.

6. Donation of Property

Persons who choose to satisfy their mitigation determination by donating real property or an interest in real property shall meet the following requirements:

- a. The donation of real property interests may be used to either partially or fully satisfy the payment of a compensatory mitigation fee to the Riparian Buffer Restoration Fund pursuant to 15A NCAC 02B .0273. The value of the property interest shall be determined by an appraisal performed in accordance with Section 10.(C)(6)(d)(iv) of this Ordinance. The donation shall satisfy the mitigation determination if the appraised value of the donated property interest is equal to or greater than the required fee. If the appraised value of the donated property interest is less than the required fee calculated pursuant to 15A NCAC 02B .0273, the applicant shall pay the remaining balance due.
- b. The donation of conservation easements to satisfy compensatory mitigation requirements shall be accepted only if the conservation easement is granted in perpetuity.
- c. Donation of real property interests to satisfy the mitigation determination shall be accepted only if such property meets all of the following requirements:
  - i. In addition to the location requirements of Section 10.(C)(5) of this Ordinance, the property shall be located within an area that is identified as a priority for restoration in, or is otherwise consistent with the goals of, the *Basinwide Wetlands and Riparian Restoration Plan for the Cape Fear River Basin* developed by NC Division of Water Quality pursuant to G.S. 143-214.10;
  - ii. The property shall contain riparian buffers not currently protected by the State’s riparian buffer protection program that are in need of restoration as defined in Section 10.(7)(d) of this Ordinance;
  - iii. The restorable riparian buffer on the property shall have a minimum length of 1000 linear feet along a surface water and a

- minimum width of 50 feet as measured horizontally on a line perpendicular to the surface water;
- iv. The size of the restorable riparian buffer on the property to be donated shall equal or exceed the area of mitigation responsibility determined pursuant to Section 10.(C)(4) of this Ordinance;
  - v. Restoration shall not require removal of man-made structures or infrastructure;
  - vi. The property shall be suitable to be successfully restored, based on existing hydrology, soils, and vegetation;
  - vii. The estimated cost of restoring and maintaining the property shall not exceed the value of the property minus site identification and transaction costs;
  - viii. The property shall not contain any building, structure, object, site, or district that is listed in the National Register of Historic Places established pursuant to Public Law 89-665, 16 U.S.C. 470 as amended;
  - ix. The property shall not contain any hazardous substance or solid waste;
  - x. The property shall not contain structures or materials that present health or safety problems to the general public. If wells, septic, water or sewer connections exist, they shall be filled, remediated or closed at owner's expense in accordance with state and local health and safety regulations;
  - xi. The property and adjacent properties shall not have prior, current, and known future land use that would inhibit the function of the restoration effort; and
  - xii. The property shall not have any encumbrances or conditions on the transfer of the property interests.
- d. At the expense of the applicant or donor, the following information shall be submitted to the City with any proposal for donations or dedications of interest in real property:
- i. Documentation that the property meets the requirements laid out in Section 10.(C)(6)(c) of this Ordinance;
  - ii. US Geological Survey 1:24,000 (7.5 minute) scale topographic map, county tax map, USDA Natural Resource Conservation Service County Soil Survey Map, and county road map showing the location of the property to be donated along with information on existing site conditions, vegetation types, presence of existing structures and easements;
  - iii. A current property survey performed in accordance with the procedures of the North Carolina Department of Administration, State Property Office as identified by the State Board of Registration for Professional Engineers and Land Surveyors in "Standards of Practice for Land Surveying in North Carolina." Copies may be obtained from the North Carolina State Board of Registration for Professional Engineers

and Land Surveyors, 3620 Six Forks Road, Suite 300, Raleigh, North Carolina 27609;

- iv. A current appraisal of the value of the property performed in accordance with the procedures of the North Carolina Department of Administration, State Property Office as identified by the Appraisal Board in the "Uniform Standards of Professional North Carolina Appraisal Practice." Copies may be obtained from the Appraisal Foundation, Publications Department, P.O. Box 96734, Washington, D.C. 20090-6734; and
  - v. A title certificate.
7. Riparian Buffer Restoration or Enhancement
- Persons who choose to meet their mitigation requirement through riparian buffer restoration or enhancement shall meet the following requirements:
- a. The applicant may restore or enhance a non-forested riparian buffer if either of the following applies:
    - i. The area of riparian buffer restoration is equal to the required area of mitigation determined pursuant to Section 10.(C)(4) of this Ordinance; or
    - ii. The area of riparian buffer enhancement is three times larger than the required area of mitigation determined pursuant to Section 10.(C)(4) of this Ordinance;
  - b. The location of the riparian buffer restoration or enhancement shall comply with the requirements in Section 10.(C)(5) of this Ordinance;
  - c. The riparian buffer restoration or enhancement site shall have a minimum width of 50 feet as measured horizontally on a line perpendicular to the surface water;
  - d. Enhancement and restoration shall both have the objective of establishing a forested riparian buffer according to the requirements of this Item. Enhancement shall be distinguished from restoration based on existing buffer conditions. Where existing trees are sparse, that is greater than or equal to 100 trees per acre but less than 200 trees per acre, a buffer may be enhanced. Where existing woody vegetation is absent, that is less than 100 trees per acre, a buffer may be restored;
  - e. The applicant shall first receive an Authorization Certificate for the proposed use according to the requirements of Section 10.(A) of this Ordinance. After receiving this determination, the applicant shall submit a restoration or enhancement plan for approval by the Stormwater Administrator. The restoration or enhancement plan shall contain the following:
    - i. A map of the proposed restoration or enhancement site;
    - ii. A vegetation plan. The vegetation plan shall include a minimum of at least two native hardwood tree species planted at a density sufficient to provide 320 trees per acre at maturity;

- iii. A grading plan. The site shall be graded in a manner to ensure diffuse flow through the riparian buffer;
- iv. A fertilization plan; and
- v. A schedule for implementation;
- f. Within one year after the Stormwater Administrator has approved the restoration or enhancement plan, the applicant shall present proof to the Stormwater Administrator that the riparian buffer has been restored or enhanced. If proof is not presented within this timeframe, then the person shall be in violation of both the State's and the City's riparian buffer protection program;
- g. The mitigation area shall be placed under a perpetual conservation easement that will provide for protection of the property's nutrient removal functions; and
- h. The applicant shall submit annual reports for a period of five years after the restoration or enhancement showing that the trees planted have survived and that diffuse flow through the riparian buffer has been maintained. The applicant shall replace trees that do not survive and restore diffuse flow if needed during that five-year period.

## **Section 11. Compliance and Enforcement**

### **A. Site Inspections**

1. Agents, officials, or other qualified persons authorized by the City may periodically inspect riparian buffers to ensure compliance with this ordinance.
2. Notice of the right to inspect shall be included in the letter of approval of each variance and buffer authorization.
3. Authority to Enter Property and Conduct Investigations and Inspections.

Authorized agents, officials or other qualified persons shall have the authority, upon presentation of proper credentials, to enter and inspect at reasonable times any property, public or private, for the purpose of investigating and inspecting the site of any riparian buffer. No person shall willfully resist, delay, or obstruct an authorized representative, employee, or agent of the City, including the Stormwater Administrator, while that person is inspecting or attempting to inspect a riparian buffer nor shall any person obstruct, hamper or interfere with any such representative while in the process of carrying out their official duties. The Stormwater Administrator shall have the power to conduct such investigations as deemed reasonably necessary to carry out the duties as prescribed in this Ordinance.

4. Notice of Violation
  - a. If it is determined that a person has failed to comply with the requirements of this Ordinance, or rules, or orders adopted or issued pursuant to this Ordinance, a notice of violation shall be served upon that person. The notice may be served by any means authorized under G.S. 1A-1, rule 4. In the event service cannot be accomplished by registered or certified mail, it may be

accomplished in any manner provided in rule (4)j of the North Carolina Rules of Civil Procedure.

- b. The notice shall specify the violation and inform the person of the actions that need to be taken to comply with this Ordinance, or rules or orders adopted pursuant to this Ordinance. The notice shall direct the person to correct the violation within a specified reasonable time. The notice shall inform the person that any person who violates or fails to act in accordance with any of the provisions of this Ordinance or rules or orders adopted or issued pursuant to this Ordinance is subject to the civil and criminal penalties and other enforcement actions as provided in this Ordinance.

5. Power to Require Statements

The City shall also have the power to require written statements, or the filing of reports under oath, with respect to pertinent questions relating to land-disturbing activities.

B. Civil Penalties

1. Assessment of Penalties

Any person who violates or fails to act in accordance with any of the provisions of this Ordinance or rules or orders adopted or issued pursuant to this Ordinance shall be subject to a civil penalty. A civil penalty for a violation may be assessed in an amount not to exceed ten thousand dollars (\$10,000) per day. If any violation for which a penalty may be assessed is continuous, a civil penalty may be assessed for each day of the violation in an amount not to exceed twenty-five thousand dollars (\$25,000) per day for as long as the violation occurs. Each day of a continuing violation shall constitute a separate violation under Section 11.(B)(1).

2. Notice of Civil Penalty Assessment

The Stormwater Administrator shall provide written notice of the civil penalty amount and the basis for the assessment to the person assessed. The notice of civil penalty assessment shall be served by any means authorized under G.S. 1A-1, Rule 4, and shall direct the violator to either pay the assessment or contest the assessment, within thirty (30) days after receipt of the notice of assessment by written demand for a hearing.

3. Hearing

A hearing on the civil penalty shall be conducted by the City Council within 45 days after the date the written demand for the hearing is received by the City.

4. Final Decision.

The City Council shall issue a final decision on the civil penalty within 20 days of the recommended decision. A copy of the final decision shall be served on the violator by any means authorized under G.S. 1A-1, Rule 4.

5. Appeal of Final Decision.

The decision of the City Council shall be subject to Superior Court review of the proceedings in the nature of certiorari. All Superior

Court review of City Council decisions shall be performed by the Superior Court of Alamance County. Petition for review by the Superior Court of Alamance County shall be filed with the Clerk of Superior Court of Alamance County within 30 days after the latter of the following:

1. The decision of the City Council is filed; or
  2. A written copy of the decision is delivered to any aggrieved party that has filed a written request for such copy with the City Council at the time of its hearing of the case.
6. Demand for Payment of Penalty  
An assessment that is not contested is due when the violator is served with a notice of assessment. The civil penalty must be paid within 30 days or the assessment, if not appealed, or within 30 days after the conclusion of the administrative or judicial review of the assessment. If payment is not received within 30 days after demand for payment is made, the City may institute a civil action to recover the amount of the assessment. The civil action may be brought in the Superior Court where the violation occurred, or the violator's residence or principal place of business is located. Such civil actions must be filed within three (3) years of the date the assessment was due.
7. Use of Penalties  
Civil penalties collected pursuant to this Ordinance shall be credited to the general fund of the City as nontax revenue.

C. Criminal Penalties

1. Any person who negligently, knowingly or willingly violates any provision of this Ordinance or rule or order adopted pursuant to this Ordinance, shall be subject to the provisions of G.S. 14-4.

D. Injunctive Relief

1. Civil Action in Superior Court  
Whenever the governing body of the City has reasonable cause to believe that any person is violating or threatening to violate this Ordinance or any rule or order adopted or issued pursuant to this Ordinance, it may, either before or after the institution of any other action or proceeding authorized by this Ordinance, institute a civil action in the name of the City for injunctive relief to restrain the violation or threatened violation. The action shall be brought in the Superior Court of Alamance County.
2. Order to Cease Violation  
Upon determination by a court that an alleged violation is occurring or is threatened, the court shall enter any order or judgment that is necessary to abate the violation, to ensure that restoration is performed, or to prevent the threatened violation. The institution of an action for injunctive relief under this section shall not relieve any party to the proceedings from any civil or criminal penalty prescribed for violations of this Ordinance.

E. Compliance with Requirements

Any person engaged in new activities as defined by this Ordinance who fails to meet the requirements of this Ordinance shall be deemed in violation of this Ordinance.

**Section 12. Severability**

If any one or more sections or portions thereof of this Ordinance are held to be invalid or unenforceable, all other sections and portions thereof shall nevertheless continue in full force and effect.

**Section 13. Effective Date**

This Ordinance will become effective upon approval by the NC Environmental Management Commission and adoption by the City of Burlington City Council.

**Section 14. Revisions to this Ordinance**

The City shall review any revisions to the Model Local Riparian Buffer Protection Ordinance made by the Environmental Management Commission and, within 60 days of receipt of the recommended revisions, submit draft amendments to the Commission for its consideration and comments. Within 90 days after receipt of the Commissions' comments, the City will incorporate amendments into this ordinance.

**Section 15. Definitions**

For the purpose of this Ordinance, these terms shall be defined as follows:

- A. „Access Trails“ means pedestrian trails constructed of pervious or impervious surfaces and related structures to access a surface water, including boardwalks, steps, rails, and signage.
- B. „Airport Facilities“ means all properties, facilities, buildings, structures, and activities that satisfy or otherwise fall within the scope of one or more of the definitions or uses of the words or phrases „air navigation facility“, „airport“, or „airport protection privileges“ under G.S. 63-1; the definition of „aeronautical facilities“ in G.S. 63-79(1); the phrase „airport facilities“ as used in G.S. 159-48(b)(1); the phrase „aeronautical facilities“ as defined in G.S. 159-81 and G.S. 159-97; and the phrase „airport facilities and improvements“ as used in Article V, Section 13, of the North Carolina Constitution, which shall include, without limitation, any and all of the following: airports, airport maintenance facilities, clear zones, drainage ditches, fields, hangars, landing lighting, airport and airport-related offices, parking facilities, related navigational and signal systems, runways, stormwater outfalls, terminals, terminal shops, and all appurtenant areas used or suitable for airport buildings or other airport facilities, and all appurtenant rights-of-way; restricted landing areas; any structures, mechanisms, lights, beacons, marks, communicating systems, or other instrumentalities or devices used or useful as an aid, or constituting an advantage or convenience to the safe taking off, navigation, and landing of aircraft, or the safe and efficient operation or maintenance of an airport or restricted landing area; easements through, or interests in, air space over land or water, interests in airport hazards outside the boundaries of airports or restricted landing areas, and other protection privileges, the acquisition or control of which is necessary to ensure safe approaches to the landing areas of airports and restricted landing areas, and the safe and efficient



operation thereof and any combination of any or all of such facilities. Notwithstanding the foregoing, the following shall not be included in the definition of „airport facilities“:

1. Satellite parking facilities;
  2. Retail and commercial development outside of the terminal area, such as rental car facilities; and
  3. Other secondary development, such as hotels, industrial facilities, free-standing offices and other similar buildings, so long as these facilities are not directly associated with the operation of the airport, and are not operated by a unit of government or special governmental entity such as an airport authority, in which case they are included in the definition of „airport facilities“.
- C. „Channel“ means a natural water-carrying trough cut vertically into low areas of the land surface by erosive action of concentrated flowing water or a ditch or canal excavated for the flow of water.
- D. „DBH“ means diameter at breast height of a tree measured at 4.5 feet above ground surface level.
- E. „Development“ means the same as defined in Rule 15A NCAC 2B .0202(23).
- F. „Ditch or canal“ means a man-made channel other than a modified natural stream constructed for drainage purposes that is typically dug through inter-stream divide areas. A ditch or canal may have flows that are perennial, intermittent, or ephemeral and may exhibit hydrological and biological characteristics similar to perennial or intermittent streams.
- G. „Ephemeral stream“ means a feature that carries only stormwater in direct response to precipitation with water flowing only during and shortly after large precipitation events. An ephemeral stream may or may not have a well-defined channel, the aquatic bed is always above the water table, and stormwater runoff is the primary source of water. An ephemeral stream typically lacks the biological, hydrological, and physical characteristics commonly associated with the continuous or intermittent conveyance of water.
- H. „Existing development“ means development, other than that associated with agricultural or forest management activities, that meets one of the following criteria:
1. It either is built or has established a vested right based on statutory or common law as interpreted by the courts, for projects that do not require a state permit, as of the effective date of either local new development stormwater programs implemented under Rule 15A NCAC 2B .0265 (Jordan Water Supply Nutrient Strategy: Stormwater Management for New Development) or, for projects requiring a state permit, as of the applicable compliance date established in Rule 15A NCAC 2B .0271 (Jordan Water Supply Nutrient Strategy: Stormwater Management for New Development), Items (5) and (6); or
  2. It occurs after the compliance date set out in Sub-Item (4)(d) of Rule .0265 (Jordan Water Supply Nutrient Strategy: Stormwater Management for New Development) but does not result in a net increase in built-upon area.

- I. „Greenway / Hiking Trails“ means pedestrian trails constructed of pervious or impervious surfaces and related structures including but not limited to boardwalks, steps, rails, and signage, and that generally run parallel to the shoreline.
- J. „High Value Tree“ means a tree that meets or exceeds the following standards: for pine species, 14-inch DBH or greater or 18-inch or greater stump diameter; or for hardwoods and wetland species, 16-inch DBH or greater or 24-inch or greater stump diameter.
- K. „Intermittent stream“ means a well-defined channel that contains water for only part of the year, typically during winter and spring when the aquatic bed is below the water table. The flow may be heavily supplemented by stormwater runoff. An intermittent stream often lacks the biological and hydrological characteristics commonly associated with the continuous conveyance of water.
- L. „Jordan nutrient strategy“ or „Jordan water supply nutrient strategy“ means the set of Rules 15A NCAC 2B .0262 through .0273 and .0311(p).
- M. „Jordan Reservoir“ means the surface water impoundment operated by the US Army Corps of Engineers and named B. Everett Jordan Reservoir, as further delineated for purposes of the Jordan nutrient strategy in Rule 15A NCAC 2B .0262(4).
- N. „Jordan watershed“ means all lands and waters draining to B. Everett Jordan Reservoir.
- O. „New Development“ means any development project that does not meet the definition of existing development set out in this Ordinance.
- P. „Perennial stream“ means a well-defined channel that contains water year round during a year of normal rainfall with the aquatic bed located below the water table for most of the year. Groundwater is the primary source of water for a perennial stream, but it also carries stormwater runoff. A perennial stream exhibits the typical biological, hydrological, and physical characteristics commonly associated with the continuous conveyance of water.
- Q. „Perennial waterbody“ means a natural or man-made basin, including lakes, ponds, and reservoirs, that stores surface water permanently at depths sufficient to preclude growth of rooted plants. For the purpose of the State’s riparian buffer protection program, the waterbody must be part of a natural drainage way (i.e., connected by surface flow to a stream).
- R. „Shoreline stabilization“ is the in-place stabilization of an eroding shoreline. Stabilization techniques which include “soft” methods or natural materials (such as root wads, or rock vanes) may be considered as part of a restoration design. However, stabilization techniques that consist primarily of “hard” engineering, such as concrete lined channels, riprap, or gabions, while providing bank stabilization, shall not be considered stream restoration.
- S. „Stream restoration“ is defined as the process of converting an unstable, altered or degraded stream corridor, including adjacent riparian zone and flood-prone areas to its natural or referenced, stable conditions considering recent and future watershed conditions. This process also includes restoring the geomorphic dimension, pattern, and profile as well as biological and chemical integrity, including transport of water and sediment produced by the

stream's watershed in order to achieve dynamic equilibrium. „Referenced“ or „referenced reach“ means a stable stream that is in dynamic equilibrium with its valley and contributing watershed. A reference reach can be used to develop natural channel design criteria for stream restoration projects.

- T. „Stream“ means a body of concentrated flowing water in a natural low area or natural channel on the land surface.
- U. „Stump diameter“ means the diameter of a tree measured at six inches above the ground surface level.
- V. „Surface waters“ means all waters of the state as defined in G.S. 143-212 except underground waters
- W. „Tree“ means a woody plant with a DBH equal to or exceeding five inches or a stump diameter exceeding six inches.
- X. „Temporary road“ means a road constructed temporarily for equipment access to build or replace hydraulic conveyance structures such as bridges, culverts, pipes or water dependent structures, or to maintain public traffic during construction.

*APPENDIX F- JORDAN LAKE STAGE ONE PROGRAM*



December 30, 2009

Mike Randall  
NC DENR, Division of Water Quality  
Stormwater Permitting Unit  
1617 Mail Service Center  
Raleigh, NC 27699-1617

Subject: City of Burlington: Jordan Lake Stage 1 Adaptive Management Programs  
for Existing Development Submission and Narrative

Dear Mr. Randall:

On behalf of the City of Burlington we are submitting a Stage 1 Adaptive Management Program for Existing Development in the Jordan Lake Watershed. Please find enclosed with this cover letter and narrative the following documents:

1. Jordan Nutrient Strategy Stage 1 Adaptive Management Program General Information Sheet.
2. Existing Development Retrofit Project Identification Program.

The City is a NPDES Phase II community and is using its Phase II programs to meet the first four requirements of the Jordan Lake Adaptive Management Program as instructed in guidance from NC DWQ. The retrofit program being submitted addresses the requirements of the final element of the Jordan Lake Adaptive Management Program.

If you have any questions or need any further information while reviewing this Adaptive Management Program please do not hesitate to contact me at (336) 226-5534 or through email at [josh@awck.com](mailto:josh@awck.com).

Sincerely,

Alley, Williams, Carmen, and King, Inc.

A handwritten signature in blue ink, appearing to read 'Joshua S. Johnson', is written over the company name.

Joshua S. Johnson, P.E.

cc: Michael Layne, Field Operations Manager

**JORDAN NUTRIENT STRATEGY STAGE 1**  
**ADAPTIVE MANAGEMENT PROGRAM FOR EXISTING DEVELOPMENT -**  
**GENERAL INFORMATION**

This form is for use by local governments in the Jordan Lake watershed that are required to implement a Stage 1 adaptive management program for their existing development according to Session Law 2009-216. A complete submittal package includes this form and three copies of the Stage 1 adaptive management program narrative. Incomplete submittals may be returned to the applicant.

**I. APPLICANT STATUS INFORMATION**

Name of Local Government	City of Burlington
County(s)	Alamance
Approximate Jurisdictional Area in Jordan Watershed (mi <sup>2</sup> )	26
Subwatershed(s) (Haw, LNH, UNH)	Haw River Watershed
Approximate Population in Jordan Watershed	46,000

**II. EXISTING LOCAL WATER QUALITY PROGRAMS**

Local Water Supply Watershed Program	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
NPDES Phase II Stormwater Program	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
NPDES Phase II Permit #: NCS000428	

**III. RELIANCE ON ANOTHER ENTITY TO SATISFY ONE OR MORE OF YOUR PROGRAM OBLIGATIONS**

(If more than one, attach additional sheets)

Do you intend that another entity perform one or more of your program obligations?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If yes, identify each entity and the element they will be implementing	
• Name of Entity	PTCOG Stormwater Smart
• Element they will implement	Public Education and Outreach
• Contact Person	Elizabeth Jernigan
• Contact Address	2216 West Meadowview Road, Suite 201, Greensboro, NC 27407
• Contact Telephone Number	336-294-4950
Are legal agreements in place to establish responsibilities?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

**IV. CONTACT INFORMATION**

Provide the following information for the person/position that will be responsible for day to day implementation and oversight of the Stage I adaptive management program.

Name of Contact Person	Michael Layne
Title	Field Operations Manager
Street Address	1103 South Mebane Street
PO Box	
City	Burlington
State	NC
Zip	27215
Telephone Number	336-222-5140
Fax Number	336-222-5142
E-Mail Address	<a href="mailto:mlayne@ci.burlington.nc.us">mlayne@ci.burlington.nc.us</a>

# **City of Burlington**

***Existing Development***

***Retrofit***

***Project***

***Identification Program***

***Jordan Lake Adaptive  
Management Stage One  
Program***

**December 2009**

Prepared by:



alley, williams, carmen & king, inc.  
engineers and architects  
740 chapel hill road - post office box 1179  
burlington, north carolina 27216-1179



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The City of Burlington is located within the Jordan Lake Watershed and is required to submit a Stage 1 Adaptive Management Program to reduce existing nutrient loading in the Jordan Lake Watershed. This requirement is included in the Jordan Lake Nutrient Strategy that was passed by the NC General Assembly in the summer and fall of 2009. This program will be reviewed by the North Carolina Department of Environment and Natural Resources, Division of Water Quality (NCDENR-DWQ). These rules require the City to develop stormwater programs that address five elements:

- Public Education and Outreach
- Mapping of Municipal Separate Storm Sewer System
- Illicit Discharge Detection and Elimination
- Program to Ensure Maintenance of BMP's owned and operated by Local Governments
- **Program to Identify Retrofit Opportunities**

Each element requires a series of Best Management Practice's (BMP's) to be developed and implemented and the City's NPDES Phase II Permit and Program covers the first four elements of the Stage 1 Adaptive Management Program for Jordan Lake. These BMP's are outlined in the October 13, 2009 Memo from Jason Robinson of NC DWQ and in the Guidance for preparing Stage One Adaptive Management Programs distributed by NC DWQ in November 2009. Both of these documents have been used to create this retrofit program that addresses the final element of the Adaptive Management Program.

### Retrofit Program Introduction

Stormwater Retrofits may be either structurally built devices that control stormwater runoff or non-structural practices that seek to reduce pollution, and nutrients, from being carried downstream by stormwater runoff. By either controlling stormwater runoff or reducing the pollution in the runoff, stormwater retrofits reduce downstream pollution in streams, rivers, and lakes. Typical structural stormwater retrofits are stormwater wetlands, bio-retention basins, water quality ponds, and other devices found in the NC Division of Water Quality Best Management Practices Manual (NC DWQ BMP Manual). Non-structural retrofits include but are not limited to fertilizer programs, reducing animal waste programs, urban forestry programs, and leaking septic tank replacement programs.

This retrofit program is intended to provide a framework for identifying retrofit opportunities to reduce nutrient loading in the Jordan Lake Watershed. The City of Burlington is within the Haw River Watershed that flows into Jordan Lake. Jordan Lake is a eutrophic lake that has an excess of nutrients flowing into the lake from both Point Source and Non-Point Source runoff. The goal of communities in the Haw River Watershed, per the Jordan Lake Nutrient Strategy, is to reduce Nitrogen loading by 8% and Phosphorous loading by 5%. By creating a list of retrofit opportunities the City of Burlington will increase the public perception of nutrient loading issues, will be complying with the Jordan Nutrient Strategy, and will be preparing for potential future projects.

The City of Burlington will use this program annually in a review of the stormwater program that will include reviewing the public education program, reviewing the illicit discharge program, and using this program to have an accurate and up to date list of potential retrofit projects.

## Stormwater Retrofit Opportunity Identification Program

- A. Establish Committee to Review Potential Projects
- B. Compile a discussion list of potential projects.
- C. Evaluate potential projects.
- D. Identify projects and Notify NC DWQ prior to December 31<sup>st</sup> each year of projects chosen.

### **A. Establish Committee to Review Potential Projects.**

A Committee is to be established at the City Manager's direction. The committee should consist of a minimum of 3 people and should include one of the following:

- 1. City Manager (or his designee).
- 2. City Engineer
- 3. Stormwater Administrator.

