

Phase II Stormwater Model Ordinance for North Carolina

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Revision history

--changes from 9/7/05 version:

Numerous changes to conform to 2006 Stormwater bill, SL 2006-246. Notably:

- revised standards for design storm and drawdown rate
- special provisions for Shellfish Resource Waters and CAMA projects
- separation from seasonal high water table for certain BMPs
- explicit authorization for clustered development
- conformed vested rights provisions for phased development plans
- statutory exceptions to buffers, deed restrictions and protective covenant requirements
- conformed definitions: *Development, redevelopment, low-density project, owner*

Editorial and typographical changes suggested by Sarah Bruce, Triangle J COG and others

Additional types of persons authorized to do inspections

--Changes from 7/1/05 draft:

Corrected reference to the Code of Federal Regulations (CFR) in XX-105(B), Exemptions (p. 12 of the 7/1/05 pdf file)—reference should read “40 CFR 232” rather than “40 CFR 302.”

--changes from 5/19/05 draft.

-§ 105(D) added reference to local zoning and jurisdictional boundary ordinances as potentially important authority for determinations about site-specific applicability.

§ 108(A) Comment--added reference to nuisance code provisions as potentially conflicting with Phase II stormwater

§ 203 – removed stray right bracket.

§ 306 Comment--added cautionary note about accepting BMPs for maintenance.

§ 402(B)--in light of concerns about failure of BMPs owned by homeowners' associations, added hold harmless clause for local governments that must take over BMP maintenance due to failure of the homeowners' association to keep a BMP functioning correctly.

§ 503(C)--added comment noting potential need for enhanced notice and opportunity to correct violations if the stormwater ordinance is enacted and administered as an exercise of the unit's planning and zoning authority.

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SECTION 1: GENERAL PROVISIONS

Commentary: 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 drafters of the model ordinance are 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, and staffing resources. Optional provisions are shown in [brackets] and generally are accompanied by some explanation in the commentary.

If adopted in its entirety, either with or without the optional provisions, this ordinance is designed to ensure that communities comply with Phase II post-construction requirements. Local governments may make changes to or omit any of the model’s provisions, but the resulting non-standard ordinance will have to be reviewed and approved by the Division of Water Quality of the North Carolina Department of Environment and Natural Resources before Phase II compliance is assured.

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 Phase II Stormwater Ordinance.” It is referred to herein as “this ordinance.”

xx-102 AUTHORITY

The (name of governing board) 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); North Carolina General Statutes 143-214.7 and rules promulgated by the Environmental Management Commission thereunder; Session Law 2004-163; Chapter 160A, §§ 174, 185 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 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. Note that both the erosion and sediment control and floodway regulations are appropriate for integration with Phase II 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-.

xx-103 FINDINGS

It is hereby determined that:

Development and *redevelopment* alter the hydrologic response of local watersheds and increase 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 Federal Water Pollution Control Act of 1972 (“Clean Water Act”) and federal Phase II Stormwater Rules promulgated under it, as well as rules of the North Carolina Environmental Management Commission promulgated in response to federal Phase II requirements, compel certain urbanized areas, including this jurisdiction, to adopt minimum stormwater controls such as those included in this ordinance.

The preceding paragraph should not be included by a jurisdiction that is adopting this ordinance without having been designated as subject to the Phase II state and federal stormwater requirements.

Therefore, the (name of governing board) 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. ¹

xx-104 PURPOSE

(A) General

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 post-*development* stormwater runoff and nonpoint and point source pollution associated with new *development* and *redevelopment* [as well as illicit discharges into municipal stormwater systems]. 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.

¹ Adapted from Stormwater Center/EPA Model Ordinance.

Commentary: The optional reference to illicit discharges should be included only if the jurisdiction is using this ordinance to add to or integrate its powers to regulate illicit discharges into the municipal stormwater system. Illicit discharge control is one of the six required minimum measures of Phase II stormwater programs; Phase II communities must implement an illicit discharge program. But the timing and approach to illicit discharge controls may vary from the timing and approach to post-construction stormwater control, which is the required Phase II minimum measure at which this model ordinance is most directly aimed. A separate set of model provisions for illicit discharge control is provided in optional section 8 of this ordinance.