The City Manager, City Engineer, and Stormwater Administrator are expected to have some knowledge of stormwater and municipal construction. Additionally the Public Works Director, Water Resources Director, and a representative of the City Council are encouraged to be a part of the committee. This committee is to meet annually and is responsible for compiling and maintaining a list of potential retrofit projects. This list shall comply with Table 1 below for the number of retrofits:

**Table 1: Minimum Number of Existing Development Nutrient Load-Reducing Projects**

Population in the Jordan Lake Watershed	Minimum Number of Existing Development Load Reducing Activities to be Identified Annually
Less than 15,000	1
15,000-30,000	2
30,000-60,000	3
60,000+	4

### **B. Compile a List of Potential Retrofit Projects.**

A discussion list of potential retrofit projects is to be compiled by the committee or its representatives. This discussion list should have a minimum of twice as many projects on it as are required to be chosen in Table 1 above. Projects for the discussion list should be compiled from suggestions from the committee, the City Council, city staff, and citizens. The discussion list may include projects that have obvious faults and projects that have been selected in the past. The discussion list is intended to grow as time goes on and for repeat projects to be evaluated with respect current conditions.

Typical Projects for the discussion list may be installing a rain garden at a municipally owned park, a stormwater wetland on school property, or an urban tree program that also evaluates the impact on water quality. Each project will have its own unique issues and circumstances including coordinating with other local agencies (as above with the school example) or purchasing software to evaluate the impact of city wide initiatives.

Structural retrofit projects on the discussion list are to be mapped showing the drainage area to the retrofit site, land uses within the drainage area, location of the retrofit, property boundaries, significant hydrography, roads, environmentally sensitive areas (including steep slopes, wetlands, riparian buffers, etc), and publicly owned properties. Ideally, ArcView or some other GIS software will be used to create the maps. The required data is easily available to communities for use in GIS and will allow easy updating for annual review of projects that stay on the discussion list. The maps of the retrofits can be used to evaluate the potential of the project.

It may or may not be possible to accurately portray non-structural retrofits with maps. Practices that will not be city wide will need to be mapped to show the nutrient loading of the impacted watershed. Practices that are city wide may not need to be mapped.

The structural retrofit projects are to be evaluated based on the following criteria and with respect to the weighted points as shown in Table 2 below:

<b>Table 2: Structural Retrofit Project Evaluation Criteria</b>		
<b>Category</b>	<b>Points</b>	<b>Description</b>
Will Clearly Reduce Nitrogen and Phosphorous Loading	0-15	Retrofit is proven device and will be sized from NC DWQ BMP Manual.
Watershed is Clearly Loading Nitrogen and Phosphorus Over Background Sources	0-15	High runoff volumes and high nutrient loading land uses in watershed.
Landowner Cooperation or Ownership	0-40	Community owned lands (Max 40), Private Lands (Max 15).
Adequate Space and Access for Retrofit	0-15	Room for device, access, and maintenance.
Technical and Cost Feasibility	0-15	To be evaluated for technical feasibility and cost feasibility.

The discussion list projects are to be ordered through the points associated with different evaluation criteria. Based on this order, the committee is to choose the projects to be selected for the Retrofit Projects List. The committee is encouraged to take the projects in the list as scored but is not required to do so.

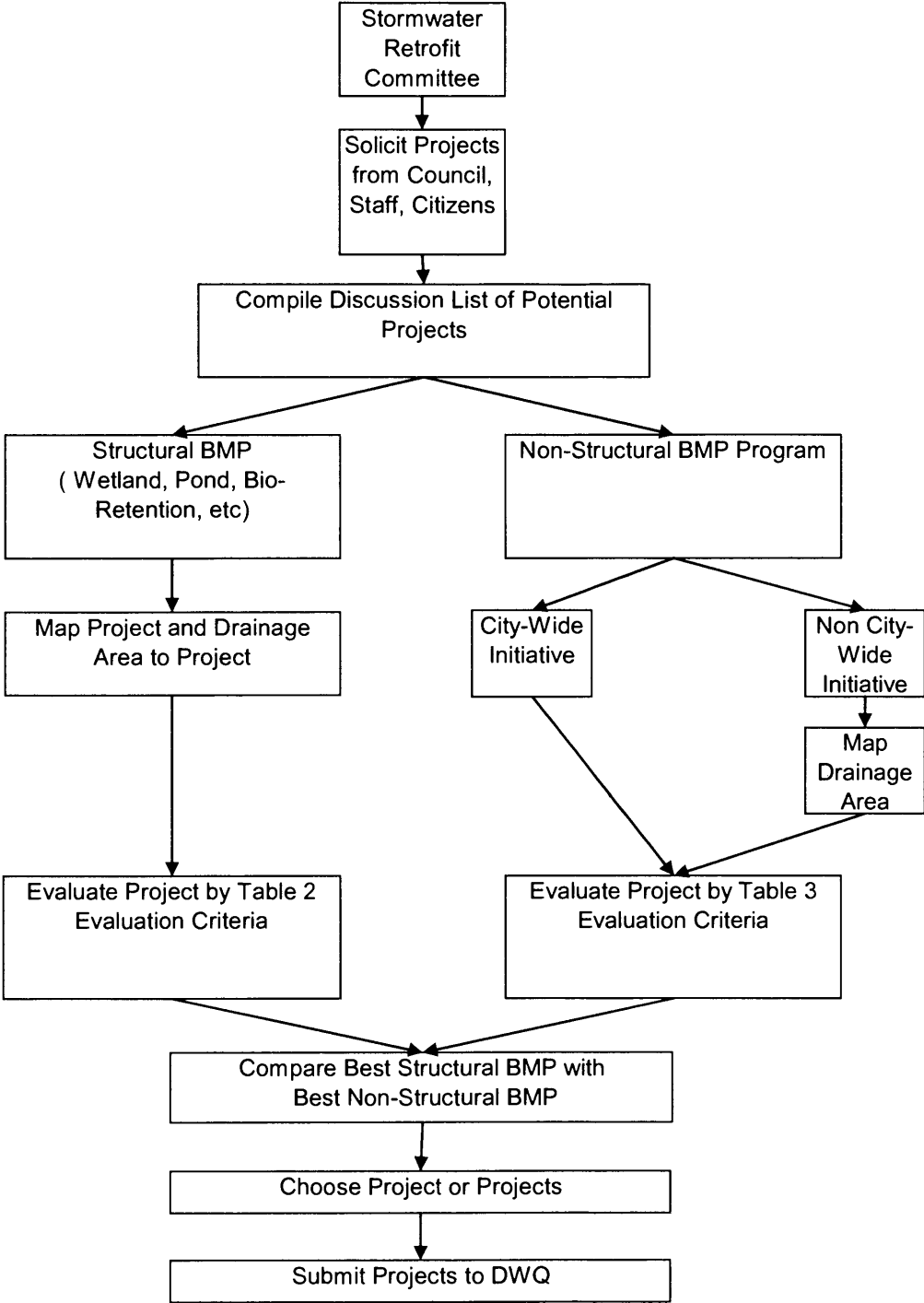
Non-structural Best Management Practices will need to be evaluated using similar evaluation criteria but the results will probably not be as clear-cut. Non-structural retrofit BMP's will need to be evaluated through the following Table 3 and compared to Structural BMP's. The scores for the two different types of retrofit BMP's are not meant to be compared to each other and the committee should use its decision making authority to choose the project that will most feasibly improve water quality and reduce nutrient loading.

<b>Table 3: Non-Structural Retrofit Project Evaluation Criteria</b>		
Category	Points	Description
Will Clearly Reduce Nitrogen and Phosphorous Loading	0-25	Nutrient Load Reduction can either be evaluated or is expected.
Watershed is Clearly Loading Nitrogen and Phosphorus Over Background Sources	0-25	Nutrient Source being regulated is high in Nitrogen or Phosphorus.
Enforcement or Likelihood of Success	0-25	What % of Success is likely, What % is necessary for reduction in Nutrient Loading.
Technical and Cost Feasibility	0-25	To be evaluated for technical feasibility and cost feasibility.

**D. Identify Projects and Submit to NC DENR prior to December 31st of each year.**

Once the Projects are evaluated and the Retrofit Projects list is created, each project is to be inserted into the following format and inserted into the format found in Table 4 below. The projects in Table 4 format are then to be submitted, along with maps showing the projects, to NC DENR Division of Water Quality prior to December 31<sup>st</sup> of each year. This submission should be done by the stormwater administrator and a copy of each submission is to be kept for the City's files.

<b>Table 4: Retrofit Opportunity Table</b>	
Location description, including directions from a major highway	
Type and description of retrofit opportunity	
Current property owner	
Is the property owner willing to cooperate?	
Land area available for retrofit (sq. ft)	
Accessibility to retrofit site	
Drainage area size (acres)	
Land use in drainage area (percent of each type of land)	
Average slope in drainage area (%)	
Environmentally sensitive areas in drainage area (steep slopes, wetlands, riparian buffers, endangered/threatened species habitat)	
Approximate annual nitrogen and phosphorus loading from drainage area (lbs/acre/year) *	
Potential nitrogen reduction (lbs/ac/yr)*	
Potential phosphorus reduction (lbs/ac/yr)*	
Estimated cost of retrofit	
Receiving water	
DWQ classification of receiving water	
Use support rating for receiving water	
Other important information	



BMP-	Best Management Practice. Practices or programs that enhance water quality over a period of time.
Eutrophication-	An overabundance of nutrients in a body of water which results in algal blooms and poor water quality. In Jordan Lake these nutrients are Nitrogen and Phosphorous.
Impervious-	Property that is paved, graveled, or otherwise does not allow rain water to infiltrate into. Creates a high runoff volume of water and a high runoff of any stormwater pollutants on the surface.
Jordan Lake Watershed-	1,686 square mile drainage basin for Jordan Lake, and impoundment of the Haw River and New Hope Creek found in Chatham County.
NC DENR-	North Carolina Department of Environment and Natural Resources.
NC DWQ-	North Carolina Division of Water Quality. A division of NC DENR and tasked with improving water quality in North Carolina's streams, rivers, and lakes.
NC DWQ BMP Manual-	A manual produced by NC DWQ that provides information and requirements for structural stormwater devices, both new and retrofitted devices.
Nitrogen-	One of two pollutants of concern in the Jordan Lake Basin. Also one of the primary ingredients in fertilizer.
Non-Structural Retrofits-	Programs or measures that reduce pollution from the source within a municipality. Usually citywide but sometimes specific to individual watersheds within a city.
Nutrient Loading-	The act of nutrients being deposited in either soil or water. High Nutrient loading produces eutrophic bodies of water.
Phosphorous-	One of two pollutants of concern in the Jordan Lake Basin. Also one of the primary ingredients in fertilizer.
Stormwater Administrator-	The compliance person for stormwater programs. Ideally a permanent town or city employee, usually the planner or clerk.
Stormwater BMP-	A Best Management Practice that enhances water quality over time. Stormwater BMP can either refer to a program or a specific structural device.
Stormwater Pollution-	Anything that is carried by rain water downstream that is not rain water. This typically includes nutrients, fertilizer, sediment and other pollutants.
Stormwater Retrofit-	A device or program that is created or built to reduce existing stormwater pollution. Devices are structural stormwater retrofits and programs are non-structural stormwater retrofits.

Stormwater Runoff-

Runoff from rainwater. Stormwater runoff is everything that runs off of land and downstream after or during a rain event. Clean stormwater runoff should be just water and should not include any nutrients, fertilizer, sediment or other pollutants.

Structural Retrofits-

Stormwater Retrofit Devices that are built or installed downstream of existing sources of pollution. Typically these devices are constructed wetlands, water quality ponds, rain gardens, or other devices from the NC DWQ BMP Manual.



*APPENDIX G- POST-CONSTRUCTION STORMWATER ADMINISTRATIVE MANUAL*

The Administrative Manual and the forms contained herein will be utilized for implementation of the New Development Ordinance. The forms are subject to revision and modification as necessary.

***Phase II Post-Construction Stormwater  
Administrative Manual***

*City of Burlington, NC*



**Stormwater Ordinance Adopted by the City Council**  
**August 21, 2012**  
**Ordinance effective August 21, 2012**

City of Burlington Water Resources Department – Stormwater Division  
P.O. Box 1358 Burlington, NC 27216  
1103 S. Mebane St., Burlington, NC 27215  
Phone (336) 222-5140 Fax (336) 222-5142  
Email [stormwater@ci.burlington.nc.us](mailto:stormwater@ci.burlington.nc.us)  
[www.BurlingtonNC.gov/stormwater](http://www.BurlingtonNC.gov/stormwater)



**Introduction**

The National Pollutant Discharge Elimination System (NPDES) Phase II Stormwater Program is an effort to preserve, protect and improve the nation's water resources from polluted runoff. The program requires Burlington and other municipalities to obtain a federal stormwater permit. The City of Burlington's permit was issued July 1, 2005.

A requirement of the Burlington permit was the adoption of a post construction stormwater ordinance. The ordinance follows the N.C. Division of Water Quality's Stormwater Model Ordinance and the Best Management Practices (BMP) Design Manual, and was adopted by the Burlington City Council June 19, 2007.

In August 2009, the NC General Assembly approved the Jordan Lake Nutrient Management Strategy. These rules are designed to address excessive chlorophyll a levels in the lake and are applicable to all of the Jordan Lake watershed, including the City of Burlington and its ETJ. The City of Burlington Stormwater Ordinance was revised on August 10, 2012 to incorporate the new development requirements as outlined in the rules.

These may be viewed at:

[City of Burlington Stormwater Ordinance](#)

[NCDENR BMP Design Manual](#)

The ordinance was effective August 10, 2012, and affects all new development and redevelopment of one acre or more for residential and one-half acre or more for other zonings.

Additional information can be obtained by contacting the City's stormwater manager at 336-222-5140 or visiting the City's Stormwater website at <http://www.BurlingtonNC.gov/stormwater>.

## **Overview of the Stormwater Permitting Process at the City of Burlington**

The Stormwater permitting process can be separated into three phases – 1) Planning, Preliminary Design and Technical Review, 2) Final Design, Construction Drawing Review, and Permitting, and 3) Construction and Inspection. Highlights of each of these phases are presented on three flow charts that are part of this Administrative Manual. Please review the [City of Burlington Stormwater Ordinance](#) for more details.

### **Stormwater Management System Concept Plan Technical Review Committee (TRC) Submittal**

The Planning, Preliminary Design, and Technical Review phase is outlined on Stormwater Flow Chart page 1 of 3 titled “Stormwater Management System Concept Plan Technical Review Committee (TRC) Submittal.” At this stage, drawings relating to stormwater facilities will most likely be shown in plan view, but should be of sufficient detail that reviewers may determine with reasonable confidence that the Stormwater Management System Concept Plan will meet the intent of the Stormwater Ordinance. The Stormwater System Concept Plan shall be submitted to the Technical Review Committee (TRC), and shall be reviewed by TRC based on the schedule published on the Planning Department’s website. Applications, application fee information and a TRC submittal and meeting schedule may be found at the Technical Review Committee website: <http://burlingtonnc.gov/index.asp?NID=495> or by selecting the following links:

- ❑ [TRC MEETING SCHEDULE AND PLAN SUBMISSION DATES](#)
- ❑ [TECHNICAL REVIEW COMMITTEE APPLICATION](#)
- ❑ [TRC PLAN SUBMISSION STANDARDS](#)

The design consultant must also submit a completed “Environmental Review Certification” form as a supplement to the TRC application. The Environmental Review Certification form is located in this Administrative manual following the Stormwater Flow Charts or at [the following link](#). A completed Operation and Maintenance Agreement and a draft copy of the Operation and Maintenance Manual shall also be submitted at this time.

The Stormwater Management System Concept Plan is only a portion of the TRC submittal. The Technical Review Committee must approve the proposed plan with respect to City ordinances and policies relating to all components of the development plan (e.g., zoning, subdivision, utility, landscape, etc) in addition to the Stormwater Management System Concept Plan before the developer may submit an application for the Stormwater Permit.

### **Stormwater Management System Permit Process**

The Final Design, Construction Drawing Review, and Permitting phase is shown on Stormwater Flow Chart page 2 of 3, titled “Stormwater Management Permit Process.” At this stage, a completed Permit Application (found in this manual or at [the following link](#)), permit review fee ([see this link](#)), full construction drawings and any other information required on the “Submittal

Checklist” (found in this manual, or at [the following link](#)) or deemed necessary by the designer shall be submitted to the Stormwater Manager. The person listed as financially responsible for the project shall be the same person denoted financially responsible when applying to the Engineering Department for a Land Disturbing Activity Permit (Sedimentation and Erosion Control).

The completed Operation and Maintenance Agreement that was submitted as part of the TRC submittal must be executed prior to the issuance of the Stormwater Permit. An escrow account for maintenance of the structural BMPs shall also be established prior to the issuance of the Stormwater Permit. The design professional shall submit an estimate of construction costs and anticipated maintenance costs for review by the Stormwater Administrator. The funding of the escrow account by the developer shall be a minimum of 40% of the estimated construction costs of the Structural BMPs. (The owner/developer may elect to fund more than the minimum.)

Per the Stormwater Ordinance the Stormwater Administrator has 60 calendar days in which to conduct the review once the application is considered complete. It is anticipated that the review process will take considerably less than the allowed time, but the review time may vary depending on workload, staffing, etc. The Stormwater Administrator will notify the designer in a timely manner (generally within one week of receipt of the application) of any missing information. The 60-day review period will not begin until missing information is received. Once all required information is received, the Stormwater Manager or a designee will review the submittal. The reviewer may request additional information or plan revision, issue a Notification of Disapproval, or approve the plans (with or without conditions) and issue a Stormwater Permit.

If a Notification of Disapproval is issued, the applicant may resubmit a revised plan within 30 calendar days of disapproval without paying an additional permit review fee. An additional review fee shall accompany any re-submittal after the first re-submittal. Within 30 calendar days re-submitted plans will be either approved (with or without conditions) or disapproved.

Requirements for a Performance Security Bond , 125% of estimated construction costs, will be addressed in the approval letter accompanying the Stormwater Permit.

### **Stormwater Management Construction and Final Review Process**

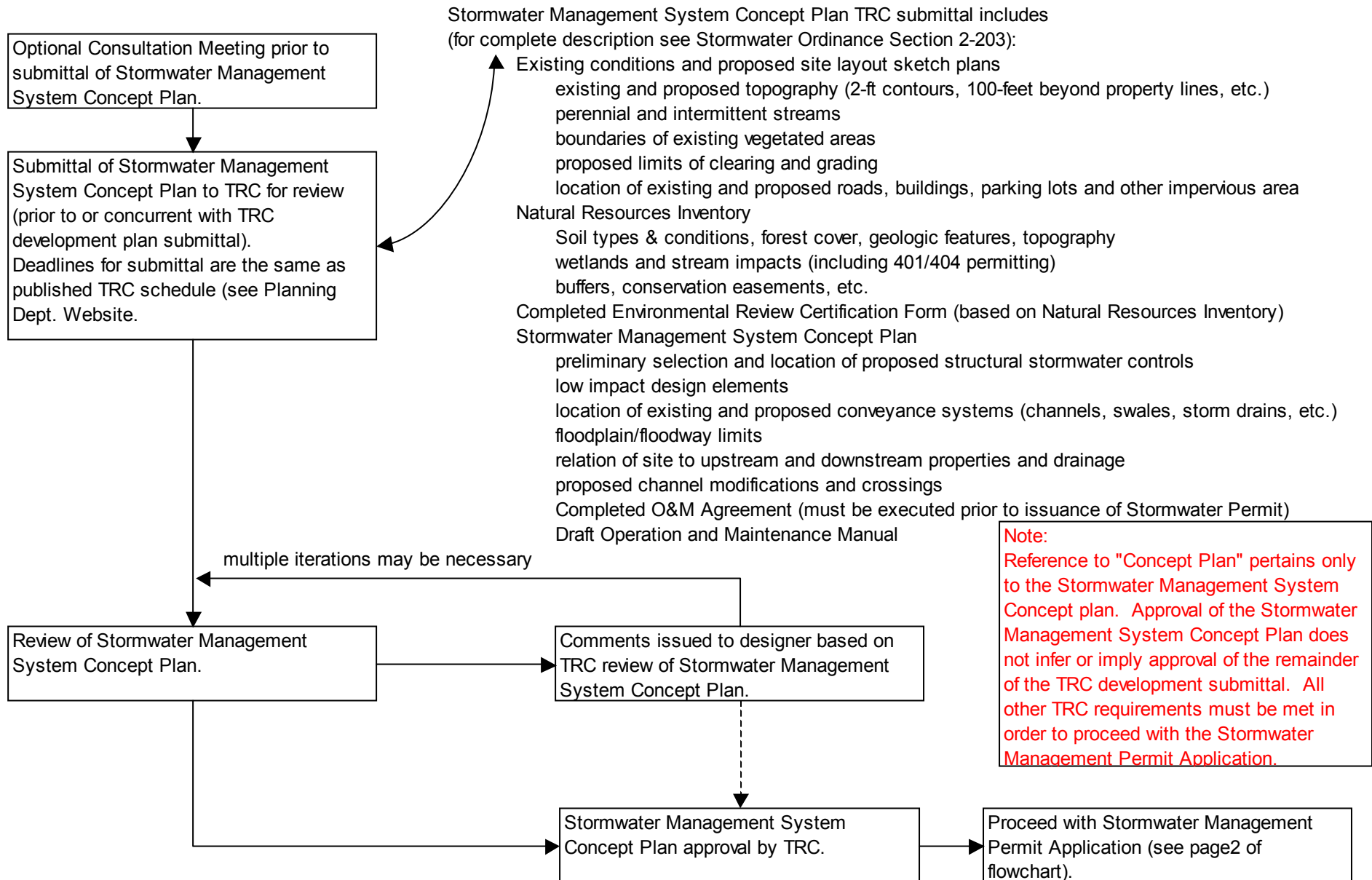
The Construction and Inspection Phase is outlined on Stormwater Flow Chart page 3 of 3, titled “ Stormwater Management Construction and Final Review Process.” Once the Stormwater Permit is issued, construction may begin, provided all other environmental permits have been obtained, or are in the process of being obtained, and all requirements of the City of Burlington Engineering Department have been satisfied. Contact the Engineering Department at 336-222-5050 regarding the status of other permits.

During construction, the financially responsible party is responsible for inspection of sediment and erosion control measures weekly and after every rain event of at least one-half inch per the Division of Water Quality’s General Stormwater Permit No. NCG010000 issued as part of the City’s Land Disturbing Activity Permit. City staff may conduct periodic inspections of Stormwater BMPs, however the designer is ultimately responsible to certify that any structural BMPs meet the requirements of the ordinance and Stormwater Permit.

All structural BMPs should be substantially complete and the designer should submit certification and as-built drawings prior to recording of plats and prior to the time a Certificate of Occupancy is needed. At the discretion of the Stormwater Manager, a performance security for the completion of structural BMPs or issuance of As-Built drawings will allow a plat to be recorded or enable Building Inspections to issue a Certificate of Occupancy. Forms for BMP certification and As-Built submittals are included in this Administrative Manual.

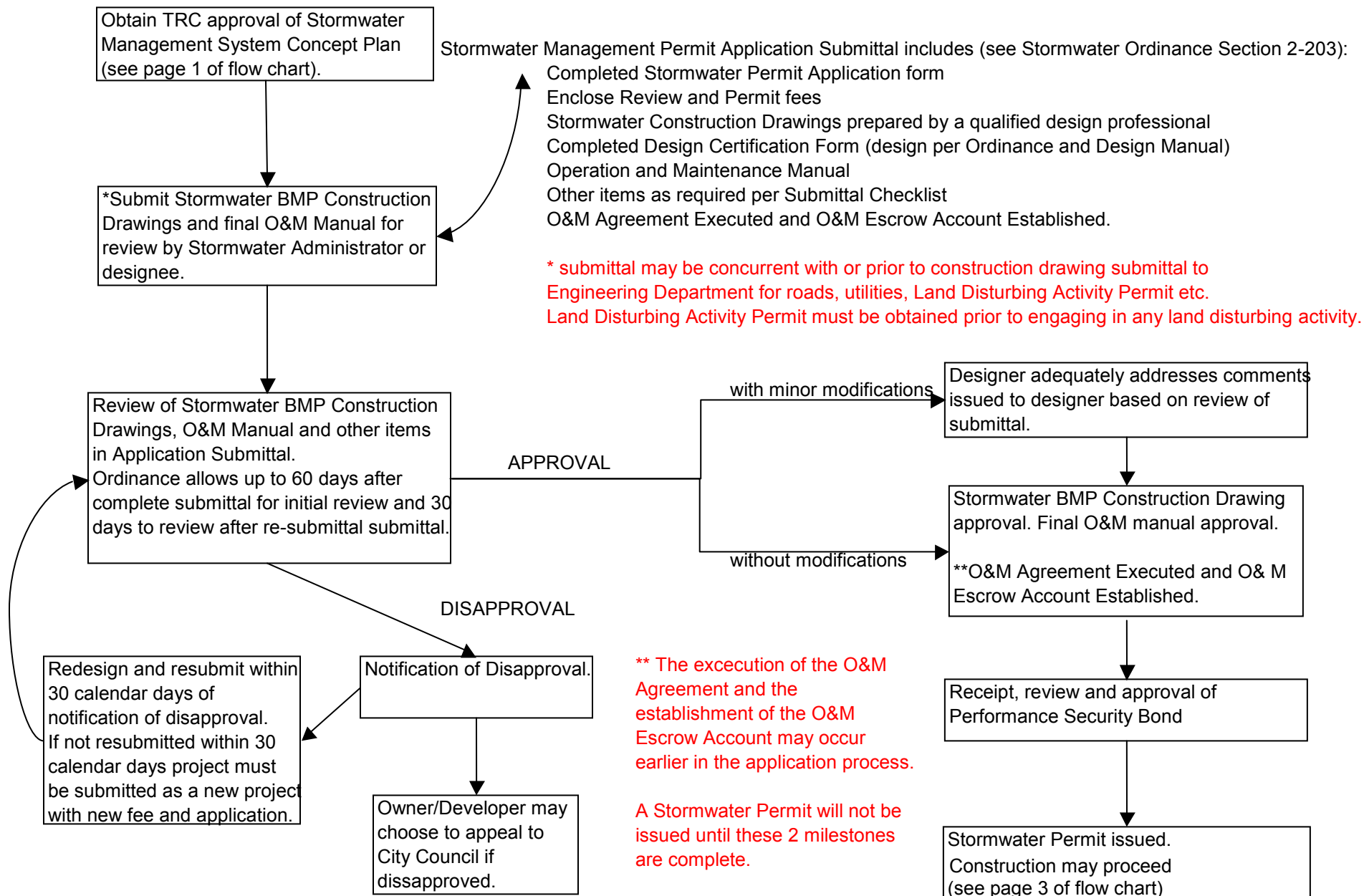
The Stormwater Administrator or his designee will perform a final inspection of each stormwater BMP. Prior to the closeout of the Stormwater permit and release of any performance securities related to BMP installation or As-Built drawings, the Stormwater Administrator must receive and approve the As-Built drawings, the site must be in compliance with the City's Sedimentation and Erosion Control Ordinance, and the project must pass the final stormwater inspection.

STORMWATER MANAGEMENT SYSTEM CONCEPT PLAN TECHNICAL REVIEW COMMITTEE (TRC) SUBMITTAL

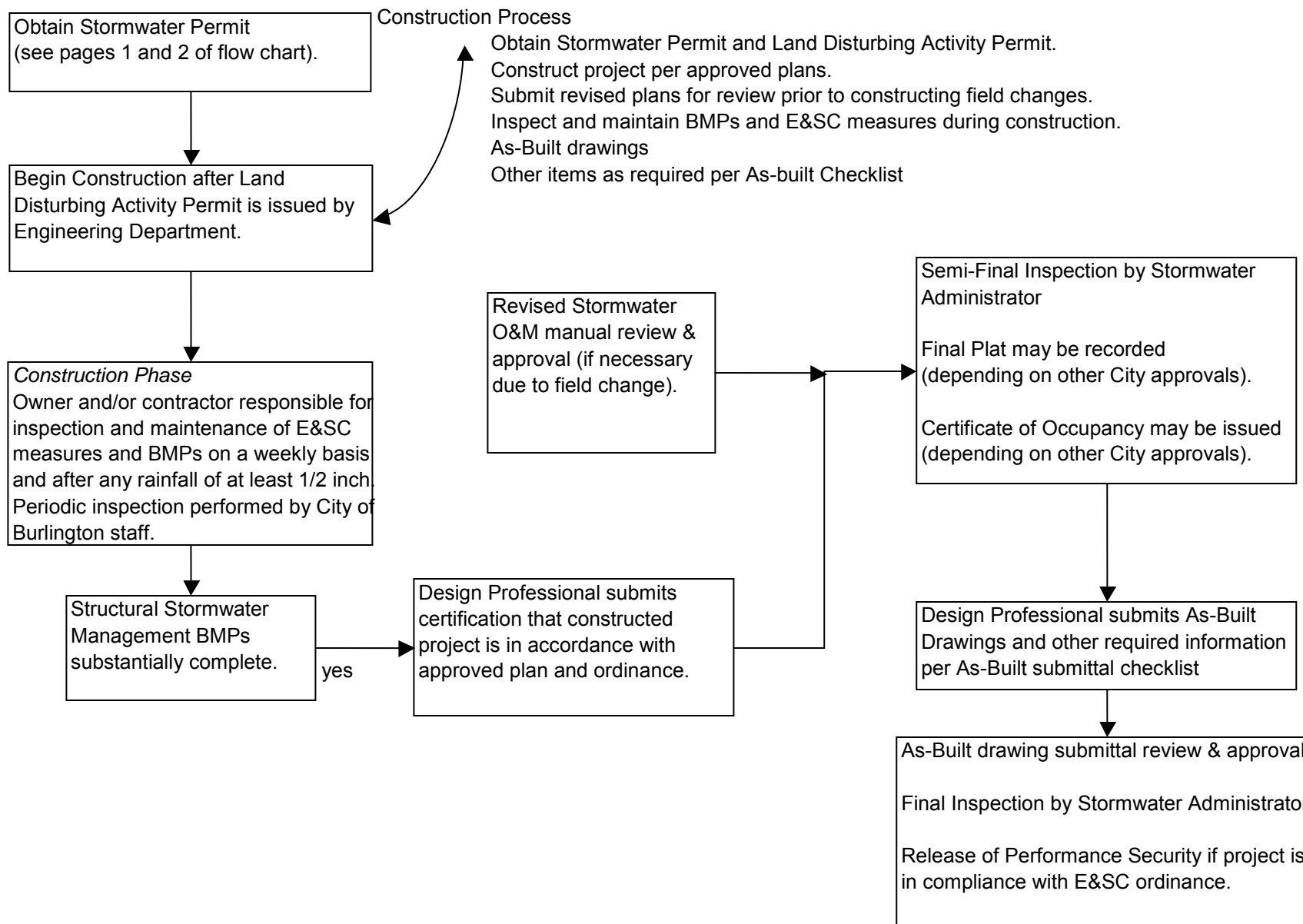




**STORMWATER MANAGEMENT PERMIT APPLICATION PROCESS**



STORMWATER MANAGEMENT CONSTRUCTION AND FINAL APPROVAL PROCESS



**Environmental Review Certification**

Any Plan submitted to the City for review by the Technical Review Committee, Engineering Department, or Stormwater Division shall be deemed incomplete until the determination of any required environmental permits is submitted by the design professional. The City shall promptly notify the person submitting the Plan that the time limit for review of the Plan (30 days for Land Disturbing Activity Permit and 60 days for Stormwater Permit) will not begin until the City Engineer receives this Certification. Once this Certification is supplied, the review may continue under the provision that all required notifications and applications shall be executed and made available for review by the City.

The design professional shall provide needs determination with respect to the following federal, state, and municipal permits:

	Needed for Project?		If Yes, indicate status		
	No	Yes	PCN not submitted	PCN Submitted	Permit / Certification issued by USACE / NCDENR
Stream Impacts – 404 General or Individual Permit & 401 WQ Certification (submit to USACE/NCDENR)	No	Yes	PCN not submitted	PCN Submitted	Permit / Certification issued by USACE / NCDENR
Jurisdictional Wetland Impacts – 404 General or Individual Permit & 401 WQ Certification (submit to USACE/NCDENR)	No	Yes	PCN not submitted	PCN Submitted	Permit / Certification issued by USACE / NCDENR
Isolated Wetland Impacts – 401 WQ Certification (submit to NCDENR)	No	Yes	PCN not submitted	PCN Submitted	Permit / Certification issued by USACE / NCDENR
FEMA Flood Map Letter of Map Change, e.g. CLOMR, LOMR, etc. (submit to FEMA)	No	Yes	Not submitted	Submitted	
Flood Study / determination of base flood elevations in non-FEMA mapped areas (submit to City)	No	Yes	Not submitted	Submitted	
Sedimentation and Erosion Control Plan (Submit to City)	No	Yes	Not submitted	Submitted	
Stormwater permit (Submit to City)	No	Yes	Not submitted	Submitted	
Water extension permit (Submit to NCDENR)	No	Yes	Not submitted	Submitted	
Sanitary Sewer Extension permit (Submit to NCDENR)	No	Yes	Not submitted	Submitted	

A response of **No** means that the site has been evaluated by the design professional in relation to the requirements of a particular permit and that the design professional certifies that site does not meet conditions required by that permit.

The design professional shall provide a copy of the Preconstruction Notification (PCN) and proof of 404 permit / 401 certification where applicable.

All applicable permits must be submitted and approved prior to construction or the site runs the risk of having all local permits suspended.

Professional Engineer or Registered Land Surveyor	
Firm Name	
Address	
Telephone / Facsimile	
Email Address	

# **STORMWATER OPERATION AND MAINTENANCE AGREEMENT**

**D-326**

**For  
Structural Stormwater Management Facilities**

**City of Burlington**

THIS AGREEMENT, made this \_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_, by and between \_\_\_\_\_, hereinafter referred to as the "OWNER(S)" and the City of Burlington, North Carolina, hereinafter referred to as the "CITY",

WITNESSETH, that

WHEREAS, the OWNER is the owner of certain real property described as \_\_\_\_\_ as recorded by deed in the land records of \_\_\_\_\_ County, Deed Book \_\_\_\_\_ Page \_\_\_\_\_, and/or Plat Book \_\_\_\_\_ Page, Parcel Identification Number(s) \_\_\_\_\_ hereinafter called the "Property".

**WHEREAS**, the OWNER is proceeding to build on and develop the property; and

**WHEREAS**, the Site Plan/Subdivision Plan known as \_\_\_\_\_, *(Name of Plan/Development)*

hereinafter called the "Plan", which is expressly made a part hereof, as approved or to be approved by the CITY, provides for treatment of stormwater within the confines of the property; and

**WHEREAS**, the CITY and the OWNER, its successors and assigns, including any homeowners association, agree that the health, safety, and welfare of the residents of Burlington, North Carolina, require that on-site structural stormwater BMP facilities be constructed and maintained on the Property; and

**WHEREAS**, the CITY requires that on-site structural stormwater Management facilities as shown on the Plan be constructed and adequately maintained by the OWNER, its successors and assigns, including any homeowners association.

**NOW, THEREFORE**, in consideration of the foregoing premises, the mutual covenants contained herein, and the following terms and conditions, the parties hereto agree as follows:

- (1) Acknowledgment that the OWNER or association shall continuously operate and maintain the stormwater control and management facilities.
- (2) The OWNER, its successors and assigns, including any homeowners association, shall adequately maintain the structural stormwater BMP facilities in accordance with the approved Operation and Maintenance Plan or Manual(s). This includes all pipes and channels built to convey stormwater to the facility, as well as all structures, improvements, and vegetation provided to control the quantity and quality of the stormwater. Adequate maintenance is herein defined as good working condition so that these facilities are performing their design functions.

(3) The OWNER, its successors and assigns, shall ensure the structural stormwater BMP facility is inspected by a qualified professional and shall submit an annual inspection report to the City of Burlington. The inspection report shall be due annually 30 days from the date of the final structural stormwater Management facilities construction inspection. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire facilities, berms, outlet structure, pond areas, access roads, etc. Deficiencies shall be noted in the inspection report.

(4) The OWNER, its successors and assigns, hereby grant permission to the City of Burlington, its authorized agents and employees, to enter upon the Property and to inspect the structural stormwater Management facilities whenever the City of Burlington deems necessary. The purpose of inspection is to follow-up on reported deficiencies and/or to respond to citizen complaints. The City of Burlington shall provide the OWNER, its successors and assigns, copies of the inspection findings and a directive to commence with the repairs if necessary.

(5) Before the City of Burlington shall approve the completed facility and issue final certificates of occupancy, the Owner and/or maintaining entity shall furnish the City of Burlington with a financial guarantee insuring future maintenance, operation, and repair of the facility. The financial guarantee shall be in the form of cash or an irrevocable letter of credit and made payable to the City of Burlington. The amount of guarantee shall be 40% of the total cost of constructing the facility based on actual contract prices for said facility.

(6) In the event the OWNER, its successors and assigns, fails to maintain the structural stormwater Management facilities in good working condition acceptable to the City of Burlington or that maintenance and repairs are not being made as required or that any action is not being done in accordance with this agreement, the City of Burlington shall notify the responsible entity who shall be given a reasonable time to correct such deficiencies. Should the responsible entity fail to act in a timely manner, or otherwise fail to correct the deficiencies, the City of Burlington will institute appropriate action to obtain compliance including criminal or civil penalties, or both. In addition, the City of Burlington may declare the responsible entity in default of this agreement and financial guarantee and use part or all of such guarantee funds to correct the deficiencies and may assume actual operation and maintenance. Default of this agreement does not release the responsible entity from liability/responsibility for the deficiencies, nor release the entity from this agreement. Likewise, default of this agreement does not prevent the City of Burlington from taking action against the responsible entity to recover the cost of such actions to correct the deficiencies.

(7) For all structural stormwater Management facilities which are to be or are owned and maintained by a property owner's association or similar entity, the OWNER also agrees to the following provisions:

- a) Acknowledgment that the association shall continuously operate and maintain the structural stormwater Management facilities.

- b) Establish adequate owner/property association dues which are to be spent solely for sediment removal, structural, biological or vegetative replacement, major repair, or reconstruction of the stormwater control measures and devices of the particular site plan or subdivision.
  - c) Granting to the City of Burlington a right of entry to inspect, monitor, maintain, repair, and reconstruct structural stormwater Management facilities.
  - d) Allow the City of Burlington to recover from the association and its members any and all costs the City of Burlington may expend to maintain or repair the stormwater control and management facility or to correct any operational deficiencies as a result of default by the Owner/association/responsible entity. Failure to pay to the City of Burlington all of its expended costs, after thirty (30) days written notice, shall constitute a breach of the agreement. The City of Burlington shall thereafter be entitled to bring an action against the association and its members to pay, or foreclose upon the lien herein authorized by the agreement against the property, or both in the case of a deficiency. Interest, collection costs, and attorney fees shall be added to the recovery.
- (8) The OWNER, its successors and assigns, will perform the work necessary to keep these facilities in good working order as appropriate. In the event a maintenance schedule for the structural stormwater Management facilities (including sediment removal) is outlined on the approved plans, the schedule will be followed.
- (9) In the event the City of Burlington, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like, the OWNER, its successors and assigns, shall reimburse the City of Burlington upon demand, within thirty (30) days of receipt thereof for all actual costs incurred by the City of Burlington hereunder.
- (10) This Agreement imposes no liability of any kind whatsoever on the City of Burlington and the OWNER agrees to hold the City of Burlington harmless from any liability in the event the structural stormwater Management facilities fail to operate properly.
- (11) This Agreement shall be recorded among the land records of \_\_\_\_\_ County, North Carolina, and shall constitute a covenant running with the land, and shall be binding on the OWNER, its administrators, executors, assigns, heirs and any other successors in interests, including any homeowners association.

**IN WITNESS WHEREOF**, the parties have executed this agreement on the day and year first above written:

\_\_\_\_\_  
Name of Company/Corporation/Partnership/Individuals (Seal if corporation)

By: \_\_\_\_\_

\_\_\_\_\_  
(Type Name)

\_\_\_\_\_  
(Type Title)

STATE OF NORTH CAROLINA

CITY OF \_\_\_\_\_

The foregoing Agreement was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_,  
20\_\_\_\_, by

\_\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

My Commission Expires: \_\_\_\_\_



CITY OF BURLINGTON, NORTH CAROLINA

\_\_\_\_\_  
City of Burlington (Seal)

By: \_\_\_\_\_

\_\_\_\_\_  
(Type Name)

\_\_\_\_\_  
(Type Title)

STATE OF NORTH CAROLINA

CITY OF \_\_\_\_\_

The foregoing Agreement was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_,  
20\_\_\_\_, by \_\_\_\_\_.

\_\_\_\_\_  
NOTARY PUBLIC

My Commission Expires: \_\_\_\_\_

Approved as to Form:

\_\_\_\_\_  
City Attorney Date



# Stormwater Permit Application City of Burlington

Use this form only if TPC has approved a Stormwater Management System Concept Plan for this project.

D-332

## SECTION A PROJECT SUMMARY INFORMATION

Development or Project Name					
Location					
County			Parcel Identification Number (PIN)		
Total Acres		Average Lot Size		Total Dwelling Units	
Built-upon Area (Acres)	Pre-development	Post-development	% Built Upon	Pre-development	Post-development
<input type="checkbox"/> Low Density (no more than two dwelling units per acre or 24-percent built-upon area) <input type="checkbox"/> High Density (exceeds the low density thresholds for dwelling units per acre or built-upon area)					

## SECTION B APPLICANT INFORMATION

CLIENT	Owner or Developer who is financially responsible for project		
Name(s)			
Address			
Email			
Phone		Fax	
CONSULTANT	Person to contact regarding questions or revisions to plan		
Contact Name(s)			
Firm			
Street Address			
City, State Zip			
Email			
Phone		Fax	

City of Burlington Water Resources Department – Stormwater Division  
 P.O. Box 1358 Burlington, NC 27216  
 1103 S. Mebane St. Burlington, NC 27215  
 Phone (336) 222-5140 Fax (336) 222-5142  
 Email [stormwater@ci.burlington.nc.us](mailto:stormwater@ci.burlington.nc.us)  
[www.BurlingtonNC.gov/stormwater](http://www.BurlingtonNC.gov/stormwater)



# Stormwater Permit Application City of Burlington

Use this form only if TPC has approved a Stormwater Management System Concept Plan for this project.  
**D-333**

Landowner(s) of Record	Attach pages as necessary to list additional owners		
Name(s)			
Street Address			
City, State Zip			
Email			
Phone		Fax	
Recorded in	Deed Book & Page		Plat Book & Page

The above information is true and correct to the best of my knowledge and belief and was provided by me while under oath.

(This form must be signed by the financially responsible person if an individual, and by an officer, director, partner, attorney-in-fact, or other person with authority to execute instruments for the financially responsible party if not an individual.)

Type or print name:		Title or Authority	
Signature			Date

I, _____, a Notary Public in the County of _____	
State of North Carolina, hereby certify that _____ personally appeared before me	
this day and under oath acknowledged that the above form was executed by him.	
Witness my hand and notarial seal, this the _____ day of _____ 2007	
Notary	
My commission expires _____	(Seal)

City of Burlington Water Resources Department – Stormwater Division  
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[www.BurlingtonNC.gov/stormwater](http://www.BurlingtonNC.gov/stormwater)



# Stormwater Permit Application City of Burlington

Use this form only  
if TPC has  
**D-334**  
approved  
Stormwater  
Management System  
Concept Plan for  
this project.

Page 3 of 8

## SECTION C SUBMITTAL CHECKLIST

The following checklist outlines submittal requirements. Initial in the space provided to indicate the following submittal requirements have been met and supporting documentation is attached.

### *General Requirements:*

#### **Applicant's initials**

- \_\_\_\_\_ 1. Sheets shall be no larger than 36" x 24" plan and profile paper.
- \_\_\_\_\_ 2. Minimum text size shall be 1/8"
- \_\_\_\_\_ 3. Scale on plan view shall be no smaller than 1" = 50'; scale on profile view shall be no smaller than 1" = 50' horizontally and 1" = 5' vertically using a grid showing 1' intervals.
- \_\_\_\_\_ 4. All drawings to be in North Carolina State Plane coordinate system.
- \_\_\_\_\_ 5. Cover sheet shall have a vicinity map at a scale no smaller than 1" = 200'.
- \_\_\_\_\_ 6. Provide a legend indicating existing and proposed lines, features and symbols.
- \_\_\_\_\_ 7. Cover sheet shall include all general notes, owner's name, telephone number, and mailing address.
- \_\_\_\_\_ 8. All elevations shall be given in relation to mean sea level; elevations in profile view shall be labeled in 10' intervals on the heavy lines (Ex. 350, 360).
- \_\_\_\_\_ 9. Benchmark elevations and locations shall be shown on plan view.
- \_\_\_\_\_ 10. Plan views shall have a north arrow on each drawing.

City of Burlington Water Resources Department – Stormwater Division  
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# Stormwater Permit Application

## City of Burlington

Use this form only  
if TPC has  
**D-335**  
approved a  
Stormwater  
Management System  
Concept Plan for  
this project.

Page 4 of 8

- \_\_\_\_\_ 11. Each drawing shall have the following information in the title block:  
Street or project title, limits, horizontal and vertical scales, original date, revisions date, drawing number, checked by and drawn by. Recommended placement is lower right-hand corner.
- \_\_\_\_\_ 12. All drawings sealed, signed and dated by a NC Professional Engineer or Landscape Architect.
- \_\_\_\_\_ 13. A signed and sealed statement on the plans (if a high density project) certifying that the design of all stormwater management facilities and practices will control and treat the runoff from the from the first one inch of rain over the total drainage area, that the designs and plans are sufficient to comply with applicable standards and policies found in the NCDENR *Stormwater BMP Design Manual* and any City of Burlington supplements to the BMP Design Manual, and that the designs and plans ensure compliance with the City's Phase II Stormwater Ordinance.
- \_\_\_\_\_ 14. Plan view shall show all actual street names (existing and proposed). State road numbers shall be shown if applicable. Plan view should also indicate whether street is asphalt, concrete, gravel or dirt. Proposed street & Right-of-way widths will be dimensioned back-to-back and labeled in plan view.
- \_\_\_\_\_ 15. Plan view shall show proposed and existing curb and gutter, pavement, storm sewers, drainage structures, driveway pipes, drainage features (ditches, swales, etc.), water mains, sanitary sewer mains, etc. Direction of flow shall be shown on plan view for all sanitary sewers and storm drains. Materials and pipe sizes shall be labeled.
- \_\_\_\_\_ 16. Existing utility lines shall be shown and labeled on plan view and indicated in the legend.
- \_\_\_\_\_ 17. Construction Drawings shall show final proposed locations and dimensions of all water, storm drain, and sanitary sewer lines, devices to be installed on the system, catch basins, culverts, BMPs, ditches, including grades, pipes sizes, elevations, assumptions, calculations, invert elevations for all inlets and manholes and profiles of sanitary sewer lines. All available elevations shall be shown on the profile view (Permitting).

City of Burlington Water Resources Department – Stormwater Division  
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# Stormwater Permit Application

## City of Burlington

Use this form only  
if TPC has  
approved a  
Stormwater  
Management System  
Concept Plan for  
this project.

Page 5 of 8

- \_\_\_\_\_ 18. All existing and proposed water, storm drainage and sanitary sewer easements shall be shown on all applicable sheets.
- \_\_\_\_\_ 19. Number of dwelling units, lots, built-upon area (predevelopment and post-development).
- \_\_\_\_\_ 20. Existing and proposed topographic lines on tract and minimum 100-foot beyond property lines (minimum 2-foot intervals).
- \_\_\_\_\_ 21. City limits, county lines, and other jurisdiction lines, if any.
- \_\_\_\_\_ 22. Streams, ponds, wetlands, etc. on the project site and within 50 feet of the property lines.
- \_\_\_\_\_ 23. Location of floodplain and floodway (if applicable).
- \_\_\_\_\_ 24. Location of drainage ways and easements.

### *Site Drainage Features:*

- \_\_\_\_\_ 25. Existing and planned drainage patterns (include off-site areas that drain through project).
- \_\_\_\_\_ 26. Any existing stormwater control systems.
- \_\_\_\_\_ 27. Sub-watershed delineation showing drainage areas (Permitting).
- \_\_\_\_\_ 28. Show extent and number of disturbed acres.
- \_\_\_\_\_ 29. Proposed impervious areas.
- \_\_\_\_\_ 30. Soil information: type, special characteristics.
- \_\_\_\_\_ 31. Name and classification of receiving watercourse.

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Phone (336) 222-5140 Fax (336) 222-5142  
Email [stormwater@ci.burlington.nc.us](mailto:stormwater@ci.burlington.nc.us)  
[www.BurlingtonNC.gov/stormwater](http://www.BurlingtonNC.gov/stormwater)



# Stormwater Permit Application City of Burlington

Use this form only  
if TPC has  
approved a  
Stormwater  
Management System  
Concept Plan for  
this project.

Page 6 of 8

## *Permanent Stormwater Control Measures (High Density only):*

- \_\_\_\_\_ 32. Type of BMP (wet pond, rain-garden, etc.)
- \_\_\_\_\_ 33. Designer's certification.
- \_\_\_\_\_ 34. Narrative description of proposed stormwater system (where runoff originates (e.g. roofs, roads, parking lots etc.), its conveyance within the project, its treatment, and its conveyance from the project to the receiving water body).
- \_\_\_\_\_ 35. Profile along the centerline of the principal spillway/outfall pipe extending below the protected outfall or to the downstream structure (Permitting).
- \_\_\_\_\_ 36. Elevations of the "water quality" surface, temporary storage water surface, and the 10-year and 100-year storms (Permitting).
- \_\_\_\_\_ 37. Stage-storage table for each BMP (Permitting).
- \_\_\_\_\_ 38. If BMP is to be used to treat construction site runoff, provide steps necessary to restore BMP to original design condition (Permitting).
- \_\_\_\_\_ 39. All necessary construction specifications (Permitting).
- \_\_\_\_\_ 40. Sequence of construction (Permitting).
- \_\_\_\_\_ 41. Individual drainage areas for each stormwater BMP (Permitting).
- \_\_\_\_\_ 42. Construction drawings and details for permanent measures (Permitting).
- \_\_\_\_\_ 43. Size and location of culverts.
- \_\_\_\_\_ 44. Size and location of subsurface drainage conveyances.
- \_\_\_\_\_ 45. Disclosure of party ultimately responsible for operation and maintenance of the stormwater system.

City of Burlington Water Resources Department – Stormwater Division  
P.O. Box 1358 Burlington, NC 27216  
1103 S. Mebane St. Burlington, NC 27215  
Phone (336) 222-5140 Fax (336) 222-5142  
Email [stormwater@ci.burlington.nc.us](mailto:stormwater@ci.burlington.nc.us)  
[www.BurlingtonNC.gov/stormwater](http://www.BurlingtonNC.gov/stormwater)



# Stormwater Permit Application City of Burlington

Use this form only  
if TRC has  
**D-338**  
approved a  
Stormwater  
Management System  
Concept Plan for  
this project.

Page 7 of 8

## *Stormwater Calculations:*

- \_\_\_\_\_ 46. Narrative description of calculations (methods, variables, assumptions, etc.) and results (Permitting).
- \_\_\_\_\_ 47. Stormwater BMPs designed in accordance with North Carolina Department of the Environment and Natural Resources-Division of Water Quality's *Manual of Stormwater Best Management Practices*, and any supplements to the BMP Design Manual issued by the City of Burlington (Permitting).
- \_\_\_\_\_ 48. Time of concentration for pre/post development conditions (Permitting).
- \_\_\_\_\_ 49. Pre-construction and post-construction runoff calculations for each outlet from the site (at peak discharge points) (Permitting).
- \_\_\_\_\_ 50. Pre-construction and post-construction design calculations and hydrographs (Permitting).
- \_\_\_\_\_ 51. Design calculations of culverts and storm sewers (Permitting).

### Note:

Items denoted "Permitting" refer to items that generally don't need to be included in the Stormwater Management System Concept Plan submittal to the Technical Review Committee, but need to be included with the Permit Application / Construction Drawing submittal.

If items are not denoted "Permitting" they are generally expected to be addressed in both the Concept plan /TRC submittal and Permit Application / Construction Drawing submittal.

City of Burlington Water Resources Department – Stormwater Division  
P.O. Box 1358 Burlington, NC 27216  
1103 S. Mebane St. Burlington, NC 27215  
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Email [stormwater@ci.burlington.nc.us](mailto:stormwater@ci.burlington.nc.us)  
[www.BurlingtonNC.gov/stormwater](http://www.BurlingtonNC.gov/stormwater)





# Stormwater Permit Application City of Burlington

Use this form only  
if TPC has  
approved a  
Stormwater  
Management System  
Concept Plan for  
this project.

Page 8 of 8

## Stormwater Permit Fee:

A stormwater permit fee of \$420 was established by City Council on August 7, 2007. This fee includes review of the initial Stormwater Management System Permit Application and associated construction drawings and stormwater calculations, and one resubmitted (revised) application and/or revised construction drawings and stormwater calculations.

At the February 5, 2008 City Council Meeting this fee was increased to \$505.00, effective March 1, 2008.

City of Burlington Water Resources Department – Stormwater Division  
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Email [stormwater@ci.burlington.nc.us](mailto:stormwater@ci.burlington.nc.us)  
[www.BurlingtonNC.gov/stormwater](http://www.BurlingtonNC.gov/stormwater)

Permit No. **SW 98765**

CERTIFICATE OF STORMWATER MANAGEMENT PLAN APPROVAL AND

# STORMWATER PERMIT BURLINGTON, NORTH CAROLINA



**Project Name:** Project Name  
**Location:** Location  
**Tax Map-Block-Lot:** x-yz-abc  
**Project Acreage:** >1.0 Acres permitted

**PID #** **EXAMPLE**

PERMIT FEE \$505.00

RECEIPT NO. 123456

This certificate verifies that a Stormwater management plan has been approved for this project by the City of Burlington in accordance with the Federal Phase II stormwater requirements, NC General Statute 143-214.7, Session Law 2006-246 (Senate Bill 1566), and the City of Burlington, North Carolina Code of Ordinances, Appendix D – Stormwater Ordinance.

A copy of this permit and the approved Stormwater Management Plan must be kept on the project site.