The other minimum measures mandated in Phase II stormwater programs – public education and outreach; public participation and involvement; construction site runoff control; and pollution prevention/good housekeeping – should also be pursued by the jurisdiction as part of its Phase II program.

(B) Specific

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 protect the integrity of watersheds and preserve the health of water resources;
2. Requiring that new *development* and *redevelopment* maintain the pre-*development* hydrologic response in their post-*development* state as nearly as practicable 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 (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).]²

[9. Controlling illicit discharges into the municipal separate stormwater system.]

[10. Controlling erosion and sedimentation from construction activities.]

[11. Assigning responsibility and processes for approving the creation and maintenance of adequate drainage and flood damage prevention measures.]

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

Commentary: The applicability mandate in the temporary rule (15A NCAC 2H.0126) is that the post-construction program cover “all new development [and redevelopment] projects that cumulatively disturb one acre or more, and to projects less than an acre that are part of a larger common plan of development or sale.”

Session Law 2004-163 provides that, to the extent that post-construction measures are implemented by a zoning ordinance, vested rights shall be determined as provided in G.S. 160A-385.1, G.S. 153A-344.1, and other applicable provisions of statutory and common law. To the extent that post-construction measures are implemented by means other than a zoning ordinance, vested rights shall be determined as provided by applicable statutory and common law.

(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, unless exempt pursuant to Subsection (B) of this Section, Exemptions.

(B) Exemptions

Development 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.

² Adapted from Metropolitan North Georgia Water Planning District Model Ordinance.

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.

Development and *redevelopment* that disturb less than one acre are not exempt if such activities are part of a *larger common plan of development or sale*, even though multiple, separate or distinct activities take place at different times on different schedules.³

Activities that are 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* 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

Commentary: The geographic coverage area is determined by reference to the standards in Session Law (SL) 2006-246., The *Division* has created a geographic information system (GIS) that can be used in conjunction with local GIS data to show jurisdictional limits. Local governments that adopt this ordinance in whole or part should consider designing their maps so as to integrate easily with this *Division* GIS.

The provisions of this ordinance shall apply within the areas designated on the map titled "Phase II Stormwater Map of (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.⁴

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 *structural BMPs* 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.

³ Adapted from the North Georgia Model Ordinance.

⁴ Adapted from North Carolina Model Watershed Protection Ordinance.

(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 meaning and application of the term in this ordinance shall control for purposes of application of this ordinance.⁵

(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), the deadline or required date of action shall be the next day that is not a Saturday, Sunday or holiday observed by the (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 (name of local government) may be carried out by his or her designee.

⁵ Provisions A through H were adapted from Town of Cary Land Development Ordinance.

(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 *structural and non-structural stormwater BMPs*.

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 Phase II laws.⁶

(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 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.

⁶ From Stormwater Center/EPA Model Ordinance.

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.⁷

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

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.

⁷ Adapted from Metro North Georgia Water Management District and Stormwater Center/EPA Model Ordinances.

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).

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.

Some communities may find that it makes sense to approach this comprehensive review along with an evaluation of whether a watershed-wide plan should be implemented (see Section xx-304)

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.⁸

(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 (name of local government) be obligated to enforce the provisions of any easements, covenants, or agreements between private parties.⁹

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 _____, 200_____.

⁸ From Metro North Georgia Water Management District Model Ordinance.

⁹ Adapted from Town of Cary Land Development Ordinance.

(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) prior to the effective date of this ordinance and which remain valid, unexpired, unrevoked and not otherwise terminated at the time of *development* or *redevelopment* shall be exempt from complying with all provisions of this ordinance dealing with the control and/or management of post-construction runoff, but shall be required to comply with all other applicable provisions[, including but not limited to illicit discharge provisions].

Commentary: As noted, illicit discharge provisions are optional for this ordinance, although a Phase II community must address illicit discharges through a legal mechanism as one of the six minimum measures required by Phase II. If included in this ordinance, then the last phrase should be added. If the ordinance is adapted by the local jurisdiction to incorporate additional components in addition to post-construction runoff control and illicit discharge, the paragraph above should be revised to reflect the applicable provisions (as in the case of illicit discharge) regardless of when a complete application was submitted and accepted.

A phased development plan shall be deemed approved prior to the effective data 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, 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, 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.¹⁰

(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.¹¹

¹⁰ SL 2006-246.