Per City Ordinance Appendix D, Section 5-503 notice is hereby given that agents, officials, or other qualified persons authorized by the City will periodically inspect any land, building, structure or premises to ensure compliance with the ordinances, or rules or orders adopted or issued pursuant to the ordinance, and to determine whether the measures required in the Plan are effective in controlling stormwater runoff resulting from development or redevelopment.

**Financially Responsible Party:**

Name, Title  
Company  
Street Address  
City, NC, Zip-  
Phone (336) 555-1212

Registered Agent

Permission to install Best Management Practices is hereby granted by this instrument at the above location in accordance with the approved Stormwater Management Plan and the City of Burlington's Stormwater Ordinance.

Reviewer: Reviewer

Date

This plan was approved with "modifications"  Yes  No  
and / or "performance reservations"  Yes  No

City of Burlington Public Works Department – Stormwater Division, 234 E. Summit Avenue, Burlington, NC 27215  
Phone 336-222-5005 Fax 336-222-5004 Email: [stormwater@ci.burlington.nc.us](mailto:stormwater@ci.burlington.nc.us)  
[www.BurlingtonNC.gov/stormwater](http://www.BurlingtonNC.gov/stormwater)



## City of Burlington Stormwater As-built Submission Form

FOR OFFICE USE ONLY	
Permit No.:	_____
Rec'd By:	_____
Date Rec'd:	_____

City of Burlington Water Resources Department –  
Stormwater Division  
Telephone: (336) 222-5140  
Fax: (336) 222-5142

1103 S. Mebane St.  
Burlington, NC 27215

City web site:  
[www.BurlingtonNC.gov/stormwater](http://www.BurlingtonNC.gov/stormwater)  
Email:  
[stormwater@ci.burlington.nc.us](mailto:stormwater@ci.burlington.nc.us)

Prior to obtaining a Certificate of Occupancy, the following items must be provided to the Burlington Stormwater Administrator for approval. These will be compared to the approved stormwater permit application for any irregularities or non-conformance with the approved plans.

- As-built Drawings (1 paper copies, 1 Mylar copy)
- Electronic As-built Drawings (.dwg, .jpg, .tif, or pdf format.)
- Designer's Stormwater BMP Certification

The as-built drawings shall reflect the “as-constructed” condition of the development, and shall include sufficient information to demonstrate conformance with the approved stormwater permit application. Significant deviations from the approved plan shall be considered violations of the Burlington Stormwater Ordinance and are grounds for the invocation of the injunctions and penalties defined therein, and/or withholding the release of any bond pending the completion of corrective action(s), and/or requiring a submittal of a revised stormwater permit application. In the event that the Stormwater Administrator requires submittal of a revised plan, the revision shall include a description of the discrepancies between the site conditions and the prior approved stormwater permit application, along with design calculations that demonstrate that the as-built conditions comply with the Burlington Stormwater Ordinance. Should the as-built conditions be shown to have a negative impact with regards to flooding, maintenance, erosion or water quality, the Stormwater Administrator has the authority to require other mitigation measures and proposed design plans to mitigate any potential impacts from the development.

Submitted By: \_\_\_\_\_ Date: \_\_\_\_\_  
(Signature Required)

\_\_\_\_\_  
(Print Name)



# City of Burlington

## WET DETENTION POND

### Engineer's Statement of Certification

**D-342**

FOR OFFICE USE ONLY

Permit No.:	
Date Rec'd.:	
Rec'd By:	

City of Burlington Water Resources Department –  
 Stormwater Division  
 Telephone: (336) 222-5140  
 Fax: (336) 222-5142

1103 S. Mebane St.  
 Burlington, NC 27215

City web site:  
[www.BurlingtonNC.gov/stormwater](http://www.BurlingtonNC.gov/stormwater)  
 Email:  
[stormwater@ci.burlington.nc.us](mailto:stormwater@ci.burlington.nc.us)

**BMP Description and Location:**

Feature	Design	As-built
Slope of embankments (3:1)		
Elevations on the following:		
Bottom of pond		
Bottom of riser		
Top of riser		
Water quality orifice		
Invert of inflow and outflow pipes		
Top of forebay dam		
Top of dam: Elevation and width		
Width of maintenance benches		
10-ft wide vegetated shelf installed		
Anti-seep collars size/installed		
Size and material of riser/barrel		
Verification of volume:		
Permanent Sediment Storage (CF)		
Permanent Water Quality (SF)		
Temporary Water Quality (CF)		
Baffle location and top elevation		
Emergency Spillway - Width		
Emergency Spillway - Elevation		

I state to the best of my knowledge and belief that the permanent structural stormwater Best Management Practice(s) for \_\_\_\_\_ will control and treat the runoff from the  
(name of plat)

first one inch of rain over the total drainage area, is duly recorded in the Office of the \_\_\_\_\_ County Register of Deeds, and has been completed in conformance with the approved plans and specifications dated \_\_\_\_\_  
(approval date)

SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_



**D-343**  
(Seal)

# City of Burlington

## BIORETENTION CELL

### Engineer's Statement of Certification

FOR OFFICE USE ONLY	
Permit No.:	_____
Date Rec'd.:	_____
Rec'd By:	_____

City of Burlington Water Resources Department –  
Stormwater Division  
Telephone: (336) 222-5140  
Fax: (336) 222-5142

1103 S. Mebane St.  
Burlington, NC 27215

City web site:  
[www.BurlingtonNC.gov/stormwater](http://www.BurlingtonNC.gov/stormwater)  
Email:  
[stormwater@ci.burlington.nc.us](mailto:stormwater@ci.burlington.nc.us)

#### BMP Description and Location:

Feature	Design	As-built
Surface area of bioretention		
Runoff volume captured		
Slope of embankments (3:1)		
Type and width of pretreatment		
Size and material of riser/barrel		
Elevations on the following:		
Top of Planting Soil		
Bottom of Planting Soil		
Bottom of riser		
Top of riser		
Invert of inflow and outflow pipes		
Top of dam: Elevation and width		
Ponding depth of bioretention		
Underdrain System Specifications:		
Size and type of underdrain pipes		
Type and thickness of filter layers around the perforated underdrain		
Number of branching lines and spacing of underdrain pipes		
Invert of underdrain pipe outlet		
Soil filter media(attach soil test report):		
Soil filter media depth		
Percentage sand(by volume)		
Percentage fines(by volume)		
Percentage organic(by volume)		
Planting specifications:		
Type and thickness of filter layers around the perforated underdrain		

Number of branching lines and  
spacing of underdrain pipes  
Emergency Spillway - Elevation


I state to the best of my knowledge and belief that the permanent structural stormwater Best Management Practice(s) for \_\_\_\_\_ will control and treat the runoff from the  
(name of plat)  
first one inch of rain over the total drainage area, is duly recorded in the Office of the \_\_\_\_\_ County Register of Deeds, and has been completed in conformance with the approved plans and specifications dated \_\_\_\_\_  
(approval date)

SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_

(Seal)

APPENDIX H- BMP MAINTENANCE AND INSPECTION PROGRAM

*City of Burlington*  
**BMP INSPECTION AND MAINTENANCE PROGRAM**  
*Stormwater Division*



**INTRODUCTION**

This section outlines the operation and maintenance requirements for the City of Burlington's model local program. The requirements defined in this manual apply to all development and redevelopment projects within the City of Burlington on both private and public property. The City of Burlington's approach to stormwater management emphasizes the use of vegetated surfaces to treat and infiltrate stormwater on the property and structural BMP's as necessary to meet the Jordan New Development Stormwater Rule, 15A NCAC 2B. 0265. The requirement to both operate and maintain these BMP's in perpetuity is a core requirement of this program.

**ACCEPTANCE**

The completion of any private or public project in the City of Burlington ETJ requires all stormwater BMP's to be converted to their approved final design. These BMP's require submittal of the following documents to the Stormwater Administrator for acceptance:

- BMP Engineer's Certification
- BMP As-Built Drawings
- BMP Operation & Maintenance Manual
- BMP Access & Easement Agreement
- BMP Financial Surety

The submitted documents are reviewed for completeness and the City of Burlington performs an inspection of all BMP's to determine if the BMP meets the approved final design.

**SELF INSPECTION**

Inspection of accepted BMP's by the individual property owner is required annually on the anniversary date of acceptance. These documents are then submitted to the Stormwater Administrator for review and are available on file during the permit cycle. This inspection by the property owner must include:

- Approved BMP Inspection Report
- Log of Annual Maintenance Items
- Signature of an Approved BMP Inspector
- Pictures of the BMP

The City of Burlington presently considers the following approved BMP Inspectors: Registered North Carolina professional engineer, surveyor, landscape architect, soil scientist, aquatic biologist, or a certified stormwater BMP inspection & maintenance professional.

### **REGULATORY INSPECTION**

The City of Burlington performs a minimum of one scheduled inspection of all BMP's on file with the Stormwater Administrator. This inspection includes a review of filed paperwork and current owner addresses for accuracy. Additional items investigated included, but are not limited to:

- Proper Function of the BMP
- Proper Access and Easement Maintenance
- Owner Contact Information
- Pictures of the BMP

The scheduled inspection includes written correspondence to the owner detailing maintenance items or compliance with the Rules if the device is operational. Submittal of the required annual inspection by the owner is reviewed and could result in additional routine inspections by the Stormwater Administrator.

### **ENFORCEMENT**

The Stormwater Administrator can issue a "Notice of Violation" in the event of a "Failure to Maintain" the BMP in accordance with the recorded design. Items identified through self inspection or regulatory inspections are categorized as "Corrective Action" items. Corrective Action items must be completed in a timeframe no greater than 30 days. The owner of said BMP can file for more time through the submittal of a "Plan of Action" which is only valid once approved by the Stormwater Administrator. Enforcement actions are as follows, but are not limited to:

- Failure to Conduct Annual Inspections
- Failure to Maintain a BMP
- Failure to Provide Corrective Action

Enforcement can result in up to \$25,000 a day for a failure that results in a decrease in water quality over a significant timeframe.

### **STORMWATER GENERAL FUND**

Upon completion of BMP's and the submittal of the required paperwork to the Stormwater Administrator a surety is due for long-term maintenance of BMP's. This fund is 40% of the completion cost for each BMP constructed by the property owner. The City of Burlington maintains these funds in a

General Fund and the balance is available for the emergency maintenance of any BMP within the City. This fund would be utilized for some of the following, but are not limited to:

- Failure to Maintain a BMP
- Failure to Provide Corrective Action
- Storm Event Emergency Repair

The City of Burlington will file legal notice to the BMP owner to acquire reimbursement of the Fund.

#### **RECORDS**

The Stormwater Administrator will continue to maintain all the required paperwork submitted and provide these records for review by the Division by request. These documents and the BMP's geographic location are available in various formats, but are not limited to:

- Microsoft Access Database
- Hard Copy
- GIS/GPS and Internet Mapping Software

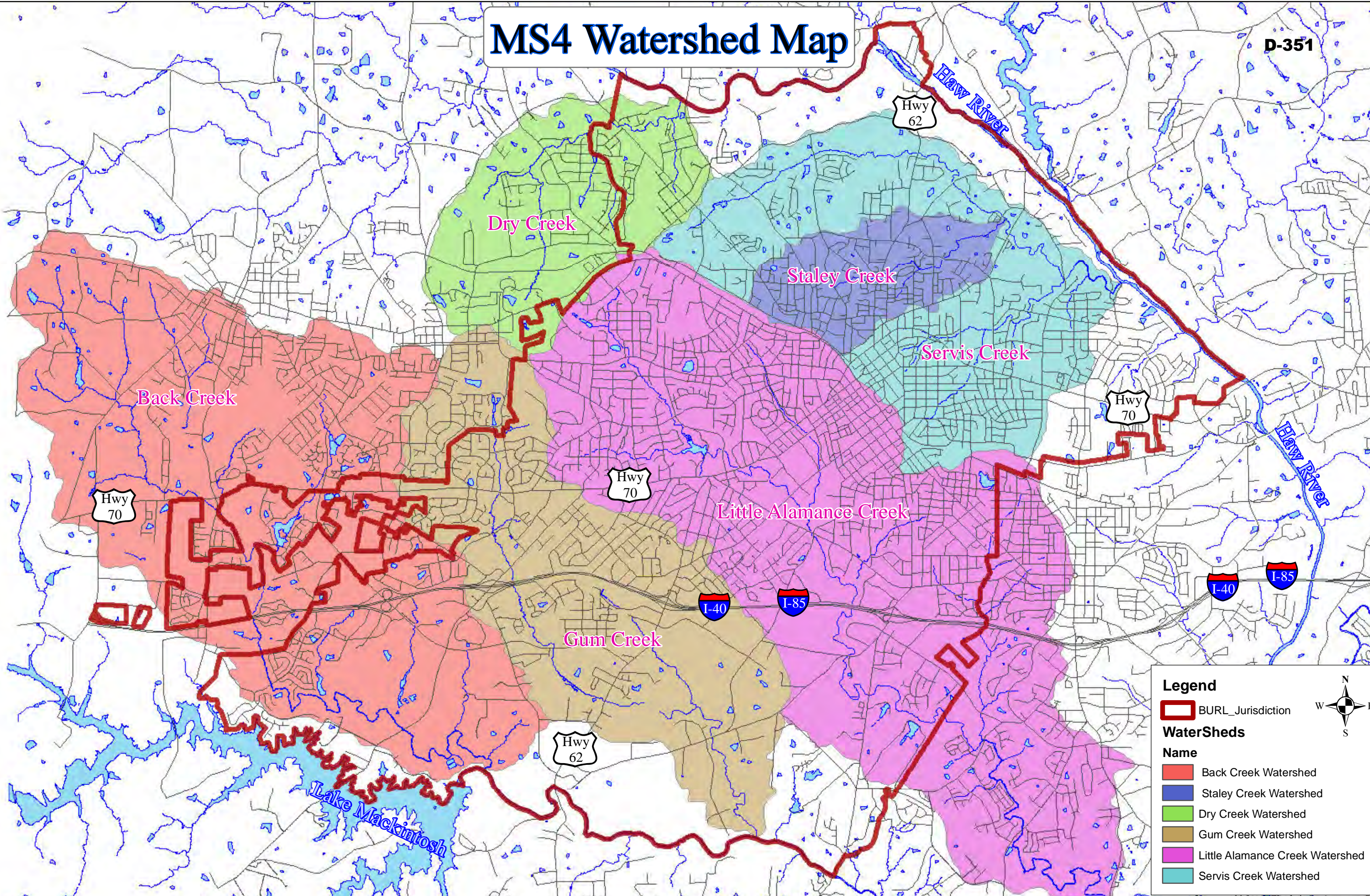
BMP's are logged into a database to track their geographic location, owner, maintenance records and other pertinent information to evaluate their long-term operation.

*APPENDIX I- STORMWATER MAP*



# MS4 Watershed Map

D-351



Back Creek

Dry Creek

Staley Creek

Servis Creek

Little Alamance Creek

Gum Creek

Hwy 62

Hwy 70

Hwy 70

Hwy 70

Hwy 62

I-40

I-85

Lake Mackintosh

**Legend**

BURL\_Jurisdiction

**WaterSheds**

**Name**

- Back Creek Watershed
- Staley Creek Watershed
- Dry Creek Watershed
- Gum Creek Watershed
- Little Alamance Creek Watershed
- Servis Creek Watershed



## SUPPLEMENTAL INFORMATION

The following information is provided to aid the Division of Water Quality's review the New Development Program.

*PROGRAM APPROVAL*

Once the EMC approves the program, local approval of the New Development Program will require the City of Burlington's City Council to hold a public hearing to receive comments on the revisions to the Stormwater Ordinance. At the August 21, 2012 City Council meeting, the Council will approve the modifications to the Stormwater Ordinance and set the effective date.

*ORDINANCE CHANGES*

The following modifications were incorporated into the Draft Stormwater Ordinance.



*Jordan Watershed Stormwater Model Ordinance (DISCUSSION DRAFT 3-16-2005) by Kane and Whisnant*

*For discussion purposes only. Do not copy or attribute without express permission*

~~Jordan Model~~ City of Burlington  
**Stormwater Ordinance** ~~for New~~  
**Development**  
**DRAFT for EMC Approval**

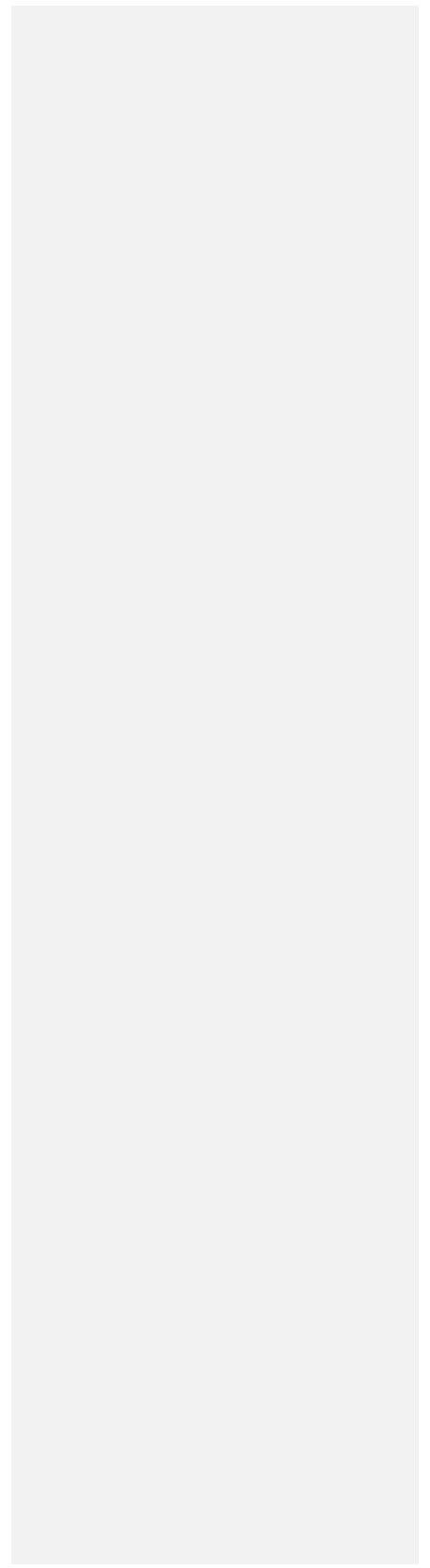
By Richard Whisnant  
UNC School of Government

March 20, 2012

| ~~Approved by EMC 3-10-11~~

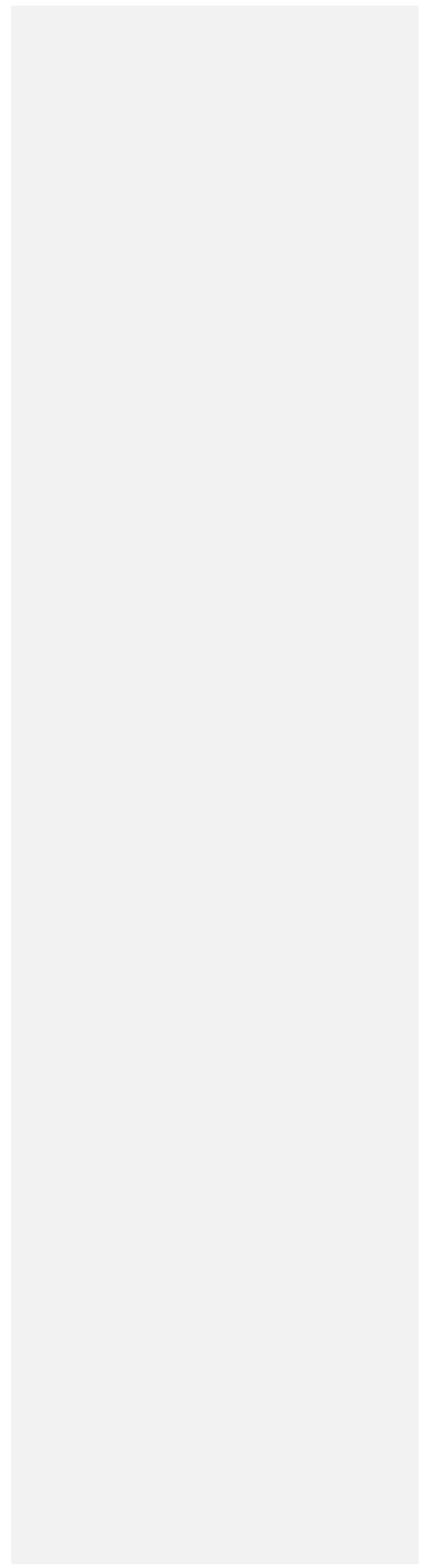
|

| DRAFT for EMC Approval



| ~~Approved by EMC 3-10-11~~

| DRAFT for EMC Approval



Approved by EMC 3-10-11

#### Revision history

Ver. 1.0 Submitted by author for review by DWQ June 3, 2010.

Ver. 2.0 With responses to DWQ comments August 20, 2010

Ver. 2.1 Reworked approach to redeveloped sites that meet prior BUA (see 15A NCAC 2b.0265(3)(a)(v)) to make clear that such sites still must meet permitting, O&M and other process-based requirements of the Jordan Rules—they are exempt only from the nutrient loading requirements and “high density” requirements. Clarified the 2<sup>nd</sup> redevelopment option: If BUA increases, the developer can either meet the target rates that are listed in xx-302(a), OR the developer can apply the percent reduction goals to the site’s pre-development loading, and meet that loading. The percent reduction goals are listed in (5)(a) and (5)(b) of Rule .0262 (35% N and 5% P for the UNH, etc.) Added definition of “stormwater system” and clarified definition of “engineered stormwater control.” Revised 85% TSS removal rule to match new definition of “stormwater system”. Added definition of “stream” from Jordan buffer ordinance. Added definition of “outfall”. Added definition of “approved accounting tool” to simplify the text and allow for the possibility of future, different accounting tools.

Ver. 3.0 First public comment and review draft; no substantive changes from ver. 2.1.

Ver. 3.1 With changes from comments received at public workshop and by email, from affected local governments:

——— Added exemption for state and federal agency projects (in light of separate Jordan rule for those projects), and added comment on possible local regulation of these projects under statutory authority. Added footnote on TSS removal to clarify source of the requirement. Added definition of “land disturbing activity.”

Ver. 3.2 With further changes suggested by local governments and consultants after the comments that led to ver 3.1 had been incorporated:

——— Added commentary on the role of this model in the context of jurisdictions that already have Phase II or other stormwater programs.

Ver. 3.3. Revised 85% TSS removal requirement in light of further consideration by DWQ of its interpretation, after receipt of comments; control now required only for runoff from impervious surfaces; not a property as a whole, and provision is made for offsite treatment where onsite treatment is impracticable. Changed definition of outfall to refer to “surface water” rather than “stream” as the former is more generally applicable and is defined in the Jordan rules. Deleted the now unnecessary definition of “stream.” Added new optional provision making petitioners for variances responsible for the required notice to other local governments. Reformatted and revised several comments.

Ver. 3.4 Refined the 85% TSS removal requirement based on further analysis by DWQ; added reference to .0240 offsets rule, 15A NCAC 02B .0240 ; narrowed notification requirement for variances to conform to a tailored “watershed water supply” approach; changed footnote references to “SB 1210” to now refer to the resulting session law, SL 2004-163 (which implemented the Phase II temporary rules).

Ver. 4.0 Refined the 85% TSS removal requirements based on further analysis by DWQ, removed S/F exclusion, refined “Stormwater Systems” definition.

DRAFT for EMC Approval

Approved by EMC 3-10-11

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DRAFT for EMC Approval

Approved by EMC 3-10-11

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(C) Authority to File Applications .....	<del>2215</del>	Field Code Changed
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<i>xx-303 Nitrogen and phosphorus standard is supplemental; TSS removal.....</i>	<del>3021</del>	Field Code Changed
<i>xx-304 Provisions for protection of Riparian Buffers .....</i>	<del>3121</del>	Field Code Changed
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DRAFT for EMC Approval

Approved by EMC 3-10-11

<i>xx-308 Dedication of BMPS, Facilities &amp; Improvements .....</i>	<del>3223</del>	Field Code Changed
<i>xx-309 Variances .....</i>	<del>3323</del>	Field Code Changed
<i>xx-310 Additional standards .....</i>	<del>3424</del>	Field Code Changed
<i>xx-311 Onsite wastewater.....</i>	<del>3525</del>	Field Code Changed
<b>SECTION 4: MAINTENANCE .....</b>	<del>3726</del>	Field Code Changed
<i>xx-401 General Standards for Maintenance.....</i>	<del>3726</del>	Field Code Changed
(A) Function of BMPs As Intended.....	<del>3726</del>	Field Code Changed
(B) Annual Maintenance Inspection and Report .....	<del>3726</del>	Field Code Changed
<i>xx-402 Operation and Maintenance Agreement.....</i>	<del>3826</del>	Field Code Changed
(A) In General.....	<del>3826</del>	Field Code Changed
<i>xx-403 Inspection Program.....</i>	<del>4229</del>	Field Code Changed
<i>xx-404 Performance Security for Installation and Maintenance .....</i>	<del>4229</del>	Field Code Changed
(A) Performance Security Required .....	<del>4229</del>	Field Code Changed
(B) Amount.....	<del>4229</del>	Field Code Changed
(C) Uses of Performance Security .....	<del>4330</del>	Field Code Changed
<i>xx-405 Notice to owners .....</i>	<del>4431</del>	Field Code Changed
(A) Deed Recordation and Indications On Plat .....	<del>4431</del>	Field Code Changed
(B) Signage .....	<del>4431</del>	Field Code Changed
<i>xx-406 Records of Installation and Maintenance Activities.....</i>	<del>4531</del>	Field Code Changed
<i>xx-407 Nuisance .....</i>	<del>4531</del>	Field Code Changed
<i>xx-408 Maintenance Easement.....</i>	<del>4531</del>	Field Code Changed
<i>xx-409 Existing Structural BMPs.....</i>	<del>4531</del>	Field Code Changed
<b>SECTION 5: ENFORCEMENT AND VIOLATIONS.....</b>	<del>4632</del>	Field Code Changed
<i>xx-501 General .....</i>	<del>4632</del>	Field Code Changed
(A) Authority to Enforce.....	<del>4632</del>	Field Code Changed
(B) Violation Unlawful.....	<del>4632</del>	Field Code Changed
(C) Each Day a Separate Offense.....	<del>4632</del>	Field Code Changed
(D) Responsible Persons/Entities.....	<del>4632</del>	Field Code Changed
<i>xx-502 Remedies and Penalties .....</i>	<del>4733</del>	Field Code Changed
(A) Remedies .....	<del>4733</del>	Field Code Changed
(B) Civil Penalties .....	<del>4834</del>	Field Code Changed
(C) Criminal Penalties.....	<del>4934</del>	Field Code Changed

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<i>xx-503 Procedures</i> .....	<b>4934</b>	Field Code Changed
(A) Initiation/Complaint .....	<b>4934</b>	Field Code Changed
(B) Inspection.....	<b>4934</b>	Field Code Changed
(C) Notice of Violation and Order to Correct.....	<b>4934</b>	Field Code Changed
(D) Extension of Time .....	<b>5035</b>	Field Code Changed
(E) Enforcement After Time to Correct.....	<b>5035</b>	Field Code Changed
(F) Emergency Enforcement .....	<b>5035</b>	Field Code Changed
<b>SECTION 6: DEFINITIONS</b> .....	<b>5136</b>	Field Code Changed
<i>xx-601 Terms Defined</i> .....	<b>5136</b>	Field Code Changed
Built-upon area (BUA) .....	<b>5136</b>	Field Code Changed
Department.....	<b>5136</b>	Field Code Changed
Design Manual.....	<b>5136</b>	Field Code Changed
Development .....	<b>5236</b>	Field Code Changed
Division.....	<b>5236</b>	Field Code Changed
Engineered stormwater control .....	<b>5236</b>	Field Code Changed
Land disturbing activity .....	<b>5337</b>	Field Code Changed
Larger common plan of development or sale .....	<b>5337</b>	Field Code Changed
10-year, 24-hour storm .....	<b>5337</b>	Field Code Changed
Outfall .....	<b>5437</b>	Field Code Changed
Owner.....	<b>5437</b>	Field Code Changed
Person.....	<b>5438</b>	Field Code Changed
Redevelopment .....	<b>5438</b>	Field Code Changed
Stormwater system.....	<b>5438</b>	Field Code Changed
Substantial progress.....	<b>5438</b>	Field Code Changed
<b>SECTION 7: Illicit Discharges</b> .....	<b>5639</b>	Field Code Changed
<i>xx-701 Illicit Discharges and Connections</i> .....	<b>5639</b>	Field Code Changed
(A) Illicit Discharges.....	<b>5639</b>	Field Code Changed
(B) Illicit Connections .....	<b>5639</b>	Field Code Changed
(C) Spills .....	<b>5740</b>	Field Code Changed
(D) Industrial or Construction Activity Discharges .....	<b>5740</b>	Field Code Changed
(E) Right of Entry, Inspection, Sampling, and Testing .....	<b>5841</b>	Field Code Changed
(F) (F) Enforcement .....	<b>5841</b>	Field Code Changed

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| ~~(G) (G) Violations Deemed a Public Nuisance ..... 5841~~

Field Code Changed

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SECTION 1: GENERAL PROVISIONS

Comment: **Context for this model ordinance**—If adopted in its entirety, either with or without the optional provisions, this ordinance is designed to ensure that communities comply with the Jordan watershed stormwater rules for new development. All ordinances implementing the Jordan Watershed stormwater rules for new development, including ordinances that adopt this model verbatim, must be reviewed and approved by the Environmental Management Commission or, through delegated authority, the Division of Water Quality of the North Carolina Department of Environment and Natural Resources before Jordan rule compliance is assured. Ordinances with changes to or omissions from this model will require closer review and possible individual discussion and approval by the EMC and/or the Division of Water Quality.

Many jurisdictions in the Jordan watershed at the time of the release of this model already have stormwater programs as a part of their development review process—some under Phase II of the federal stormwater program, others as part of the state Water Supply Watershed Program or other state stormwater programs. Such jurisdictions have the option to adopt this model, or similar language, in its entirety, but it is more likely they will wish to mesh the parts of this model that are new and different (mainly the standards for nutrient loading) with their existing stormwater review process. Either approach can work. To make it easier to integrate this model with an existing Phase II program, the author of the model has also produced a matrix that compares this model to the model Phase II stormwater ordinance. Also, to the greatest extent possible, this model was written to match existing regulations for Phase II and Water Supply Watersheds.

Comment: **Format**—Throughout this model ordinance, the **bold underlines** serve as prompts where text that is appropriately customized for the locality should be inserted. For example, where “name of governing board” is indicated in the blank, the name of the local governing body—for example, “Tarheelville City Council” or “Dogwood County Commission”—should be inserted.

Commentary from the drafter of the model ordinance is placed in boxes such as this. These comments should be removed from the ordinance text actually adopted; they are not part of the ordinance itself.

Optional provisions are provided throughout this document and are intended to address the diverse needs of local government depending on characteristics such as population, financial resources, location in the watershed and staffing resources. Optional provisions are shown in [brackets] and generally are accompanied by some explanation in the commentary.

*Defined terms* are shown in italics. The definitions section of the ordinance is at the end.

Footnotes give information on the original source of the text language. Note that changes may have been made in the source language to better match North Carolina’s needs.

xx-101 TITLE

This ordinance shall be officially known as “The Jordan WatershedCity of Burlington Stormwater Ordinance for New Development.” It is referred to herein as “this ordinance.”

xx-102 AUTHORITY

The (name of governing board)Burlington City Council is authorized to adopt this ordinance pursuant to North Carolina law, including but not limited to Article 14, Section 5 of the Constitution of North Carolina; (name of municipal charter, if relevant)the Charter of the City of Burlington; North Carolina General Statutes Chapter 143-214.7 and rules promulgated by the Environmental Management Commission thereunder; Chapter 143-

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215.6A; Session Laws ~~2006-246~~, 2009-216, 2009-484; Chapter 153A-454; Chapter 160A, §§ 174, 185, 459 ~~and (cite any special legislation applicable to the specific local government).;~~ as well as Chapter 113A, Article 4 (Sedimentation Pollution Control)~~);~~ Article 21, Part 6 (Floodway Regulation) ~~);~~ Chapter 143-214.5, Water Supply Watershed Protection~~);~~ Chapter 160A, Article 19 (Planning and Regulation of Development); Chapter 153A, Article 18~~).~~

~~Regarding this section which recites authority for this ordinance: Some jurisdictions may wish to integrate this ordinance with a local erosion and sediment control ordinance, in which case adding the reference to Chapter 113A is appropriate. Some jurisdictions may wish to integrate this ordinance with existing floodway regulations, in which case adding the reference to Chapter 143, Article 21, Part 6 is appropriate. Chapter 143-214.5 is appropriate if the jurisdiction is also administering and is integrating this ordinance with a water supply watershed protection program. Note that the water supply watershed program, erosion and sediment control and floodway regulations are appropriate for integration with Jordan Watershed stormwater controls, but each of these programs has particular requirements that are not covered in this model ordinance.~~

~~Local governments that anticipate including a program of open space acquisition as part of their stormwater program should include a reference to statutory authority for that function here as well (Article 19, Part 4, Chapter 160A, as well as G.S. 160A-372).~~

~~Jurisdictions that are adopting this ordinance as part of a land use ordinance or unified development ordinance should include a reference to statutory authority for planning and regulation of development (Chapter 153A, Article 18 (Parts 1, 2, and 3), including particularly but not limited to G.S. 153A-324 (enforcement), G.S. 153A-330 and 331 (subdivision), and G.S. 153A-340 (zoning). In addition, when adopting this ordinance as part of land use regulations, local governments should follow the standards for adoption/amendment of such ordinances set out in G.S. 153A-323 and 160A-364.~~

#### xx-103 FINDINGS

It is hereby determined that:

*Development* and *redevelopment* alter the hydrologic response of local watersheds and increases stormwater runoff rates and volumes, flooding, soil erosion, stream channel erosion, nonpoint and point source pollution, and sediment transport and deposition, as well as reducing groundwater recharge;

These changes in stormwater runoff contribute to increased quantities of water-borne pollutants and alterations in hydrology that are harmful to public health and safety as well as to the natural environment; and

These effects can be managed and minimized by applying proper design and well-planned controls to manage stormwater runoff from *development* sites.

Further, the *Commission* has identified B. Everett Jordan reservoir, a water supply reservoir, as nutrient sensitive waters; has identified all or a portion of the reservoir as impaired waters under the federal Clean Water Act due to exceedances of the chlorophyll a standard; and has promulgated rules that have been amended and affirmed by the North Carolina General Assembly (the "Jordan Rules") to reduce the average annual loads of nitrogen and phosphorus delivered to Jordan Reservoir from all point and nonpoint sources of these nutrients located within its watershed, including stormwater from new development in this jurisdiction;

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Therefore, the ~~(name of governing board)~~Burlington City Council establishes this set of water quality and quantity regulations to meet the requirements of state and federal law regarding control of stormwater runoff and discharge for *development*.

**xx-104 PURPOSE**

The purpose of this ordinance is to protect, maintain and enhance the public health, safety, environment and general welfare by establishing minimum requirements and procedures to control the adverse effects of increased stormwater runoff, nitrogen and phosphorus in stormwater runoff and nonpoint and point source pollution associated with new *development* and *redevelopment* as well as illicit discharges into municipal separate stormwater systems in the watershed of B. Everett Jordan reservoir. It has been determined that proper management of construction-related and post-*development* stormwater runoff will minimize damage to public and private property and infrastructure; safeguard the public health, safety, and general welfare; and protect water and aquatic resources.

~~Commentary: The locality adopting the ordinance may wish to supplement the objectives included below, depending on the nature of its stormwater program and specific local needs. This list is a general set of objectives to reduce the impacts of post-development stormwater runoff quantity and quality from land development activities. More specific objectives might be included by the locality adopting the ordinance based upon a watershed management plan, impervious surface targets, the findings of a watershed assessment or study, a local water quality problem or Total Maximum Daily Load (TMDL) requirement.~~

This ordinance seeks to meet its general purpose through the following specific objectives and means:

1. Establishing decision-making processes for *development* that protects the integrity of watersheds and preserves the health of water resources;
2. Requiring that new *development* and *redevelopment* maintain the pre-*development* hydrologic response in their post-*development* state for the applicable design storm to reduce flooding, streambank erosion, nonpoint and point source pollution and increases in stream temperature, and to maintain the integrity of stream channels and aquatic habitats;
3. Establishing minimum post-*development* stormwater management standards and design criteria for the regulation and control of stormwater runoff quantity and quality;
4. Establishing design and review criteria for the construction, function, and use of *structural stormwater BMPs* that may be used to meet the minimum post-*development* stormwater management standards;
5. Encouraging the use of better management and site design practices, such as the use of vegetated conveyances for stormwater and the preservation of greenspace, riparian buffers and other conservation areas to the maximum extent practicable;
6. Establishing provisions for the long-term responsibility for and maintenance of *structural and nonstructural stormwater BMPs* to ensure that they continue to function as designed, are maintained appropriately, and pose no threat to public safety;

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7. Establishing administrative procedures for the submission, review, approval and disapproval of *stormwater management plans*, for the inspection of approved projects, and to assure appropriate long-term maintenance.

{8. Coordinating site design plans that include open space and natural areas with the City of Burlington open space and natural area protection plans, policies or ordinances.~~(name of the open space and natural areas protection plan of the local government, or the section of its comprehensive plan dealing with open space/natural areas, if applicable).~~{

{9. Controlling illicit discharges into the municipal separate *stormwater system*.}

{10. Controlling erosion and sedimentation from construction activities per the City of Burlington Code of Ordinances Chapter 31.5 - Soil Erosion and Sedimentation Control.}

{11. Assigning responsibility and processes for approving the creation and maintenance of adequate drainage and flood damage prevention measures per the City of Burlington Code of Ordinance Appendix B – Flood Damage Prevention Ordinance.}

~~Commentary: Optional provisions 8, 9, 10 and 11 are appropriate only if the jurisdiction is integrating this model ordinance with existing programs for open space protection, illicit discharge control, erosion and sediment control for construction, and/or floodway and related drainage regulation. Any such existing programs may be good candidates for inclusion in an integrated stormwater ordinance, which would have the advantage of collecting most or all the relevant stormwater related development requirements in a single place. However, this model ordinance does not attempt to provide comprehensive substantive provisions for these programs.~~

xx-105 APPLICABILITY AND JURISDICTION

(A) General

Beginning with and subsequent to its effective date, this ordinance shall be applicable to all *development* and *redevelopment*, including, but not limited to, site plan applications, subdivision applications, and grading applications, within the corporate limits and extra territorial jurisdiction limits unless exempt pursuant to this ordinance.

(B) Exemptions

Single family and duplex residential and recreational *development* and *redevelopment* that cumulatively disturbs less than one acre and is not part of a *larger common plan of development or sale* is exempt from the provisions of this ordinance.

Commercial, industrial, institutional, multifamily residential or local government *development* and *redevelopment* that cumulatively disturbs less than one-half acre and is

<sup>4</sup>-Adapted from Metropolitan North Georgia Water Planning District Model Ordinance.

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not part of a *larger common plan of development or sale* is exempt from the provisions of this ordinance.

*Development and redevelopment* that disturbs less than the above thresholds are not exempt if such activities are part of a *larger common plan of development or sale* and the larger common plan exceeds the relevant threshold, even though multiple, separate or distinct activities take place at different times on different schedules.<sup>2</sup>

*Development* that is exempt from permit requirements of Section 404 of the federal Clean Water Act as specified in 40 CFR 232 (primarily, ongoing farming and forestry activities) are exempt from the provisions of this ordinance.

~~State/Federal Projects: One of the Jordan Rules, 15A NCAC 2B.271 requires state and federal entities within the watershed to have their developments reviewed and approved by the Division. Note that cities and counties do have authority to regulate certain state and federal agency stormwater impacts under G.S. 160A-459 (cities) and G.S. 153A-454 (counties). A city or county that interprets this authority to require it to regulate non-NPDES permitted state and/or federal entities relative to the requirements of this rule should consider stating this in the ordinance.~~

**(C) No Development or Redevelopment Until Compliance and Permit**

No *development* or *redevelopment* shall occur except in compliance with the provisions of this ordinance or unless exempted. No *development* or *redevelopment* for which a permit is required pursuant to this ordinance shall occur except in compliance with the provisions, conditions, and limitations of the permit.

**(D) Map**

The provisions of this ordinance shall apply within the areas designated on the map titled "~~Jordan Watershed~~ Stormwater Map of ~~the City of Burlington (name of local government)~~, North Carolina" ("the Stormwater Map"), which is adopted simultaneously herewith. The Stormwater Map and all explanatory matter contained thereon accompanies and is hereby made a part of this ordinance.<sup>3</sup>

The Stormwater Map shall be kept on file by the Stormwater Administrator and shall be updated to take into account changes in the land area covered by this ordinance and the geographic location of all *engineered stormwater controls* permitted under this ordinance. In the event of a dispute, the applicability of this ordinance to a particular area of land or BMP shall be determined by reference to the North Carolina Statutes, the North Carolina Administrative Code, and local zoning and jurisdictional boundary ordinances.

**xx-106 INTERPRETATION**

~~Commentary: Each local government should consider whether to use existing rules of interpretation, if any are in current use for other ordinances, or whether to adopt the ones provided here. If the local government uses existing rules, they should be fully reviewed for their potential effect on the application of this ordinance.~~

<sup>2</sup>-Adapted from the North Georgia Model Ordinance.

<sup>3</sup>-Adapted from North Carolina Model Watershed Protection Ordinance.

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(A) **Meaning and Intent**

All provisions, terms, phrases, and expressions contained in this ordinance shall be construed according to the general and specific purposes set forth in Section 104, Purpose. If a different or more specific meaning is given for a term defined elsewhere in ~~(name of municipality's or county's code of ordinances)~~the Code of Ordinances of the City of Burlington, the meaning and application of the term in this ordinance shall control for purposes of application of this ordinance.<sup>4</sup>

(B) **Text Controls in Event of Conflict**

In the event of a conflict or inconsistency between the text of this ordinance and any heading, caption, figure, illustration, table, or map, the text shall control.

(C) **Authority for Interpretation**

The Stormwater Administrator has authority to determine the interpretation of this ordinance. Any person may request an interpretation by submitting a written request to the Stormwater Administrator, who shall respond in writing within 30 days. The Stormwater Administrator shall keep on file a record of all written interpretations of this ordinance.

(D) **References to Statutes, Regulations, and Documents**

Whenever reference is made to a resolution, ordinance, statute, regulation, manual (including the *Design Manual*), or document, it shall be construed as a reference to the most recent edition of such that has been finalized and published with due provision for notice and comment, unless otherwise specifically stated.

(E) **Computation of Time**

The time in which an act is to be done shall be computed by excluding the first day and including the last day. If a deadline or required date of action falls on a Saturday, Sunday, or holiday observed by the ~~(name of local government)~~City of Burlington, the deadline or required date of action shall be the next day that is not a Saturday, Sunday or holiday observed by the City of Burlington~~(name of local government)~~. References to days are calendar days unless otherwise stated.

(F) **Delegation of Authority**

Any act authorized by this Ordinance to be carried out by the Stormwater Administrator of ~~City of Burlington(name of local government)~~ may be carried out by his or her designee.

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<sup>4</sup>Provisions A through H were adapted from Town of Cary Land Development Ordinance.

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(G) Usage

(1) Mandatory and Discretionary Terms

The words “shall,” “must,” and “will” are mandatory in nature, establishing an obligation or duty to comply with the particular provision. The words “may” and “should” are permissive in nature.

(2) Conjunctions

Unless the context clearly indicates the contrary, conjunctions shall be interpreted as follows: The word “and” indicates that all connected items, conditions, provisions and events apply. The word “or” indicates that one or more of the connected items, conditions, provisions or events apply.

(3) Tense, Plurals, and Gender

Words used in the present tense include the future tense. Words used in the singular number include the plural number and the plural number includes the singular number, unless the context of the particular usage clearly indicates otherwise. Words used in the masculine gender include the feminine gender, and vice versa.

(H) Measurement and Computation

Lot area refers to the amount of horizontal land area contained inside the lot lines of a lot or site.

xx-107 DESIGN MANUAL

(A) Reference to Design Manual

The Stormwater Administrator shall use the policy, criteria, and information, including technical specifications and standards, in the *Design Manual* as the basis for decisions about stormwater permits and about the design, implementation and performance of *engineered stormwater controls* and other practices for compliance with this ordinance.

The *Design Manual* includes a list of acceptable stormwater treatment practices, including specific design criteria for each stormwater practice. Stormwater treatment practices that are designed, constructed, and maintained in accordance with these design and sizing criteria will be presumed to meet the minimum water quality performance standards of the Jordan Rules.<sup>5</sup>

(B) Relationship of Design Manual to Other Laws and Regulations

Commentary: This provision is intended to prevent a situation where another, less stringent standard has the force of law, and might be interpreted as overriding the design manual if the manual does not have the

<sup>5</sup> From Stormwater Center/EPA Model Ordinance.



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~~force of law—for example, where a community has an enacted standard for storm sewers that are to be accepted into the public maintenance system, and this enacted standard is less stringent than the guidelines in the design manual.~~

If the specifications or guidelines of the *Design Manual* are more restrictive or apply a higher standard than other laws or regulations, that fact shall not prevent application of the specifications or guidelines in the *Design Manual*.

(C) **Changes to Standards and Specifications**

If the standards, specifications, guidelines, policies, criteria, or other information in the *Design Manual* are amended subsequent to the submittal of an application for approval pursuant to this ordinance but prior to approval, the new information shall control and shall be utilized in reviewing the application and in implementing this ordinance with regard to the application.

(D) ~~{Amendments to Design Manual}~~

~~Commentary: This optional section would be relevant if a special local design manual is in use.~~

~~{The *Design Manual* may be updated and expanded from time to time, based on advancements in technology and engineering, improved knowledge of local conditions, or local monitoring or maintenance experience.<sup>6</sup>~~

~~Prior to amending or updating the *Design Manual*, proposed changes shall be generally publicized and made available for review, and an opportunity for comment by interested persons shall be provided.~~

xx-108 **RELATIONSHIP TO OTHER LAWS, REGULATIONS AND PRIVATE AGREEMENTS**

(A) **Conflict of Laws**

~~Commentary: This is a standard legal provision that generally provides that the stricter law or regulation will control in the event of conflict.~~

~~From a policy rather than a legal perspective, it should be noted that ordinances and standards in many communities may interfere with effective site design and planning for stormwater management. Some examples may include:~~

- ~~▪ Excessive curb & gutter requirements that increase directly connected impervious areas discharging directly into the stormwater conveyance system~~
- ~~▪ Street design standards that provide for overly generous pavement widths in low traffic areas~~
- ~~▪ Minimum residential lot sizes and other ordinance provisions that hinder sensitive site layout designed around riparian buffers, conservation of open space and clustered development.~~
- ~~▪ Oversized minimum parking requirements that result in large paved parking lots~~
- ~~▪ Building codes that add to the cost of rehabilitating older buildings prevent adaptive re-use in existing urbanized areas or promote greenfield development~~
- ~~▪ Nuisance code provisions that limit vegetation height and restrict wildlife habitat~~

<sup>6</sup>Adapted from Metro North Georgia Water Management District and Stormwater Center/EPA Model Ordinances.

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Thus, many common development standards tend to promote the creation of impervious surface and encourage sprawling, low-density land use patterns that actually worsen stormwater problems, especially when viewed at the watershed scale.

Each jurisdiction will need to consider its standards and ordinances in light of their effects on stormwater runoff. For example, curb & gutter policies may need to be reformulated to allow alternatives that let stormwater flow across vegetative strips before it is sent to the stormwater conveyance system; planting islands may be required to limit the impervious surface in cul-de-sacs; and smaller lot sizes with cluster provisions can permit open space in yards to be reconfigured as preserved common open space. A number of North Carolina cities and counties have adopted the new "Rehab Code" which provides adjusted building code standards to promote the re-use of older buildings (information available at [www.ncrehabcode.com](http://www.ncrehabcode.com)).

If possible, communities should undertake a comprehensive review of their policies and standards with the involvement of planning and zoning staff, public works or engineering personnel, and the Stormwater Administrator, with the goal of reducing regulatory barriers and enabling designers to develop plans that deal with stormwater in the most environmentally sound and cost-effective ways.

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This ordinance is not intended to modify or repeal any other ordinance, rule, regulation or other provision of law. The requirements of this ordinance are in addition to the requirements of any other ordinance, rule, regulation or other provision of law. Where any provision of this ordinance imposes restrictions different from those imposed by any other ordinance, rule, regulation or other provision of law, whichever provision is more restrictive or imposes higher protective standards for human or environmental health, safety, and welfare shall control.<sup>7</sup>

**(B) Private Agreements**

This ordinance is not intended to revoke or repeal any easement, covenant, or other private agreement. However, where the regulations of this ordinance are more restrictive or impose higher standards or requirements than such an easement, covenant, or other private agreement, the requirements of this ordinance shall govern. Nothing in this ordinance shall modify or repeal any private covenant or deed restriction, but such covenant or restriction shall not legitimize any failure to comply with this ordinance. In no case shall City of Burlington (name of local government) be obligated to enforce the provisions of any easements, covenants, or agreements between private parties.<sup>8</sup>

**xx-109 SEVERABILITY**

If the provisions of any section, subsection, paragraph, subdivision or clause of this ordinance shall be adjudged invalid by a court of competent jurisdiction, such judgment shall not affect or invalidate the remainder of any section, subsection, paragraph, subdivision or clause of this ordinance.

<sup>7</sup>From Metro North Georgia Water Management District Model Ordinance.

<sup>8</sup>Adapted from Town of Cary Land Development Ordinance.

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xx-110 EFFECTIVE DATE AND TRANSITIONAL PROVISIONS

(A) Effective Date

This Ordinance shall take effect on \_\_\_\_\_, 201\_\_\_\_.

(B) Final Approvals, Complete Applications

All development and redevelopment projects for which complete and full applications were submitted and approved by the (name of local government)City of Burlington Technical Review Committee prior to the effective date of this ordinance and which remain valid, unexpired, unrevoked and not otherwise terminated at the time of development shall be exempt from complying with all provisions of this ordinance dealing with the control and/or management of stormwater, but shall be required to comply with all other applicable provisions, including but not limited to illicit discharge provisions.

A phased development plan shall be deemed approved prior to the effective date of this ordinance if it has been approved by all necessary government units, it remains valid, unexpired, unrevoked and not otherwise terminated, and it shows:

- 1. For the initial or first phase of development or redevelopment, the type and intensity of use for a specific parcel or parcels, including at a minimum, the boundaries of the project and a subdivision plan that has been approved.
2. For any subsequent phase of development or redevelopment, sufficient detail so that implementation of the requirements of this ordinance to that phase of development would require a material change in that phase of the plan.

(C) Violations Continue

Any violation of provisions existing on the effective date of this ordinance shall continue to be a violation under this ordinance and be subject to penalties and enforcement under this ordinance unless the use, development, construction, or other activity complies with the provisions of this ordinance.

9 SL 2006 246.

10 Adapted from Town of Cary Land Development Ordinance.

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**SECTION 2: ADMINISTRATION AND PROCEDURES**

~~Commentary: Jurisdictions should consider how to coordinate the stormwater review process with local land development approval procedures. Activities that trigger stormwater review can occur earlier than activities that trigger a zoning permit or preliminary subdivision plat, and so the stormwater permit review should occur earlier than a building permit or a zoning permit (sometimes called a “change in use approval,” “certificate of zoning compliance” or similar name). Communities that administer their own grading permit, or that rely on a state issued erosion and sedimentation control plan approval, should ensure that stormwater permit review occurs prior to or in conjunction with that grading or sediment and erosion control plan approval.~~

~~In some cases, a stormwater plan for a subdivision may require revision when the preliminary subdivision plan is finalized. One approach to managing the process would be to require an initial stormwater approval as a prerequisite for preliminary plat approval; then after the preliminary plat has been approved, the final stormwater permit can be approved, provided that nothing has happened in the preliminary plat stage to compromise the stormwater design. Alternatively, the final stormwater permit could be obtained in advance, and the subdivision review process could require a signoff from the Stormwater Administrator affirming that the plat is consistent with approved stormwater plans.~~

**xx-201 REVIEW AND DECISION-MAKING ENTITIES**

**(A) Stormwater Administrator**

**(1) Designation**

A Stormwater Administrator shall be designated by the ~~(name of governing board)~~City Council to administer and enforce this ordinance.

~~Commentary: The person designated as the Stormwater Administrator will need to have the technical background and expertise to carry out the duties outlined in the ordinance. It may be necessary for some communities to contract out the position either to another local government or possibly to a private entity.~~

**(2) Powers and Duties**

In addition to the powers and duties that may be conferred by other provisions of the ~~(name of local municipal or county code)~~Code of Ordinances of the City of Burlington and other laws, the Stormwater Administrator shall have the following powers and duties under this ordinance:

- a. To review and approve, approve with conditions, or disapprove applications for approval of plans pursuant to this ordinance.
- b. To make determinations and render interpretations of this ordinance.
- c. To establish application requirements and schedules for submittal and review of applications and appeals, to review and make recommendations to the ~~(name of governing board)~~City Council on applications for *development* or *redevelopment* approvals.
- d. To enforce the provisions of this ordinance in accordance with its enforcement provisions.

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- e. To maintain records, maps, forms and other official materials as relate to the adoption, amendment, enforcement, and administration of this ordinance.
- f. To provide expertise and technical assistance to the ~~(name of governing board and, if a stormwater board is established, the name of that board as well)~~City Council, upon request.
- g. To designate appropriate other *person(s)* who shall carry out the powers and duties of the Stormwater Administrator.
- h. To take any other action necessary to administer the provisions of this ordinance.

xx-202 REVIEW PROCEDURES

**(A) Permit Required; Must Apply for Permit**

A stormwater permit is required for all *development* and *redevelopment* unless exempt pursuant to this ordinance. A permit may only be issued subsequent to a properly submitted and reviewed permit application, pursuant to this section.