¹¹ Adapted from Town of Cary Land Development Ordinance.

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) 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) 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) 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 (name of governing board and, if a stormwater board is established, the name of that board as well), 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 *structural BMPs* and elements of site design for stormwater management other than *structural BMPs*.

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 *structural BMPs* 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 structural BMPs 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.

(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) 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: Fees for **State** stormwater permits are limited under G.S. 143-215.3D to \$420. The jurisdiction should consider whether to use this same limit in order to be consistent with state-issued permits. Alternatively, under the reasoning of Homebuilder’s Association v. Charlotte, 336 N.C. 37 (1994), which upheld the inherent power of North Carolina local governments to charge fees to cover the costs of regulatory programs, the jurisdiction could analyze the full costs of its Stormwater Phase II program and set its fees at some reasonable level that is expected to cover those costs.

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 Phase II 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.

(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 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.

(3) Revision and Subsequent Review

A complete revised application shall be reviewed by the Stormwater Administrator [within _____ working 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 post-construction 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, 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), 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); 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 structural 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) 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 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) As-Built Plans and Final Approval

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) Other Permits

No certificate of compliance or occupancy shall be issued by the (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 where multiple units are served by the stormwater practice or facilities, in which case the (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.

(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.
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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

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.

Commentary: We 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.

(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.]

SECTION 3: STANDARDS

xx-301 GENERAL STANDARDS

All *development* and *redevelopment* to which this ordinance applies shall comply with the standards of this section.

Commentary: Standards for the high-density/low-density option for complying with Phase II implementation are given in the following provisions. However, note also that pursuant to SL 2004-163, Section 12, subsection (14)i., it is permissible for a local government to implement Phase II requirements by other means. That provision specifies that the regulated entity may comply by developing its own comprehensive watershed plan, designing its own post-construction practices based on the Department's guidance and engineering standards, or incorporate the post-construction model practices set out in the Stormwater Management Rule. A placeholder for application of a comprehensive watershed plan approach is provided in Section xx-304 below. Presumably, the other two approaches specified in the statute would be implemented through formulation of a special Design Manual applicable in the local jurisdiction (see Section xx-107, Design Manual).

xx-302 DEVELOPMENT STANDARDS FOR LOW-DENSITY PROJECTS

Low-density projects shall comply with each of the following standards:

- (A) Stormwater runoff from the *development* shall be transported from the *development* by vegetated conveyances to the maximum extent practicable.

Commentary: The term "maximum extent practicable" is not defined in the federal Phase II rule or the temporary state rule. However, the commentary accompanying the federal rule clarifies that the "maximum extent practicable" standard should be applied in a site-specific manner taking into account cost considerations as well as protection of water quality. It appears, therefore, that a site-specific review should be performed to ensure that vegetated conveyances in low-density projects meet this standard.

- (B) All *built-upon area* shall be at a minimum of 30 feet landward of all perennial and intermittent surface waters. A perennial or intermittent surface water shall be deemed present if the feature is approximately shown on either the most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture (USDA) or the most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geologic Survey (USGS). An exception to this requirement may be allowed when surface waters are not present in accordance with the provisions of 15A NCAC 2B .0233 (3)(a) or similar site-specific determination made using *Division*-approved methodology.

Commentary: The cited portion of the riparian buffer rule provides, "When a landowner or other affected party believes that the maps have inaccurately depicted surface waters, he or she shall consult the *Division* or the appropriate delegated local authority. Upon request, the *Division* or delegated local authority shall make on-site determinations" regarding whether the stream depicted is subject to the rule. If the Phase II community has a riparian buffer program in place, it may be able to obtain delegation from the State to make "stream calls." If a buffer program is not already in place, the Phase II community may be able to get training for its Stormwater Administrator to make stream determinations through the *Division* or the Cooperative Extension Service.

- (C) 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-303 DEVELOPMENT STANDARDS FOR HIGH-DENSITY PROJECTS

High-density projects shall implement stormwater control measures that comply with each of the following standards:

- (A) The measures shall control and treat runoff from the first inch of rain [and, for projects in areas subject to the Coastal Area Management Act of 1974, the measures shall control and treat runoff from the first one and one-half inches of rain. In addition, projects that are located within one-half mile and draining to *Shellfish Resource Waters* must control and treat the difference in stormwater runoff from the pre- and post-*development* conditions for, at a minimum, the *1-year, 24-hour storm*.] Runoff volume drawdown time shall be a minimum of 48 hours, but not more than 120 hours.