**(B) Effect of Permit**

A stormwater permit shall govern the design, installation, and construction of stormwater management and control practices on the site, including *engineered stormwater controls* and elements of site design for stormwater management other than *engineered stormwater controls*.

The permit is intended to provide a mechanism for the review, approval, and inspection of the approach to be used for the management and control of stormwater for the *development* or *redevelopment* site consistent with the requirements of this ordinance, whether the approach consists of *engineered stormwater controls* or other techniques such as low-impact or low-density design. The permit does not continue in existence indefinitely after the completion of the project; rather, compliance after project construction is assured by the maintenance provisions of this ordinance.

~~Commentary: This provision mandates a permit for stormwater management on all non-exempt sites. Both *engineered stormwater controls* and *site design* are covered by the permit review and approval. For example, if a site uses primarily low-impact development rather than specific BMPs to manage and control stormwater runoff, the design and layout are subject to review and approval under a stormwater permit, just as are the design and layout of BMPs.~~

~~However, as the provision makes clear, the permit is for the construction period only and does not normally endure past post-inspection approval. Ongoing maintenance of BMPs is ensured by Section 4, Maintenance, which gives specific requirements for ongoing operation and maintenance, including a recorded O&M agreement that is binding on subsequent owners, annual inspections, reporting, and record-keeping requirements.~~

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(C) Authority to File Applications

All applications required pursuant to this Code shall be submitted to the Stormwater Administrator by the land owner or the land owner's duly authorized agent.

~~Commentary: The local government may choose to treat stormwater applications by persons other than the owner/sole owner in the same way that other such applications (such as zoning requests and variances) are treated.~~

(D) Establishment of Application Requirements, Schedule, and Fees

(1) Application Contents and Form

The Stormwater Administrator ~~{Stormwater Advisory Board}~~ shall establish requirements for the content and form of all applications and shall amend and update those requirements from time to time. At a minimum, the stormwater permit application shall describe in detail how post-development stormwater runoff will be controlled and managed, the design of all stormwater facilities and practices, and how the proposed project will meet the requirements of this ordinance.

(2) Submission Schedule

The Stormwater Administrator ~~{Stormwater Advisory Board}~~ shall establish a submission schedule for applications. The schedule shall establish deadlines by which complete applications must be submitted for the purpose of ensuring that there is adequate time to review applications; and that the various stages in the review process are accommodated.

~~{Optional provision: Replace first sentence with "The Stormwater Administrator shall establish a submission schedule for applications, which shall be reviewed and approved by the (name of governing board) {Stormwater Advisory Board}."~~

(3) Permit Review Fees

The ~~(name of governing board)~~City Council shall establish permit review fees as well as policies regarding refund of any fees upon withdrawal of an application, and may amend and update the fees and policies from time to time.

~~Commentary: Commentary: Fees for application review should be distinguished from fees or user charges that a jurisdiction may want to impose as a means of paying for its ongoing stormwater program as a "public enterprise" (also known as a "stormwater utility"). North Carolina law allows the imposition of such fees and charges, but only with the process and limits set out at G.S. § 160A-314. The best practice for all jurisdictions adopting this ordinance or similar Jordan Watershed ordinances would be to schedule and hold a public hearing in accordance with § 160A-314, whether or not user fees will be assessed to pay for the stormwater program. This ordinance does not attempt to set out the additional provisions that would be needed to create a stormwater utility.~~

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(4) **Administrative Manual**

For applications required under this Code, the Stormwater Administrator shall compile the application requirements, submission schedule, fee schedule, a copy of this ordinance, and information on how and where to obtain the Design Manual in an Administrative Manual, which shall be made available to the public.

~~Commentary: The Administrative Manual may be as simple as a three-ring binder containing in one place the updated master versions of the ordinance, fee schedule, application requirements, submission schedule, and so on. Copies of the information can be made available to the public as photocopied handouts or simple brochures at the permit counter, clerk's office, or other convenient location.~~

(E) **Submittal of Complete Application**

Applications shall be submitted to the Stormwater Administrator pursuant to the application submittal schedule in the form established by the Stormwater Administrator, along with the appropriate fee established pursuant to this section.

An application shall be considered as timely submitted only when it contains all elements of a complete application pursuant to this ordinance, along with the appropriate fee. If the Stormwater Administrator finds that an application is incomplete, the applicant shall be notified of the deficient elements and shall be provided with an opportunity to submit a complete application. However, the submittal of an incomplete application shall not suffice to meet a deadline contained in the submission schedule established above.

(F) **Review**

~~Within          working(60) calendar days after a complete application is submitted, the Stormwater Administrator shall review the application and determine whether the application complies with the standards of this ordinance.~~

~~Commentary: The time limitation here and in subsection (3) below is optional. The adopting local government may wish to consider allowing increased flexibility in review times for a period of time immediately following adoption of the ordinance, as both staff and applicants adjust to the new requirements.~~

(1) **Approval**

If the Stormwater Administrator finds that the application complies with the standards of this ordinance, the Stormwater Administrator shall approve the application. The Stormwater Administrator may impose conditions of approval as needed to ensure compliance with this ordinance. The conditions shall be included as part of the approval.

(2) **Fails to Comply**

If the Stormwater Administrator finds that the application fails to comply with the standards of this ordinance, the Stormwater Administrator shall notify the applicant and shall indicate how the application fails to comply. The applicant shall have an opportunity to submit a revised application.

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(3) **Revision and Subsequent Review**

A complete revised application shall be reviewed by the Stormwater Administrator ~~within \_\_\_\_\_ working (30) calendar days~~ after its re-submittal and shall be approved, approved with conditions or disapproved.

If a revised application is not re-submitted within thirty (30) calendar days from the date the applicant was notified, the application shall be considered withdrawn, and a new submittal for the same or substantially the same project shall be required along with the appropriate fee for a new submittal.

One re-submittal of a revised application may be submitted without payment of an additional permit review fee. Any re-submittal after the first re-submittal shall be accompanied by a permit review fee additional fee, as established pursuant to this ordinance.

~~Commentary: Some local governments may prefer not to allow the first re-submittal without requiring the additional fee. The policy choice is up to the local government and may be adjusted to be consistent with re-submittal policies for other types of permit applications.~~

xx-203 **APPLICATIONS FOR APPROVAL**

(A) **Concept Plan and Consultation Meeting**

~~Commentary: This section allows a pre-application conference and conceptual discussion between the developer and the Stormwater Administrator, at the discretion of the Stormwater Administrator. It creates some additional steps in the review process, thus imposing costs, and so may not be appropriate for all applications and for all time. However, for large development projects, those with substantial impact, or for developers, engineers or stormwater administrators who are new to the jurisdiction's processes and rules for handling stormwater, the conference may be a useful way to focus and improve the application and the project itself.~~

~~Smaller communities or those with fewer staff resources may feel that providing the option of concept plans and consultation meetings would be unduly burdensome, given their present limitations. However, the option may become useful as the community grows or adds staff—even if it is rarely utilized in the beginning. Also, concept plan review may be kept very informal if this would help to limit costs. For this reason the provision should be included in the adopted ordinance. Note that the suggested submittal of materials outlined in (1), (2), and (3) below is permissive, not mandatory.~~

~~Finally, because stormwater management is best addressed as early as possible in the site design and approval process, communities with more staff resources should consider whether an informal consultation meeting should be mandatory or at least strongly encouraged. This would allow dialogue and information sharing before "hardlining" of site design begins. It could result in cost savings to applicants in terms of more efficient site design (working with a site's existing vegetation or topography, for example, as stormwater management components).~~

Before a stormwater management permit application is deemed complete, the Stormwater Administrator or developer may request a consultation on a concept plan for the post-construction stormwater management system to be utilized in the proposed *development* project. This consultation meeting should take place at the time of the preliminary plan of subdivision or other early step in the *development* process. The purpose of this meeting is to discuss the stormwater management measures

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necessary for the proposed project, as well as to discuss and assess constraints, opportunities and potential approaches to stormwater management designs before formal site design engineering is commenced. Local watershed plans, ~~the (name of locality's open space or natural area protection plan, or section of its comprehensive plan dealing with open space/natural resources, if applicable)~~open space and natural area protection plans, policies or ordinances, and other relevant resource protection plans should be consulted in the discussion of the concept plan.

To accomplish this goal, the following information should be included in the concept plan, which should be submitted in advance of the meeting:

(1) **Existing Conditions / Proposed Site Plans**

Existing conditions and proposed site layout sketch plans, which illustrate at a minimum: existing and proposed topography; perennial and intermittent streams; mapping of predominant soils from soil surveys (if available); stream and other buffers and features used in designing buffers and meeting any applicable buffer requirements; boundaries of existing predominant vegetation; proposed limits of clearing and grading; and location of existing and proposed roads, buildings, parking areas and other impervious surfaces.

(2) **Natural Resources Inventory**

A written or graphic inventory of natural resources at the site and surrounding area as it exists prior to the commencement of the project. This description should include a discussion of soil conditions, forest cover, geologic features, topography, wetlands, and native vegetative areas on the site, as well as the location and boundaries of other natural feature protection and conservation areas such as lakes, ponds, floodplains, stream buffers and other setbacks (e.g., drinking water well setbacks, septic setbacks, etc.). Particular attention should be paid to environmentally sensitive features that provide particular opportunities or constraints for *development* and stormwater management.

(3) **Stormwater Management System Concept Plan**

A written or graphic concept plan of the proposed post-*development* stormwater management system including: preliminary selection and location of proposed *engineered stormwater controls*; low-impact design elements; location of existing and proposed conveyance systems such as grass channels, swales, and storm drains; flow paths; location of floodplain/floodway limits; relationship of site to upstream and downstream properties and drainages; and preliminary location of any proposed stream channel modifications, such as bridge or culvert crossings.

**(B) Technical Review Committee Submittal and Approval**

The Stormwater Management System Concept Plan and a separate maintenance plan shall be submitted to the Technical Review Committee (TRC) prior to, or concurrent with, the TRC development plan submittal. The Technical Review Committee shall be authorized to approve the Stormwater Management System Concept Plan and separate maintenance plan if the Concept Plan and maintenance plan are both found to be in conformance with this Ordinance.

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~~(B)(C)~~ **Stormwater Management Permit Application**

The stormwater management permit application shall detail how post-*development* stormwater runoff will be controlled and managed and how the proposed project will meet the requirements of this ordinance, including Section 3, Standards. All such plans shall be prepared by a qualified registered North Carolina professional engineer, surveyor, soil scientist or landscape architect, and the engineer, surveyor, soil scientist or landscape architect shall perform services only in their area of competence, and shall verify that the design of all stormwater management facilities and practices meets the submittal requirements for complete applications, that the designs and plans are sufficient to comply with applicable standards and policies found in the *Design Manual*, and that the designs and plans ensure compliance with this ordinance.

The submittal of the Stormwater Management Plan and permit application shall occur after approval of the Stormwater Management Concept Plan by the Technical Review Committee. The submittal shall include construction drawings and any other information required in the submittal checklist established by the Stormwater Administrator. Incomplete submittals shall be treated pursuant to Section 2-202(E).

~~The submittal shall include all of the information required in the submittal checklist established by the Stormwater Administrator. Incomplete submittals shall be treated pursuant to Section xx 202(D).~~

~~(C)(D)~~ **As-Built Plans and Final Approval**

The construction of all stormwater management improvements shown on an approved and permitted Stormwater Management Plan shall be substantially complete prior to final plat recordation or issuance of any certificate of occupancy. Upon approval of the Stormwater Administrator, a final plat may be recorded prior to substantial completion of all structural stormwater measures given a performance security as specified in Section 4-404 is posted.

Upon completion of a project and its associated stormwater management improvements, and before a certificate of occupancy shall be granted, the Design Professional shall certify, under seal, that the completed project is in accordance with the approved Stormwater Management Plan and design and with the requirements of this ordinance.

The Design Professional shall also submit the information required in the As-Built submittal checklist established by the Stormwater Administrator.

As-built submittals shall be certified by a qualified, licensed North Carolina professional engineer, surveyor, soil scientist, or landscape architect. The As-Built drawings shall show the final design specifications for all stormwater management facilities and practices and the field location, size, depth, and planted vegetation of all measures, controls, and devices, as installed. The designer of the stormwater management measures and plans shall certify, under seal, that the as-built stormwater measures, controls, and devices are in compliance with the approved stormwater management plans and designs and with the requirements of this ordinance.

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Prior to the release of any performance securities required for the installation of structural BMPs as specified in Sections 4-404(A) & 4-404(B) the following conditions must be satisfied:

(1) As-Built drawings and submittals must be approved by the Stormwater Administrator;

(2) Project must be in compliance with the City's Erosion and Sedimentation Control Ordinance; and

(3) Project must pass a final inspection and receive approval by the Stormwater Administrator.

~~Upon completion of a project, and before a certificate of occupancy shall be granted, the applicant shall certify that the completed project is in accordance with the approved stormwater management plans and designs, and shall submit actual "as built" plans for all stormwater management facilities or practices after final construction is completed.~~

~~The plans shall show the final design specifications for all stormwater management facilities and practices and the field location, size, depth, and planted vegetation of all measures, controls, and devices, as installed. The designer of the stormwater management measures and plans shall certify, under seal, that the as-built stormwater measures, controls, and devices are in compliance with the approved stormwater management plans and designs and with the requirements of this ordinance. A final inspection and approval by the Stormwater Administrator shall occur before the release of any performance securities.~~

~~(D)~~(E) **Other Permits**

No certificate of compliance or occupancy shall be issued by the City of Burlington Inspections Department~~(insert name of local official, department, or agency responsible for issuing building permits and certificates of occupancy)~~ without final as-built plans and a final inspection and approval by the Stormwater Administrator, except when a performance security is posted as required by Sections 4-404, or where multiple units are served by the stormwater practice or facilities, in which case the City of Burlington Inspections Department~~(name of local official, department, or agency that issues building permits)~~ may elect to withhold a percentage of permits or certificates of occupancy until as-built plans are submitted and final inspection and approval has occurred.

xx-204 **APPROVALS**

(A) **Effect of Approval**

Approval authorizes the applicant to go forward with only the specific plans and activities authorized in the permit. The approval shall not be construed to exempt the applicant from obtaining other applicable approvals from local, state, and federal authorities.

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**(B) Time Limit/Expiration**

~~Commentary: An expiration date or validity period for permits/approvals to require that construction begin and be completed within certain time periods should be included for a number of reasons, such as preventing obsolete approvals from persisting indefinitely. This ordinance allows for a single, one-year extension upon written request. Where possible, the time limit should run concurrently with the erosion and sedimentation control plan approval to avoid staggered expirations.~~

An approved plan shall become null and void if the applicant fails to make *substantial progress* on the site within one year after the date of approval. The Stormwater Administrator may grant a single, one-year extension of this time limit, for good cause shown, upon receiving a written request from the applicant before the expiration of the approved plan.

In granting an extension, the Stormwater Administrator may require compliance with standards adopted since the original application was submitted unless there has been substantial reliance on the original permit and the change in standards would infringe the applicant's vested rights.

**xx-205 APPEALS**

**(A) Right of Appeal**

~~(1) Any aggrieved person affected by any decision, order, requirement, or determination relating to the interpretation or application of this ordinance and made by the Stormwater Administrator may file an appeal to the City Council within (30) days after receipt of said written decision, order, requirement, or determination.~~

~~(2) A public hearing held pursuant to this section shall be conducted by the City Council within (45) days after the date of appeal or request for a hearing.~~

~~(3) The City Council will render its final decision on any appeal within (20) days of the date of hearing.~~

~~(4) The decision of the City Council shall be subject to Superior Court review of the proceedings in the nature of certiorari. All Superior Court review of City Council decisions shall be performed by the Superior Court of Alamance County. Petition for review by the Superior Court of Alamance County shall be filed with the Clerk of Superior Court of Alamance County within (30) days after the latter of the following:~~

~~(a) The decision of the City Council is filed; or~~

~~(b) A written copy of the decision is delivered to any aggrieved party that has filed a written request for such copy with the City Council at the time of its hearing of the case.~~

~~Any aggrieved *person* affected by any decision, order, requirement, or determination relating to the interpretation or application of this ordinance made by the Stormwater Administrator, may file an appeal to the (Board of Adjustment or governing board) within 30 days. Appeals of variance requests shall be made as provided in the section on Variances. In the case of requests for review of proposed civil penalties for violations of this ordinance, the (Board of Adjustment or~~

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~~governing board~~ shall make a final decision on the request for review within 90 days of receipt of the date the request for review is filed.

Commentary: I recommend that appeals be routed to Board of Adjustment if the community has one, and the procedures for stormwater appeals dovetailed as far as possible with procedures for handling other kinds of appeals to that board (such as appeals of zoning determinations). This recommendation is for both policy and legal reasons: (1) it avoids the problem of creating and managing another specialized board; and (2) Boards of Adjustment are accustomed to conducting quasi-judicial procedures, which must also be applied to stormwater appeals.

If the community does not have a Board of Adjustment, appeals should be routed to the same board to which other appeals from decisions of administrative staff are sent (which may be the governing board, as long as it is acting in a quasi-judicial capacity). For those communities which do not have an existing quasi-judicial procedure that is already being followed by a Board of Adjustment or other body, optional subsections (B) and (C) below should be added to provide basic procedural rules.

The 90 day time limit for appeals from civil penalties is set by statute: see G.S. 143-215.6A(k).

Appeals from variance requests are required by the Jordan rules to be handled in a separate manner, pursuant to 15A NCAC 2b.104[r] and 2b.265. See below for variance and variance appeal procedures.

~~(B) — [Filing of Appeal and Procedures]~~

~~{Appeals shall be taken within the specified time period by filing a notice of appeal and specifying the grounds for appeal on forms provided by (name of local government). The Stormwater Administrator shall transmit to the (name of board that will hear appeals) all documents constituting the record on which the decision appealed from was taken.~~

~~The hearing conducted by the (name of board that will hear appeals) shall be conducted in the nature of a quasi-judicial proceeding with all findings of fact supported by competent, material evidence.}~~

~~(C) — [Review by Superior Court]~~

~~{Every decision of the (name of board that will hear appeals) shall be subject to Superior Court review by proceedings in the nature of certiorari. Petition for review by the Superior Court shall be filed with the Clerk of Superior Court within thirty (30) days after the latter of the following:~~

~~(1) The decision of the (name of board that will hear appeals) is filed; or~~

~~(2) A written copy of the decision is delivered to every aggrieved party who has filed a written request for such copy with the (Chair or Secretary of the board that will hear appeals) at the time of its hearing of the case.}~~

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SECTION 3: STANDARDS

xx-301 GENERAL STANDARDS

All development and redevelopment to which this ordinance applies shall comply with the standards of this section. The approval of the stormwater permit shall require an enforceable restriction on property usage that runs with the land, such as a recorded deed restriction or protective covenants, to ensure that future development and redevelopment maintains the site consistent with the approved project plans.

xx-302 NITROGEN AND PHOSPHORUS LOADING

Nitrogen and phosphorus loads contributed by the proposed new development shall not exceed the following unit-area mass loading rates: ~~if in the Haw subwatershed; 3.8 and 1.43 pounds per acre per year for nitrogen and phosphorus, respectively; if in the Upper New Hope; 2.2 and 0.82 pounds per acre per year for nitrogen and phosphorus, respectively; if in the Lower New Hope; 4.4 and 0.78 pounds per acre per year for nitrogen and phosphorus, respectively;.~~

- (a) Notwithstanding 15A NCAC 2B.104(q), redevelopment subject to this ordinance that would replace or expand existing structures or improvements and would result in a net increase in built-upon area shall have the option of either meeting the loading standards identified in subsection (a) or meeting a loading rate that achieves the following nutrient loads compared to the existing development: ~~if in the Haw subwatershed; 8 percent and 5 percent reduction for nitrogen and phosphorus, respectively; if in the Upper New Hope; 35 percent and 5 percent reduction for nitrogen and phosphorus, respectively; if in the Lower New Hope; no increase for nitrogen or phosphorus;.~~

~~(b)~~

~~(c) Comment: the extent of the subwatersheds is defined at 15A NCAC 2B.262 (4). Several jurisdictions covered by the Jordan rules, including Orange County, Chatham County, and possibly others such as Cary, may have jurisdiction over projects in multiple subwatersheds. They should accordingly include more than one of the above standards, as appropriate, varying by the location of the development.~~

~~(d)~~

- ~~(e)~~(b) The developer shall determine the need for engineered stormwater controls to meet these loading rate targets by using the approved accounting tool.

~~Comment: the Division of Water Quality is required to develop a tool that will allow developers to account for nutrient loading from development lands and loading changes due to BMP implementation to meet these requirements and submit the tool, along with this model ordinance and any other elements of its model program, to the Commission.~~

xx-303 NITROGEN AND PHOSPHORUS STANDARD IS SUPPLEMENTAL; TSS REMOVAL

The nitrogen and phosphorus loading standards in this ordinance are supplemental to, not replacements for, stormwater standards otherwise required by federal, state or local law, including without limitation any riparian buffer requirements applicable to the location of

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the *development*. This includes, without limitation, the riparian buffer protection requirements of 15A NCAC 2B.0267 and .0268.

All *stormwater systems* used to meet these requirements shall be designed to have a minimum of 85% average annual removal for Total Suspended Solids (TSS)<sup>11</sup>.

~~Comment: For purposes of this model ordinance, we expect that the runoff from at least all impervious surfaces is to be captured and treated for 85% TSS removal, along with resulting attendant pervious areas within the drainage envelope of the stormwater practices. This would include any offsite run-on that is not diverted around or through the site. Offsite run-on should be calculated assuming that the offsite drainage envelope will be built out to the maximum built-upon area based on zoning or a specific development plan. This policy is consistent with Phase II NPDES stormwater and WSW stormwater.~~

~~xx-304~~ **PROVISIONS FOR PROTECTION OF RIPARIAN BUFFERS**

~~Provisions for protection of buffers adjacent to surface waters (intermittent and perennial streams, lakes, reservoirs, and ponds) are included in the City of Burlington Riparian Buffer Protection Ordinance [for Lands within the Jordan Watershed], herein referred to as the "Buffer Ordinance". Without limitation, adherence to the provisions of the Buffer Ordinance are required for all *development* and *redevelopment*.~~

~~xx-304~~~~xx-305~~ **CONTROL-CONTROL AND TREATMENT OF RUNOFF VOLUME**

~~*Stormwater systems* shall be designed to control and treat the runoff generated from all surfaces by one inch of rainfall. The treatment volume shall be drawn down pursuant to standards specific to each practice as provided in the *Design Manual*. To ensure that the integrity and nutrient processing functions of receiving waters and associated riparian buffers are not compromised by erosive flows, stormwater flows from the *development* shall not contribute to degradation of waters of the State. At a minimum, the *development* shall not result in a net increase in peak flow leaving the site from pre-development conditions for the ~~one~~~~ten~~-year, 24-hour storm event. For design purposes, the ten-year, 24-hour storm produces approximately 5.0 inches of rain in the Burlington Area.~~

~~In the event that development has, in the opinion of the Stormwater Administrator, the potential to cause increased downstream flooding and erosion, a stormwater system may be required that does not allow stormwater to leave the project site at a rate greater than the predevelopment discharge rate for up to the 100-year, 24 hour storm.~~

~~xx-305~~~~xx-306~~ **PARTIAL OFFSET OF NUTRIENT CONTROL REQUIREMENTS**

~~*Development* subject to this ordinance shall attain a maximum nitrogen loading rate on-site of six pounds per acre per year for single-family, detached and duplex residential development and ten pounds per acre per year for other development, including multi-family residential,~~

<sup>11</sup> See S.L. 2009-484 sec. 5(c), which imposed the TSS removal requirement, essentially requiring at least one BMP for all new development that exceeds a loading rate.

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commercial and industrial and shall meet any requirements for engineered stormwater controls otherwise imposed by this ordinance. A developer subject to this ordinance may achieve the additional reductions in nitrogen and phosphorus loading required by this ordinance by making offset payments to the NC Ecosystem Enhancement Program contingent upon acceptance of payments by that Program. A developer may use an offset option provided by ~~(the local government in which the development activity occurs)~~the City of Burlington. A developer may propose other offset measures to ~~(name of local government)~~the City of Burlington, including providing his or her own offsite offset or utilizing a private seller. All offset measures permitted by this ordinance shall meet the requirements of 15A NCAC 02B .0273 (2) through (4) and 15A NCAC 02B .0240.

~~Comment: 15A NCAC 02B .0273 (2) through (4) come from the part of the Jordan rules that spell out options and requirements for nutrient offset payments. They regulate the sellers of offset credits and provide for an accounting tool to ensure that credits are genuine. 15A NCAC 02B .0240 is a separate, partially overlapping rule that applies to all nutrient offset payments.~~

~~xxx-306xx-307~~ EVALUATION OF STANDARDS FOR STORMWATER CONTROL MEASURES

(A) Evaluation According to Contents of Design Manual

All stormwater control measures, *stormwater systems* and stormwater treatment practices (also referred to as Best Management Practices, or BMPs) required under this ordinance shall be evaluated by the Stormwater Administrator according to the policies, criteria, and information, including technical specifications and standards and the specific design criteria for each stormwater practice, in the *Design Manual*. The Stormwater Administrator shall determine whether proposed BMPs will be adequate to meet the requirements of this ordinance.

(B) Determination of Adequacy; Presumptions and Alternatives

Stormwater treatment practices that are designed, constructed, and maintained in accordance with the criteria and specifications in the *Design Manual* and the *approved accounting tool* will be presumed to meet the minimum water quality and quantity performance standards of this ordinance. Whenever an applicant proposes to utilize a practice or practices not designed and constructed in accordance with the criteria and specifications in the *Design Manual*, the applicant shall have the burden of demonstrating that the practice(s) will satisfy the minimum water quality and quantity performance standards of this ordinance. The Stormwater Administrator may require the applicant to provide the documentation, calculations, and examples necessary for the Stormwater Administrator to determine whether such an affirmative showing is made.

~~xxx-307xx-308~~ DEDICATION OF BMPS, FACILITIES & IMPROVEMENTS

~~Commentary: If the local government accepts any BMPs into public maintenance pursuant to this section, at the time of acceptance a binding agreement or process should be established by which the locality will recover costs from the owner for carrying out maintenance activities on the BMPs. Before accepting BMPS for maintenance, the jurisdiction should weigh the costs and benefits of so doing and identify a way to pay for maintenance.~~

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Unless otherwise approved by City Council, ownership and maintenance responsibility of any existing or future stormwater management facilities shall remain with the owner of the property or a legally established property owner's association. Such facilities shall meet all the requirements of this ordinance and include adequate and perpetual access and sufficient area, by easement or otherwise, for inspection and regular maintenance.

~~xx-308 THE (NAME OF LOCAL GOVERNMENT) MAY ACCEPT DEDICATION OF ANY EXISTING OR FUTURE STORMWATER MANAGEMENT FACILITY FOR MAINTENANCE, PROVIDED SUCH FACILITY MEETS ALL THE REQUIREMENTS OF THIS ORDINANCE AND INCLUDES ADEQUATE AND PERPETUAL ACCESS AND SUFFICIENT AREA, BY EASEMENT OR OTHERWISE, FOR INSPECTION AND REGULAR MAINTENANCE.<sup>42</sup>~~

xx-309 VARIANCES

~~Commentary: The Jordan Rules, 15A NCAC 2b.265(3)(d)(ii), require use of the variance procedures from the water supply watershed program, 15A NCAC 2b.104(e), although these allow the use of Board of Adjustment variance standards and process for "minor variances." I recommend that the provisions for minor variances that follow be changed to dovetail with the unit's existing board of adjustment variance procedure, if one exists. The Jordan rules, consistent with the water supply watershed rules, call for the local Watershed Review Board to make certain findings, and if the unit of government adopting this ordinance has a Watershed Review Board that is separate from its Board of Adjustment and governing board, the Watershed Review Board is the appropriate entity to hear and make findings on variance requests to meet the letter of the rules. Rule 15A NCAC 2b.202 defines major and minor variance, and these definitions have been incorporated into this ordinance; there are different processes set out for action on these two types of variances. The statute creating the water supply watershed program, GS 143-215.5, requires that "~~

~~Appeals from the local government decision on a major or minor variance request are made on certiorari to the local Superior Court. Appeals from the Commission decision on a major variance request are made on judicial review to Superior Court. When local ordinances are more stringent than the state's minimum water supply protection rules and Jordan rules, a variance to the local government's ordinance is not considered a major variance as long as the result of the variance is not less stringent than the state's minimum requirements~~

(A) Any person may petition the ~~(name of local government)~~City Council for a variance granting permission to use the person's land in a manner otherwise prohibited by this ordinance. For all proposed major and minor variances from the requirements of this ordinance, the ~~local Watershed Review Board~~City Council shall make findings of fact showing that:

- (1) there are practical difficulties or unnecessary hardships that prevent compliance with the strict letter of ~~the this~~ ordinance;
- (2) the variance is in harmony with the general purpose and intent of ~~the local watershed protection this~~ ordinance and preserves its spirit; and
- (3) in granting the variance, the public safety and welfare have been assured and substantial justice has been done.

<sup>42</sup> From Virginia Stormwater Management Model Ordinance.

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(B) In the case of a request for a *minor variance*, the ~~(name of local government)~~City of Burlington may vary or modify any of the regulations or provisions of the ordinance so that the spirit of the ordinance shall be observed, public safety and welfare secured, and substantial justice done may impose reasonable and appropriate conditions and safeguards upon any variance it grants.

(C) The ~~City of Burlington~~(name of local government) may attach conditions to the *major* or *minor variance* approval that support the purpose of ~~the local watershed protection~~this ordinance. If the variance request qualifies as a *major variance*, and the ~~City of Burlington~~(name of local government) decides in favor of granting the *major variance*, the ~~Board-City Council~~ shall then prepare a preliminary record of the hearing and submit it to the *Commission* for review and approval. If the *Commission* approves the *major variance* or approves with conditions or stipulations added, then the *Commission* shall prepare a *Commission* decision which authorizes ~~City of Burlington~~(name of local government) to issue a final decision which would include any conditions or stipulations added by the *Commission*. If the *Commission* denies the major variance, then the *Commission* shall prepare a decision to be sent to ~~the City of Burlington~~(name of local government). ~~(Name of local government)~~The ~~City Council~~ shall prepare a final decision denying the major variance.

(D) Appeals from the local government decision on a *major* or *minor variance* request are made on certiorari to the local Superior Court. Appeals from the *Commission* decision on a *major variance* request are made on judicial review to Superior Court.

~~Note the special notice and reporting requirements for variances under the Jordan Rule, which incorporates 15A NCAC 2B.0104(r) from the Water Supply Watershed program. A unit of local government implementing the rule should consider requiring the applicant for a variance to provide this notice and proof of delivery of this notice. An optional provision implementing this notice requirement is given below:~~

~~{(E) On request of the Stormwater Administrator, anyAny person who petitions the (name of local government)City of Burlington for a variance under this ordinance shall provide notice to the affected local governments of the variance request as required under the Jordan Rule, 15A NCAC 2B.0104(r). For purposes of this notice requirement, "affected local governments" means any local governments that withdraw water from Lake Jordan or its tributaries downstream of the site of the proposed variance. If the proposed variance is in a Water Supply Watershed area classified as WS II, WS III or WS IV, "affected local governments" also includes any other local governments in the same water supply watershed as the proposed variance. The notice shall provide a reasonable period for comments and shall direct the comments to be sent to the Stormwater Administrator. The person petitioning for the variance shall supply proof of notification in accordance with this ordinance to the Stormwater Administrator.}~~

xx-310 ADDITIONAL STANDARDS

(A) Animal Waste

(1) It shall be unlawful for the owner or custodian of any animal to take it off the owner's own property limits without the means to properly remove and dispose of the animal's feces from any public property.

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(2) It is the responsibility of the animal's owner or custodian to clean up the animal's feces from any public property outside of the animal owner's own property limits. Such property includes, but is not limited to, parks, rightsof- way, paths, and public access areas.

(3) "Means to properly remove and dispose of feces" shall consist of having on or near one's person a device such as a plastic bag, or other suitable plastic or paper container that can be used to clean up and contain animal waste until it can be disposed of in an appropriate container. Such a device must be produced and shown, upon request, to anyone authorized to enforce these ordinances.

(4) This provision shall not apply to handicapped persons assisted by trained guide or assistant dogs, or other animals trained to assist handicapped persons.

(5) "Public nuisance" is defined to include "an animal which deposits feces on public property, and the person owning, possessing, harboring of having the care, charge, control or custody of the animal fails to remove the feces so deposited. Provided, however, this definition shall not apply to any animal assisting a handicapped person.

(6) It shall be required of all new residential development and redevelopment projects subject to this Ordinance to develop a means for proper disposal of animal waste. This could include, but is not limited to, installing pet waste stations, constructing dog runs, including restrictions in the Home Owners Association by-laws, etc...

(B) Nutrient Sensitive Waters Program

This section requires both inorganic fertilizer and organic nutrient application to be performed with the most current state-recognized technical guidance on proper nutrient management. Persons applying inorganic fertilizer and organic nutrient application shall comply with 15A NCAC 02B .0272 Jordan Water Supply Nutrient Strategy: Fertilizer Management.

(A) 15A NCAC 02B .0272 Jordan Water Supply Nutrient Strategy: Fertilizer Management applies to the application of nutrients on:

- (1) Cropland areas in the Jordan watershed for commercial purposes,
- (2) Commercial ornamental and floriculture areas and greenhouse production areas in the Jordan watershed,
- (3) Golf courses, public recreational lands, road or utility rights of way, or other commercial or institutional lands where any such land, or a combination of such lands, under common management in the watershed totals at least five acres,
- (4) Any lands in the Jordan watershed where a hired applicator, as defined in 15A NCAC 02B .0202 (4), who does not own or lease the lands applies nutrients to a total of at least five acres per year.

xx-311 ONSITE WASTEWATER

(A) On-Site Wastewater System Permit

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For new development and redevelopment that utilize the use of on-site wastewater treatment systems, a copy of the approved on-site wastewater system permit issued by the Alamance County Environmental Health Department shall be provided to the Stormwater Administrator as part of the Stormwater Management Permit Application.

(B) Standards for Operation and Maintenance

Onsite systems for domestic wastewater shall be operated and maintained so as to avoid adverse effects on surface water and groundwater, including eutrophication of surface water and microbial or nitrate contamination of groundwater. Septic tank residuals shall be pumped whenever necessary to assure the proper operation of the system to meet these standards, and the septage shall be reused or disposed of in a manner that does not present significant risks to human health, surface water or groundwater.

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SECTION 4: MAINTENANCE

xx-401 GENERAL STANDARDS FOR MAINTENANCE

Commentary: The long term effectiveness of any engineered stormwater control relies, above all, on appropriate maintenance. This section is intended to provide a full array of provisions to ensure that such maintenance occurs, including identifying who will be responsible for maintenance over the long term as well as during development, and ensuring that funds for maintenance and repair are available when appropriate.

(A) Function of BMPs As Intended

The owner of each engineered stormwater control installed pursuant to this ordinance shall maintain and operate it so as to preserve and continue its function in controlling stormwater quality and quantity at the degree or amount of function for which the engineered stormwater control was designed.

(B) Annual Maintenance Inspection and Report

The person responsible for maintenance of any engineered stormwater control installed pursuant to this ordinance shall submit to the Stormwater Administrator an inspection report for each engineering stormwater control. The inspection report shall be submitted from one of the following persons performing services only in their area of competence: a qualified registered North Carolina professional engineer, surveyor, landscape architect, soil scientist, aquatic biologist, or a person certified by the North Carolina Cooperative Extension Service for stormwater treatment practice inspection and maintenance. The inspection report shall contain all of the following:

- (1) The name and address of the land owner;
(2) The recorded book and page number of the lot of each engineered stormwater control;
(3) A statement that an inspection was made of all the engineered stormwater controls;
(4) The date the inspection was made;
(5) A statement that all the inspected engineered stormwater controls are is performing properly and are is in compliance with the terms and conditions of the approved maintenance agreement required by this ordinance; and
(6) The original signature and seal, if applicable, of the inspector, of the engineer, surveyor, or landscape architect.

All inspection reports shall be on forms supplied by the Stormwater Administrator, or an approved equal as determined by the Stormwater Administrator. An original

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inspection report shall be provided to the Stormwater Administrator beginning one year from the date of as-built certification and each year thereafter on or before the date of the as-built certification.<sup>43</sup>

xx-402 OPERATION AND MAINTENANCE AGREEMENT

(A) In General

Prior to the conveyance or transfer of any lot or building site to be served by a *engineered stormwater control* pursuant to this ordinance, and prior to issuance of any permit for *development* requiring a *engineered stormwater control* pursuant to this ordinance, the applicant or *owner* of the site must execute an operation and maintenance agreement that shall be binding on all subsequent *owners* of the site, portions of the site, and lots or parcels served by the *engineered stormwater control*. Until the transference of all property, sites, or lots served by the *engineered stormwater control*, the original *owner* or applicant shall have primary responsibility for carrying out the provisions of the maintenance agreement.

The operation and maintenance agreement shall require the ~~owner(s) or owners~~ to maintain, repair and, if necessary, reconstruct the *engineered stormwater control*, and shall state the terms, conditions, and schedule of maintenance for the *engineered stormwater control*. In addition, it shall grant to ~~(name of local government)~~ the City of Burlington a right of entry in the event that the Stormwater Administrator has reason to believe it has become necessary to inspect, monitor, maintain, repair, or reconstruct the *engineered stormwater control*; however, in no case shall the right of entry, of itself, confer an obligation on ~~(name of local government)~~ the City of Burlington to assume responsibility for the *engineered stormwater control*.

The operation and maintenance agreement must be approved by the Stormwater Administrator prior to plan approval, and it shall be referenced on the final plat and shall be recorded with the county Register of Deeds upon final plat approval.<sup>44</sup> A copy of the recorded maintenance agreement shall be given to the Stormwater Administrator within fourteen (14) days following its recordation.<sup>45</sup>

For all *engineered stormwater controls* required pursuant to this ordinance, the required operation and maintenance agreement shall include all of the following provisions:

- (1) Acknowledgment that the OWNER or association shall continuously operate and maintain the stormwater control and management facilities.
- (2) The OWNER, its successors and assigns, including any homeowners association, shall adequately maintain the structural stormwater BMP facilities in accordance with the approved Operation and Maintenance Plan or Manual(s). This

<sup>43</sup> Drawn from Wake County stormwater ordinance (based on Neuse Urban Stormwater program).

<sup>44</sup> Adapted from Metro North Georgia Water Management District and Stormwater Center/EPA Model Ordinances. The requirement that owner maintain the BMP is adapted from the Town of Cary Watershed Protection Ordinance.

<sup>45</sup> Most of the following homeowners' association requirements are adapted from Neuse model program provisions as adopted in Wake County.

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includes all pipes and channels built to convey stormwater to the facility, as well as all structures, improvements, and vegetation provided to control the quantity and quality of the stormwater. Adequate maintenance is herein defined as good working condition so that these facilities are performing their design functions.

(3) The OWNER, its successors and assigns, shall ensure the structural stormwater BMP facility is inspected by a qualified professional and shall submit an annual inspection report to the City of Burlington. The inspection report shall be due annually 30 days from the date of the final structural stormwater Management facilities construction inspection. The purpose of the inspection is to assure safe and proper functioning of the facilities. The inspection shall cover the entire facilities, berms, outlet structure, pond areas, access roads, etc. Deficiencies shall be noted in the inspection report.

(4) The OWNER, its successors and assigns, hereby grant permission to the City of Burlington, its authorized agents and employees, to enter upon the Property and to inspect the structural stormwater Management facilities whenever the City of Burlington deems necessary. The purpose of inspection is to follow-up on reported deficiencies and/or to respond to citizen complaints. The City of Burlington shall provide the OWNER, its successors and assigns, copies of the inspection findings and a directive to commence with the repairs if necessary.

(5) Before the City of Burlington shall approve the completed facility and issue final certificates of occupancy, the Owner and/or maintaining entity shall furnish the City of Burlington with a financial guarantee insuring future maintenance, operation, and repair of the facility. The financial guarantee shall be in the form of cash or an irrevocable letter of credit and made payable to the City of Burlington. The amount of guarantee shall be 40% of the total cost of constructing the facility based on actual contract prices for said facility.

(6) In the event the OWNER, its successors and assigns, fails to maintain the structural stormwater Management facilities in good working condition acceptable to the City of Burlington or that maintenance and repairs are not being made as required or that any action is not being done in accordance with this agreement, the City of Burlington shall notify the responsible entity who shall be given a reasonable time to correct such deficiencies. Should the responsible entity fail to act in a timely manner, or otherwise fail to correct the deficiencies, the City of Burlington will institute appropriate action to obtain compliance including criminal or civil penalties, or both. In addition, the City of Burlington may declare the responsible entity in default of this agreement and financial guarantee and use part or all of such guarantee funds to correct the deficiencies and may assume actual operation and maintenance. Default of this agreement does not release the responsible entity from liability/responsibility for the deficiencies, nor release the entity from this agreement. Likewise, default of this agreement does not prevent the City of Burlington from taking action against the responsible entity to recover the cost of such actions to correct the deficiencies.

(7) For all structural stormwater Management facilities which are to be or are owned and maintained by a property owner's association or similar entity, the OWNER also agrees to the following provisions:

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- a. Acknowledgment that the association shall continuously operate and maintain the structural stormwater Management facilities.
- b. Establish adequate owner/property association dues which are to be spent solely for sediment removal, structural, biological or vegetative replacement, major repair, or reconstruction of the stormwater control measures and devices of the particular site plan or subdivision.
- c. Granting to the City of Burlington a right of entry to inspect, monitor, maintain, repair, and reconstruct structural stormwater Management facilities.
- d. Allow the City of Burlington to recover from the association and its members any and all costs the City of Burlington may expend to maintain or repair the stormwater control and management facility or to correct any operational deficiencies as a result of default by the Owner/association/responsible entity. Failure to pay to the City of Burlington all of its expended costs, after thirty (30) days written notice, shall constitute a breach of the agreement. The City of Burlington shall thereafter be entitled to bring an action against the association and its members to pay, or foreclose upon the lien herein authorized by the agreement against the property, or both in the case of a deficiency. Interest, collection costs, and attorney fees shall be added to the recovery.

(8) The OWNER, its successors and assigns, will perform the work necessary to keep these facilities in good working order as appropriate. In the event a maintenance schedule for the structural stormwater Management facilities (including sediment removal) is outlined on the approved plans, the schedule will be followed.

(9) In the event the City of Burlington, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like, the OWNER, its successors and assigns, shall reimburse the City of Burlington upon demand, within thirty (30) days of receipt thereof for all actual costs incurred by the City of Burlington hereunder.

(10) This Agreement imposes no liability of any kind whatsoever on the City of Burlington and the OWNER agrees to hold the City of Burlington harmless from any liability in the event the structural stormwater Management facilities fail to operate properly.

**~~(B) Special Requirement for Homeowners' and Other Associations~~**

~~For all *engineered stormwater controls* required pursuant to this ordinance and that are to be or are owned and maintained by a homeowners' association, property owners' association, or similar entity, the required operation and maintenance agreement shall include all of the following provisions:~~

~~(1) Acknowledgment that the association shall continuously operate and maintain the stormwater control and management facilities.~~

~~(2) Establishment of an escrow account, which can be spent solely for sediment removal, structural, biological or vegetative replacement, major repair, or reconstruction of the *engineered stormwater controls*. If *engineered stormwater controls* are not performing adequately or as intended or are not properly maintained, the (name of~~

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~~local government), in its sole discretion, may remedy the situation, and in such instances the (name of local government) shall be fully reimbursed from the escrow account. Escrowed funds may be spent by the association for sediment removal, structural, biological or vegetative replacement, major repair, and reconstruction of the *engineered stormwater controls*, provided that the (name of local government) shall first consent to the expenditure.~~

~~(3) — Both developer contribution and annual sinking funds shall fund the escrow account. Prior to plat recordation or issuance of construction permits, whichever shall first occur, the developer shall pay into the escrow account an amount equal to fifteen (15) per cent of the initial construction cost of the *engineered stormwater controls*. Two-thirds (2/3) of the total amount of sinking fund budget shall be deposited into the escrow account within the first five (5) years and the full amount shall be deposited within ten (10) years following initial construction of the *engineered stormwater controls*. Funds shall be deposited each year into the escrow account. A portion of the annual assessments of the association shall include an allocation into the escrow account. Any funds drawn down from the escrow account shall be replaced in accordance with the schedule of anticipated work used to create the sinking fund budget.~~

~~(4) — The percent of developer contribution and lengths of time to fund the escrow account may be varied by the (name of local government) depending on the design and materials of the stormwater control and management facility.~~

~~(5) — Granting to the (name of local government) a right of entry to inspect, monitor, maintain, repair, and reconstruct *engineered stormwater controls*.~~

~~(6) — Allowing the (name of local government) to recover from the association and its members any and all costs the (name of local government) expends to maintain or repair the *engineered stormwater controls* or to correct any operational deficiencies. Failure to pay the (name of local government) all of its expended costs, after forty five days written notice, shall constitute a breach of the agreement. In case of a deficiency, the (name of local government) shall thereafter be entitled to bring an action against the association and its members to pay, or foreclose upon the lien hereby authorized by the agreement against the property, or both. Interest, collection costs, and attorney fees shall be added to the recovery.~~

~~(7) — A statement that this agreement shall not obligate the (name of local government) to maintain or repair any *engineered stormwater controls*, and the (name of local government) shall not be liable to any person for the condition or operation of *engineered stormwater controls*.~~

~~(8) — A statement that this agreement shall not in any way diminish, limit, or restrict the right of the (name of local government) to enforce any of its ordinances as authorized by law.~~

~~(9) — A provision indemnifying and holding harmless the (name of local government) for any costs and injuries arising from or related to the *engineered stormwater control*, unless the (name of local government) has agreed in writing to assume the maintenance responsibility for the BMP and has accepted dedication of any and all rights necessary to carry out that maintenance.~~

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xx-403 INSPECTION PROGRAM

Inspections and inspection programs by ~~(name of local government)~~the City of Burlington may be conducted or established on any reasonable basis, including but not limited to routine inspections; random inspections; inspections based upon complaints or other notice of possible violations; and joint inspections with other agencies inspecting under environmental or safety laws. Inspections may include, but are not limited to, reviewing maintenance and repair records; sampling discharges, surface water, groundwater, and material or water in BMPs; and evaluating the condition of BMPs.<sup>46</sup>

If the owner or occupant of any property refuses to permit such inspection, the Stormwater Administrator 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 the Stormwater Administrator while carrying out his or her official duties.

xx-404 PERFORMANCE SECURITY FOR INSTALLATION AND MAINTENANCE

(A) ~~Performance Security May Be Required~~<sup>47</sup>

~~The (name of local government) may, at its discretion, require the submittal of a~~ performance security or bond with surety, cash escrow, letter of credit or other acceptable legal arrangement ~~shall be required~~ prior to issuance of a permit in order to ensure that the *engineered stormwater controls* are:

- (1) installed by the permit holder as required by the approved stormwater management plan, and/or
- (2) maintained by the owner as required by the operation and maintenance agreement.

(B) Amount

(1) Installation

The amount of an installation performance security shall be the total estimated construction cost of the BMPs approved under the permit, plus 25%.

(2) Maintenance

The amount of a maintenance performance security shall be the present value of an annuity of perpetual duration based on a reasonable estimate of the annual cost of inspection, operation and maintenance of the BMPs approved under the

<sup>46</sup>Adapted from Stormwater Center/EPA and Metro North Georgia Water Management District Model Ordinances.

<sup>47</sup>From Virginia Model Ordinance for Stormwater Management.

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permit, at a discount rate that reflects the jurisdiction’s cost of borrowing minus a reasonable estimate of long-term inflation.

~~Commentary: Use of this approach to maintenance security creates an incentive to choose the engineered stormwater controls that are expected to have the least costly maintenance. An example for calculating the amount of maintenance performance security is as follows: suppose the expected annual cost of inspection, operation and maintenance of the BMPs covered by the permit is \$500 in current dollars. The security amount is the present value of a perpetuity in the amount of \$500, which is simply \$500 divided by the real (inflation adjusted) discount rate. The real discount rate, for these purposes, is calculated by taking a reasonable estimate of the jurisdiction’s expected return on moderately risky investments, such as the return on corporate bonds rated Aa by Moody’s, and subtracting the expected rate of inflation. So if the jurisdiction’s expected return on moderately risk investments is 7% and a reasonable estimate of long term inflation is 2%, then the maintenance security amount would be:  $\$500 / (.07 - .02) = \$500 / .05 = \$10,000$ .~~

~~Some annual maintenance cost estimates for BMPs in North Carolina are available in Wassick and Hunt, “An Evaluation of Costs and Benefits of Structural Stormwater Best Management Practices in North Carolina,” N.C. Extension Service, available online as of 5/1/2010 at <http://www.bae.ncsu.edu/people/faculty/hunt/bmpecosts&benefits.pdf>. The authors find a range from \$4,411 annually for wet ponds to \$583 for bioretention in clay or sandy soils for BMPs controlling a 10 acre watershed, presumably in 2003 dollars. The jurisdiction should evaluate whether it will have additional costs for inspection time and possible operation of the BMP should the owner fail to maintain the BMP.~~

**(C) Uses of Performance Security**

**(1) Forfeiture Provisions**

The performance security shall contain forfeiture provisions for failure, after proper notice, to complete work within the time specified, or to initiate or maintain any actions which may be required of the applicant or *owner* in accordance with this ordinance, approvals issued pursuant to this ordinance, or an operation and maintenance agreement established pursuant to this ordinance.

**(2) Default**

Upon default of the *owner* to construct, maintain, repair and, if necessary, reconstruct any *engineered stormwater control* in accordance with the applicable permit or operation and maintenance agreement, the Stormwater Administrator shall obtain and use all or any portion of the security to make necessary improvements based on an engineering estimate. Such expenditure of funds shall only be made after requesting the *owner* to comply with the permit or maintenance agreement. In the event of a default triggering the use of installation performance security, the ~~(name of local government)~~City of Burlington shall not return any of the unused deposited cash funds or other security, which shall be retained for maintenance.<sup>48</sup>

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<sup>48</sup>From Town of Cary Watershed Protection Ordinance.

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**(3) Costs in Excess of Performance Security**

If ~~(name of local government)~~the City of Burlington takes action upon such failure by the applicant or owner, the ~~City (name of local government)~~ may collect from the applicant or owner the difference between the amount of the reasonable cost of such action and the amount of the security held, in addition to any other penalties or damages due.

**(4) Refund**

Within sixty days of the final approval, the installation performance security shall be refunded to the applicant or terminated, except any amount attributable to the cost (plus 25%) of landscaping installation and ongoing maintenance associated with the BMPs covered by the security. Any such landscaping shall be inspected one (1) year after installation with replacement for compliance with the approved plans and specifications and, if in compliance, the portion of the financial security attributable to landscaping shall be released.

xx-405 NOTICE TO OWNERS

**(A) Deed Recordation and Indications On Plat**

The applicable operations and maintenance agreement, conservation easement, or dedication and acceptance into public maintenance (whichever is applicable) pertaining to every *engineered stormwater control* shall be referenced on the final plat and shall be recorded with the county Register of Deeds upon final plat approval. If no subdivision plat is recorded for the site, then the operations and maintenance agreement, conservation easement, or dedication and acceptance into public maintenance (whichever is applicable) shall be recorded with the county Register of Deeds so as to appear in the chain of title of all subsequent purchasers under generally accepted searching principles.

**(B) Signage**

Where appropriate in the determination of the Stormwater Administrator to assure compliance with this ordinance, *engineered stormwater controls* shall be posted with a conspicuous sign stating who is responsible for required maintenance and annual inspection. The sign shall be maintained so as to remain visible and legible.

Additional signage or information deemed pertinent by the Stormwater Administrator for BMP maintenance may be required. Examples include, but are not limited to: bottom elevation, permanent pool elevation, riser elevation, media thickness, benchmark elevation, etc...

**Commentary: The intent of discretionary provision (B) is to create actual notice whenever reasonable and useful, rather than relying solely on constructive or record notice.**

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xx-406 RECORDS OF INSTALLATION AND MAINTENANCE ACTIVITIES

The owner of each engineered stormwater control shall keep records of inspections, maintenance, and repairs for at least five years from the date of creation of the record and shall submit the same upon reasonable request to the Stormwater Administrator.<sup>49</sup>

xx-407 NUISANCE

The owner of each stormwater BMP, whether engineered stormwater control or non-engineered stormwater control, shall maintain it so as not to create or result in a nuisance condition.

xx-408 MAINTENANCE EASEMENT

Every engineered stormwater control installed pursuant to this ordinance shall be made accessible for adequate maintenance and repair by a maintenance easement. The easement shall be recorded and its terms shall specify who may make use of the easement and for what purposes.}

~~Commentary: With regard to this optional provision for a maintenance easement, it is anticipated that few local governments will opt to maintain BMPs that serve private property. In the case of any communities that should wish to do so, those jurisdictions should carefully consider, in consultation with their attorney and engineer, public works director or other person familiar with drainage maintenance, whether they wish to have easements dedicated for the purpose of maintaining BMPs. While dedication in this manner facilitates maintenance by the jurisdiction, it also raises the risk of governmental liability for problems caused by flooding or other drainage issues, under North Carolina ease law.~~

~~xx-409 EXISTING STRUCTURAL BMPS~~

~~Sections 4-401, 4-403, 4-404, 4-405(B), 4-406 and 4-407 of this ordinance shall also apply to structural BMPs that were installed prior to the effective date of this ordinance.~~

<sup>49</sup> Adapted from Metro North Georgia Water Management District Model Ordinance.

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SECTION 5: ENFORCEMENT AND VIOLATIONS

xx-501 GENERAL

Commentary: The Jordan Rules (15A NCAC 2B.262) provide that violations of the stormwater provisions implemented by this ordinance (15A NCAC 2B.265) are subject to enforcement as authorized by G. S. 143-215.6A (civil penalties), G.S. 143-215.6B (criminal penalties), and G.S.143-215.6C (injunctive relief). See particularly G.S. 143-215.6A(j) and (k) for authorization and process for an approved local stormwater program to take direct enforcement action using civil penalties.

Communities should consider whether a violation of the stormwater ordinance should also constitute a violation of the zoning or building regulations, and may wish to make amendments to those regulations accordingly. For example, the zoning code could specify that compliance with stormwater regulations is required for issuance of any approvals issued under the zoning code, so that any development not complying with the stormwater regulations is also prohibited under zoning.

(A) Authority to Enforce

The provisions of this ordinance shall be enforced by the Stormwater Administrator, his or her designee, or any authorized agent of City of Burlington(name of local government). Whenever this section refers to the Stormwater Administrator, it includes his or her designee as well as any authorized agent of the City of Burlington(name of local government).

(B) Violation Unlawful

Any failure to comply with an applicable requirement, prohibition, standard, or limitation imposed by this ordinance, or the terms or conditions of any permit or other *development* approval or authorization granted pursuant to this ordinance, is unlawful and shall constitute a violation of this ordinance.<sup>20</sup>

(C) Each Day a Separate Offense

Each day that a violation continues shall constitute a separate and distinct violation or offense.<sup>21</sup>

(D) Responsible *Persons/Entities*

Any *person* who erects, constructs, reconstructs, alters (whether actively or passively), or fails to erect, construct, reconstruct, alter, repair or maintain any structure, BMP, *engineered stormwater control*, practice, or condition in violation of this ordinance shall be subject to the remedies, penalties, and/or enforcement actions in accordance with this section. *Persons* subject to the remedies and penalties set forth herein may include any architect, engineer, builder, contractor, developer, agency, or any other *person* who participates in, assists, directs, creates, causes, or maintains a condition that results in or constitutes a violation of this ordinance, or fails to take appropriate action, so that a violation of this ordinance results or persists; or an *owner*, any tenant

<sup>20</sup> From Town of Apex Unified Development Ordinance.

<sup>21</sup> Adapted from Town of Cary Land Development Ordinance.

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or occupant, or any other *person*, who has control over, or responsibility for, the use or *development* of the property on which the violation occurs.<sup>22</sup>

For the purposes of this article, responsible *person(s)* shall include but not be limited to:<sup>23</sup>

**(1) Person Maintaining Condition Resulting In or Constituting Violation**

An architect, engineer, builder, contractor, developer, agency, or any other *person* who participates in, assists, directs, creates, causes, or maintains a condition that constitutes a violation of this ordinance, or fails to take appropriate action, so that a violation of this ordinance results or persists.

**(2) Responsibility For Land or Use of Land**

The *owner* of the land on which the violation occurs, any tenant or occupant of the property, any *person* who is responsible for stormwater controls or practices pursuant to a private agreement or public document, or any *person*, who has control over, or responsibility for, the use or *development* of the property.

**xx-502 REMEDIES AND PENALTIES**

The remedies and penalties provided for violations of this ordinance, whether civil or criminal, shall be cumulative and in addition to any other remedy provided by law, and may be exercised in any order.

**(A) Remedies**

**(1) Withholding of Certificate of Occupancy**

The Stormwater Administrator, Building Inspections or other authorized agent may refuse to issue a certificate of occupancy for the building or other improvements constructed or being constructed on the site and served by the stormwater practices in question until the applicant or other responsible *person* has taken the remedial measures set forth in the notice of violation or has otherwise cured the violations described therein.

**(2) Disapproval of Subsequent Permits and Development Approvals**

As long as a violation of this ordinance continues and remains uncorrected, the Stormwater Administrator or other authorized agent may withhold, and the ~~(name of planning board, governing board, and/or other board(s) that review land development requests)~~ Planning and Zoning Board and/or City Council may disapprove, any request for permit or *development* approval or authorization provided for by this ordinance or the ~~(zoning, subdivision, and/or building regulations, as appropriate)~~ for the land on which the violation occurs.

<sup>22</sup> Adapted from Hall County, Georgia, Unified Development Ordinance.

<sup>23</sup> An inclusive approach to "responsible persons" drawn from the Town of Apex UDO.

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**(3) Injunction, Abatements, etc.**

The Stormwater Administrator, with the written authorization of the ~~(insert title of municipal or county manager, or, if there is no municipal manager, of the town clerk or the governing board)~~City Manager, may institute an action in a court of competent jurisdiction for a mandatory or prohibitory injunction and order of abatement to correct a violation of this ordinance. Any *person* violating this ordinance shall be subject to the full range of equitable remedies provided in the General Statutes or at common law.

**(4) Correction as Public Health Nuisance, Costs as Lien, etc.**

If the violation is deemed dangerous or prejudicial to the public health or public safety and is within the geographic limits prescribed by North Carolina G.S. § 160A-193, the Stormwater Administrator, with the written authorization of the ~~(title of municipal or county manager, or, if there is no manager, of the town clerk or the governing board)~~City Manager, may cause the violation to be corrected and the costs to be assessed as a lien against the property.

**(5) ~~Stop Work Order~~**

The Stormwater Administrator may issue a stop work order to the *person(s)* violating this ordinance. The stop work order shall remain in effect until the *person* has taken the remedial measures set forth in the notice of violation or has otherwise cured the violation or violations described therein. The stop work order may be withdrawn or modified to enable the *person* to take the necessary remedial measures to cure such violation or violations.

~~Commentary: A stop work order is an important tool where, as in the case of stormwater violations, the consequences of delay in halting illegal activity can result in significant harm to the environment and public health, safety or welfare. However, the enabling authority for use of a stop work order by local governments is unclear.~~  
~~If a local government chooses to include this stop work provision, it should do so in consultation with legal counsel, and an accelerated appeal process pursuant to Section xx-205, Appeals, should be provided for situations where a stop work order is applied. One way to accelerate the appeal process is to shorten the timeframe for review of appeals. A special or emergency Board of Adjustment meeting could be called, so that a party seeking to challenge a stop work order would achieve a speedy resolution of the matter.~~

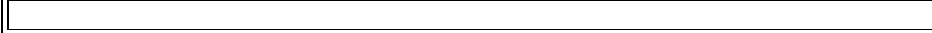
**(B) Civil Penalties**

The Stormwater Administrator may assess a civil penalty against any person who violates any provision of this ordinance or of a permit or other requirement pursuant to this ordinance. Civil penalties may be assessed up to the full amount of penalty authorized by G.S. 143-215.6A.

~~Commentary: The statutory civil penalty limit as of the drafting of this model ordinance is \$25,000 per violation, and for continuous violations, \$25,000 per violation per day, for a given violation.~~  
~~The amount of a proposed civil penalty should be set in consideration of the factors set out at G.S. 143B-282.1(b)~~



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**(C) Criminal Penalties**

Violation of this ordinance may be enforced as a criminal matter under North Carolina law.

**xx-503 PROCEDURES**

**(A) Initiation/Complaint**

Whenever a violation of this ordinance occurs, or is alleged to have occurred, any *person* may file a written complaint. Such complaint shall state fully the alleged violation and the basis thereof, and shall be filed with the Stormwater Administrator, who shall record the complaint. The complaint shall be investigated promptly by the Stormwater Administrator.

**(B) Inspection**

The Stormwater Administrator shall have the authority, upon presentation of proper credentials, to enter and inspect any land, building, structure, or premises to ensure compliance with this ordinance.<sup>24</sup>

**(C) Notice of Violation and Order to Correct**

When the Stormwater Administrator finds that any building, structure, or land is in violation of this ordinance, the Stormwater Administrator shall notify, in writing, the property *owner* or other *person* violating this ordinance. The notification shall indicate the nature of the violation, contain the address or other description of the site upon which the violation is occurring, order the necessary action to abate the violation, and give a deadline for correcting the violation. If civil penalties are to be assessed, the notice of violation shall also contain a statement of the civil penalties to be assessed, the time of their accrual, and the time within which they must be paid or be subject to collection as a debt.

The Stormwater Administrator may deliver the notice of violation and correction order personally, by the Burlington Police Department, by certified or registered mail, return receipt requested, or by any means authorized for the service of documents by Rule 4 of the North Carolina Rules of Civil Procedure.<sup>25</sup>

~~Note that if the administering unit is adopting this stormwater ordinance under its planning and zoning authority or is administering it as part of its building code enforcement program, it should consider whether it needs to follow the notice and opportunity to respond procedure set out in G.S. 160A-441 *et seq.* See *Newton v. Winston-Salem*, 92 N.C. App. 446 (1988).~~

If a violation is not corrected within a reasonable period of time, as provided in the notification, the Stormwater Administrator may take appropriate action under this

<sup>24</sup> ~~From Town of Cary Land Development Ordinance.~~  
<sup>25</sup> ~~From Town of Apex Unified Development Ordinance.~~

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ordinance to correct and abate the violation and to ensure compliance with this ordinance.

**(D) Extension of Time**

A *person* who receives a notice of violation and correction order, or the *owner* of the land on which the violation occurs, may submit to the Stormwater Administrator a written request for an extension of time for correction of the violation. On determining that the request includes enough information to show that the violation cannot be corrected within the specified time limit for reasons beyond the control of the *person* requesting the extension, the Stormwater Administrator may extend the time limit as is reasonably necessary to allow timely correction of the violation, up to, but not exceeding ~~30~~ 7 days. The Stormwater Administrator may grant ~~7~~ 7-day extensions in addition to the foregoing extension if the violation cannot be corrected within the permitted time due to circumstances beyond the control of the *person* violating this ordinance. The Stormwater Administrator may grant an extension only by written notice of extension. The notice of extension shall state the date prior to which correction must be made, after which the violator will be subject to the penalties described in the notice of violation and correction order.<sup>26</sup>

**(E) Enforcement After Time to Correct**

After the time has expired to correct a violation, including any extension(s) if authorized by the Stormwater Administrator, the Stormwater Administrator shall determine if the violation is corrected. The Stormwater Administrator may act to impose one or more of the remedies and penalties authorized by this ordinance whether or not the violation has been corrected.<sup>27</sup>

**(F) Emergency Enforcement**

If delay in correcting a violation would seriously threaten the effective enforcement of this ordinance or pose an immediate danger to the public health, safety, or welfare, then the Stormwater Administrator may order the immediate cessation of a violation. Any *person* so ordered shall cease any violation immediately. The Stormwater Administrator may seek immediate enforcement, without prior written notice, through any remedy or penalty authorized by this article.

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<sup>26</sup> ~~From Town of Apex Unified Development Ordinance.~~

<sup>27</sup> ~~From Town of Apex Unified Development Ordinance.~~

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SECTION 6: DEFINITIONS

Commentary: [sources of definitions]

xx-601 TERMS DEFINED

When used in this Ordinance, the following words and terms shall have the meaning set forth in this section, unless other provisions of this Ordinance specifically indicate otherwise.

Approved accounting tool

The accounting tool for nutrient loading approved by the EMC for the relevant geography and development type under review.

Built-upon area (BUA)

That portion of a development project that is covered by impervious or partially impervious surface including, but not limited to, buildings; pavement and gravel areas such as roads, parking lots, and paths; and recreation facilities such as tennis courts. "Built-upon area" does not include a wooden slatted deck, the water area of a swimming pool, or pervious or partially pervious paving material to the extent that the paving material absorbs water or allows water to infiltrate through the paving material.<sup>28</sup> The project site or area must exclude any land adjacent to the area disturbed by the project that has been counted as pervious by any other development regulated under a federal, state or local stormwater regulation.

~~This definition continues the tradition of the water supply watershed program and other state stormwater programs in allowing local programs some flexibility in project definition. Hard counting issues arise with, for example, campus type developments in which multiple parcels are developed over time. The last sentence of this definition incorporates the state's policy of disallowing double counting of open space for multiple projects, which otherwise could, over time, result in a cumulative erosion of pervious areas by projects that individually appear not to increase built upon area. Owners and developers of large, campus-type developments with phased development plans are encouraged to work out master plans with local and/or state regulators so that development phases for regulatory purposes match phases for actual building plans.~~

Commission

The North Carolina Environmental Management Commission, in the Department.

Department

The North Carolina Department of Environment and Natural Resources.<sup>29</sup>

Design Manual

The stormwater design manual approved for use in this part of the Jordan Watershed by the Department for the proper implementation of the requirements of the Jordan Watershed

<sup>28</sup> From SL 2004-163.

<sup>29</sup> From temporary rule.

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stormwater program. All references herein to the *Design Manual* are to the latest published edition or revision.<sup>30</sup>

*Commentary:* Under the Jordan rules, the default design manual is the July 2007 version of the *Stormwater Best Management Practices Manual* published by the Department. Jordan Watershed jurisdictions may develop their own Design Manual to more carefully tailor stormwater management practices to local condition, or to explain to developers and engineers in a practical way to comply with a comprehensive local watershed plan. Jurisdictions wishing to pursue this route should consult with the Division on necessary elements of the manual and the state approval process. Jurisdictions should also consider and explain the process they will use to give notice and provide an opportunity to comment on the original manual and any changes in it.

#### **Development**

Any *land-disturbing* activity that increases the amount of *built-upon area* or that otherwise decreases the infiltration of precipitation into the soil.<sup>34</sup>

The Jordan rules define “development” (as does the Phase II stormwater program) based on 15A NCAC 2B.0202(23), and implicitly define “redevelopment” in 15A NCAC 2B.0265(3)(a)(v), but the Jordan rules go on to define “existing development” and “new development. However, when read together with the vested rights provisions and agricultural/silvicultural exemptions in the Phase II program, the terms all match. This model ordinance uses the language from the Jordan Rules (similar to the language in the existing Water Supply Watershed rules), but without relying on a definition of “new development.” The definition is unnecessary in this ordinance since it simply is a catchall category for “development” that is not “existing development.” The definitions of *development* and *existing development* in this ordinance, when read with the applicability language, serve to define this catchall category.

#### **Division**

The Division of Water Quality in the Department.<sup>32</sup>

#### **Existing development**

*Development* not otherwise exempted by this ordinance that meets one of the following criteria:

- (a) It either is built or has established a statutory or common-law vested right as of the effective date of this ordinance; or
- (b) It occurs after the effective date of this ordinance, but does not result in a net increase in *built-upon area* and does not decrease the infiltration of precipitation into the soil

#### **Engineered stormwater control**

A physical device designed to trap, settle out, or filter pollutants from stormwater runoff; to alter or reduce stormwater runoff velocity, amount, timing, or other characteristics; to

<sup>30</sup> Adapted from North Georgia M.O.

<sup>31</sup> From North Carolina Model Ordinance for Water Supply Watershed Protection and 15A NCAC 2B.0202(23), along with the definitions of “existing development” and “new development” in 15A NCAC 2B.263.

<sup>32</sup> From SL 2004-163.

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approximate the pre-*development* hydrology on a developed site; or to achieve any combination of these goals. *Engineered stormwater control* includes physical practices such as constructed wetlands, vegetative practices, filter strips, grassed swales, and other methods installed or created on real property. “Engineered stormwater control” is synonymous with “structural practice,” “stormwater control facility,” “stormwater control practice,” “stormwater treatment practice,” “stormwater management practice,” “stormwater control measures,” “structural stormwater treatment systems,” and similar terms used in this ordinance. It is a broad term that may include practices that do not require design by a professionally licensed engineer.

***Land disturbing activity***

Any use of the land that results in a change in the natural cover or topography that may cause or contribute to sedimentation.<sup>33</sup>

***Larger common plan of development or sale***

Any area where multiple separate and distinct construction or *land-disturbing activities* will occur under one plan. A plan is any announcement or piece of documentation (including but not limited to a sign, public notice or hearing, sales pitch, advertisement, loan application, drawing, permit application, zoning request, or computer design) or physical demarcation (including but not limited to boundary signs, lot stakes, or surveyor markings) indicating that construction activities may occur on a specific plot.<sup>34</sup>

***Major variance***

A variance from the minimum statewide watershed protection or Jordan rules that results in the relaxation, by a factor greater than five percent of any buffer, density or built-upon area requirement under the high density option; any variation in the design, maintenance or operation requirements of a wet detention pond or other approved stormwater management system; or relaxation by a factor greater than 10 percent, of any management requirement under the low density option. For provisions in this ordinance that are more stringent than the state's minimum water supply protection rules and Jordan rules, a variance to this ordinance is not considered a *major variance* as long as the result of the variance is not less stringent than the state's minimum requirements.<sup>35</sup>

***Minor variance***

A variance from the minimum statewide watershed protection or Jordan rules that results in a relaxation, by a factor of up to five percent of any buffer, density or built-upon area requirement under the high density option; or that results in a relaxation by a factor up to 10 percent, of any management requirement under the low density option.

***10-year, 24-hour storm***

The surface runoff resulting from a 24-hour rainfall of an intensity expected to be equaled or exceeded, on average, once in 120 months and with a duration of 24 hours.<sup>36</sup>

<sup>33</sup> From 15A NCAC 2B.20.(37).

<sup>34</sup> Definition adapted from EPA Storm Water Phase II Compliance Assistance Guide.

<sup>35</sup> From 15A NCAC 2B.202, plus 15A NCAC 2B.104 language on provisions that are stricter than state minima.

<sup>36</sup> From SL 2004-163.

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***Outfall***

A point at which stormwater (1) enters surface water or (2) exits the property of a particular owner.<sup>37</sup>

***Owner***

The legal or beneficial owner of land, including but not limited to a mortgagee or vendee in possession, receiver, executor, trustee, or long-term or commercial lessee, or any other *person* or entity holding proprietary rights in the property or having legal power of management and control of the property. "Owner" shall include long-term commercial tenants; management entities, such as those charged with or engaged in the management of properties for profit; and every *person* or entity having joint ownership of the property. A secured lender not in possession of the property does not constitute an owner, unless the secured lender is included within the meaning of "owner" under another description in this definition, such as a management entity.

***Person***

Includes, without limitation, individuals, firms, partnerships, associations, institutions, corporations, municipalities and other political subdivisions, and governmental agencies.<sup>38</sup>

***Redevelopment***

Any *development* on previously-developed land. *Redevelopment* of structures or improvements that (i) existed prior to December 2001 and (ii) would not result in an increase in *built-upon area* and (iii) provides stormwater control at least equal to the previous development is not required to meet the nutrient loading targets of this ordinance.

***Stormwater system***

All engineered stormwater controls owned or controlled by a *person* that drain to the same *outfall*, along with the conveyances between those controls. A system may be made up of one or more stormwater controls.

***Substantial progress***

For the purposes of determining whether sufficient progress has been made on an approved plan, one or more of the following construction activities toward the completion of a site or subdivision plan shall occur: obtaining a grading permit and conducting grading activity on a continuous basis and not discontinued for more than thirty (30) days; or installation and approval of on-site infrastructure; or obtaining a building permit for the construction and approval of a building foundation. "Substantial progress" for purposes of determining

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<sup>37</sup> "Outfall" is used at various places in the N.C. General Statutes with reference to sewers, and always as a discharge point to surface water. "Stormwater outfall" is used in various places in title 15A of the North Carolina Administrative Code, but without a definition. Here the definition is intended to make clear that the term includes both the more familiar discharge to a stream, as well as the point at which stormwater leaves a piece of property under control of a particular owner. The term "surface water" is defined in the Jordan Rule, definitions section (15A-NCAC 2B.0263).

<sup>38</sup> From G.S. 143-212(4).

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| whether an approved plan is null and void is not necessarily the same as “substantial expenditures” used for determining vested rights pursuant to applicable law.<sup>39</sup>

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| ~~<sup>39</sup>Adapted from Town of Cary Land Development Ordinance.~~

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## SECTION 7: ILLICIT DISCHARGES

### xx-701 ILLICIT DISCHARGES AND CONNECTIONS

#### (A) Illicit Discharges

No person shall cause or allow the discharge, emission, disposal, pouring, or pumping directly or indirectly to any stormwater conveyance, the waters of the State, or upon the land in manner and amount that the substance is likely to reach a stormwater conveyance or the waters of the State, any liquid, solid, gas, or other substance, other than stormwater; provided that non-stormwater discharges associated with the following activities are allowed and provided that they do not significantly impact water quality:

- (1) Water line flushing;
- (2) Landscape irrigation;
- (3) Diverted stream flows;
- (4) Rising ground waters;
- (5) Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20));
- (6) Uncontaminated pumped ground water;
- (7) Discharges from potable water sources;
- (8) Foundation drains;
- (9) Air conditioning condensation;
- (10) Irrigation water;
- (11) Springs;
- (12) Water from crawl space pumps;
- (13) Footing drains;
- (14) Lawn watering;
- (15) Individual residential car washing;
- (16) Flows from riparian habitats and wetlands;
- (17) Dechlorinated swimming pool discharges;
- (18) Street wash water; and
- (19) Flows from emergency firefighting
- (20) Other non-stormwater discharges for which a valid NPDES discharge permit has been approved and issued by the State of North Carolina, and provided that any such discharges to the municipal separate storm sewer system shall be authorized by the City of Burlington.

Prohibited substances include but are not limited to: oil, anti-freeze, chemicals, animal waste, paints, garbage, and litter.

#### (B) Illicit Connections

(1) Connections to a stormwater conveyance or stormwater conveyance system that allow the discharge of non-stormwater, other than the exclusions described in section (a) above, are unlawful. Prohibited connections include, but are not limited to: floor drains, waste water from washing machines or sanitary sewers, wash water from commercial vehicle washing or steam cleaning, and waste water from septic systems.

(2) Where such connections exist in violation of this section and said connections were made prior to the adoption of this provision or any other ordinance prohibiting such connections, the property owner or the person using said connection shall remove the



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connection within one year following the effective date of this ordinance. However, the one-year 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.

This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

(3) Where it is determined that said connection:

(a) 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

(b) Was made in violation of any applicable regulation or ordinance, other than this section;

the Stormwater Administrator shall designate the time within which the connection shall be removed. In setting the time limit for compliance, the Stormwater Administrator shall take into consideration:

- i. The quantity and complexity of the work,
- ii. The consequences of delay,
- iii. The potential harm to the environment, to the public health, and to public and private property, and
- iv. The cost of remedying the damage.

**(C) Spills**

Spills or leaks of polluting substances released, discharged to, or having the potential to released or discharged to the stormwater conveyance system, shall be contained, controlled, collected, and properly disposed. All affected areas shall be restored to their preexisting condition. Persons in control of the polluting substances immediately prior to their release or discharge, and persons owning the property on which the substances were released or discharged, shall immediately notify the Emergency Management Coordinator or the Fire Chief of the release or discharge, as well as making any required notifications under state and federal law. 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.

**(D) Industrial or Construction Activity Discharges**

Any person subject to an industrial or construction activity NPDES stormwater discharge permit shall comply with provisions of such permit. Proof of compliance with said permit may be required in a form acceptable to the City of Burlington prior to authorization of discharges to the MS4.

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**(E) Right of Entry, Inspection, Sampling, and Testing**

(1) Authority to Inspect – Whenever necessary to make an inspection to enforce any provision of this Ordinance, or whenever the Stormwater Administrator has cause to believe that there exists, or potentially exists, in or upon any premise any condition which constitutes a violation of this Ordinance, the Stormwater Administrator may enter such premises at all reasonable times to inspect the same and to inspect and copy records related to stormwater compliance. In the event the owner or occupant refuses entry after a request to enter and inspect has been made, the City of Burlington is hereby empowered to seek assistance from any court of competent jurisdiction in obtaining such entry.

(2) Authority to Sample, Establish Sampling Devices, and Test – During any inspection as provided herein, the Stormwater Administrator may take any samples and perform any testing deemed necessary to aid in the pursuit of the inquiry or to record site activities.

**(F) (F) Enforcement**

Whenever the Stormwater Administrator finds that a person has violated a prohibition or failed to meet a requirement of this Ordinance, the Stormwater Administrator may order compliance by written notice of violation to the responsible person and/or the property owner. Such notice may require without limitation:

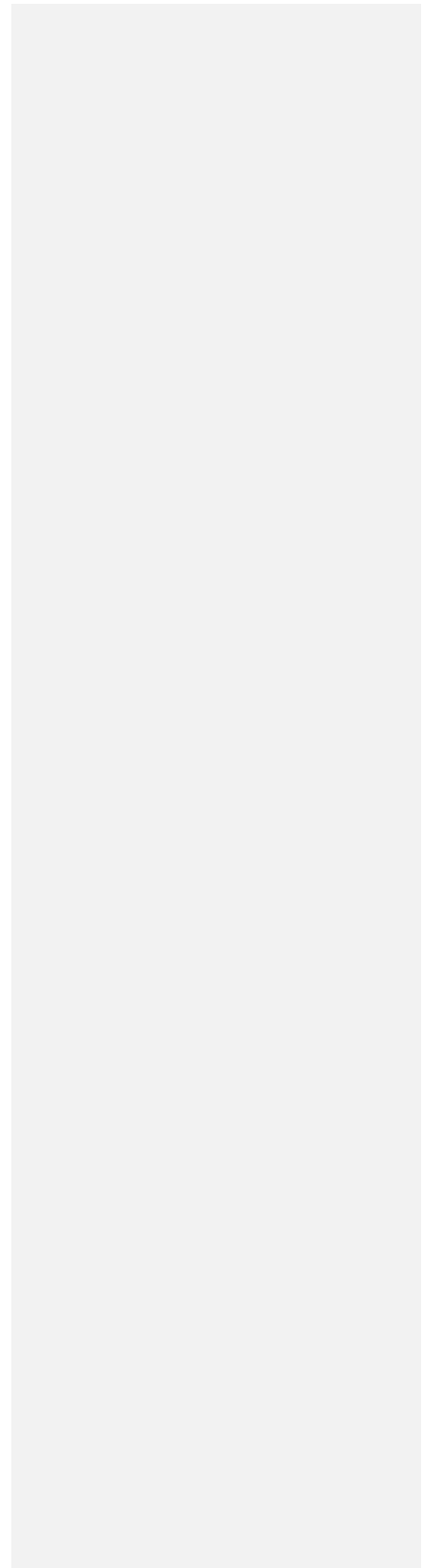
- (11) The performance of monitoring, analysis, and reporting;
- (12) The elimination of illicit connections or discharges;
- (13) That violating discharges, practices, or operations shall cease and desist;
- (14) The abatement or remediation of stormwater pollution or contamination hazards and the restoration of any affected property;
- (15) Payment of a fine to cover administrative and remediation costs; and
- (16) The implementation of source control BMPs.

If abatement of a violation and/or restoration of affected property is required, the notice shall set forth a deadline within which such remediation or restoration must be completed. Said notice shall further advise that, should the violator fail to remediate or restore within the established deadline, the work will be done by the City of Burlington or a contractor designated by the Stormwater Administrator and the expense shall be charged to the violator.

**(G) (G) Violations Deemed a Public Nuisance**

Illicit discharges and illicit connections which exist within the City Limits and the City's Extraterritorial Jurisdiction are hereby found, deemed, and declared to be dangerous or prejudiced to the public health or public safety and are found, deemed, and declared to be public nuisances. Such public nuisances shall be abated in accordance with the procedures set forth in the City of Burlington Code of Ordinances Chapter 22.

| ~~Approved by EMC 3-10-11~~



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### LAND USE PLANNING

The City of Burlington has recently reviewed its Zoning and Subdivision Ordinances. Through this process, the Stormwater Division worked with the Planning and Engineering Departments to ensure that there is flexibility to allow for *Low Impact Development* or other minimally impact design alternatives. Should a developer decide to take this approach, the Stormwater Division will work closely with the designer to ensure water quality is protected and nutrient reductions are adequate.