The optional provisions should be included for jurisdictions in the coastal zone. They were added by SL 2006-246.

- (B) All structural stormwater treatment systems used to meet these requirements shall be designed to have a minimum of 85% average annual removal for Total Suspended Solids (TSS);
- (C) General engineering design criteria for all projects shall be in accordance with 15A NCAC 2H .1008(c), as explained in the *Design Manual*;
- (D) All *built-upon area* shall be at a minimum of 30 feet landward of all perennial and intermittent surface waters. A surface water shall be deemed present if the feature is approximately shown on either the most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture (USDA) or the most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geologic Survey (USGS). An exception to this requirement may be allowed when surface waters are not present in accordance with the provisions of 15A NCAC 2B .0233 (3)(a) or similar site-specific determination made using *Division*-approved methodology.
- (E) The approval of the stormwater permit shall require an enforceable restriction on property usage that runs with the land, such as recorded deed restrictions or protective covenants, to ensure that future *development* and *redevelopment* maintains the site consistent with the approved project plans.

xx-304 COMPREHENSIVE WATERSHED PLAN

Commentary: SL 2006-246, § 9(b) provides that public bodies may develop and implement comprehensive watershed protection plans that can be used to meet part, or all, of the post-construction requirements of the rule. Thus, if a suitable comprehensive watershed plan has been approved by the local government adopting this ordinance and approved by the *Department*, this section can be used in place of the low-density/high-density standards set out in Sections xx-302 and xx-303 above. In that case, all the standards of the watershed plan that would be appropriate for implementation by an ordinance should be set out in this

section. (Some aspects of a watershed plan would be implemented by other, non-regulatory means, such as capital improvements programming, staffed local government activities, and other methods not suitable for inclusion in an ordinance).

In addition to eliminating some of the administrative burdens created with a site-by-site permitting and maintenance program, a comprehensive watershed plan can address factors that are not dealt with in applying a site-by-site low-density or high-density approach. As one example of the shortcomings of site-by-site regulation, lot coverage limitations under a low-density district may actually worsen stormwater effects when viewed at the watershed or sub-watershed scale. That is because low densities frequently require more off-site impervious infrastructure (such as roads) than the same amount of development configured in a more urban pattern. In addition, surfaces such as turfgrass lawns can act like impervious surface in the amount of runoff generated due to compaction and other factors. Nutrient loading from lawn fertilizers is often a problem. These drawbacks and others have brought many localities concerned about water quality to apply a watershed-wide approach, rather than attempting to control impacts at the level of individual parcels or development sites or applying a one-size-fits-all impervious surface limitation.

A watershed approach will use a variety of tools to limit stormwater impacts, tailored to the specific needs that are identified in the watershed. With this approach, a comprehensive program for resource protection is developed based on the specific issues that are unique to the watershed. For example, one watershed may have steep slopes or highly erodible soils that warrant special treatment, while surface waters in another watershed may sustain special uses such as swimming or fishing that merit other protective measures. Some watersheds will be particularly affected by the presence of specific pollutants, while others may involve the consideration of aquifer recharge areas. A comprehensive watershed plan will involve data collection and a rational analysis of the issues that are present.

Based on the analysis, the most appropriate means of implementation should be chosen. The menu of implementation options could include:

- Riparian buffers scaled to achieve reduction of specific pollutants
- Programmatic acquisition and preservation of open space, especially hydrologically important open space.
- Conservation of important water-related features or critical/sensitive areas (e.g., wetlands, floodplains, steep slopes, intermittent or seasonal streams, vernal pools, forested cover)
- Allowing higher-density or compact development options on less sensitive sites
- Providing for flexibility in the application of an impervious surface district
- Adjusting infrastructure policies to reduce pavement requirements
- Establishing graduated (rather than averaged) utility fees based on impacts generated
- Developing a list of preferred BMPs that are tailored to identified water quality protection goals
- Allowing low-impact development (LID) options to allow decentralized management of rainfall in a way that mimics pre-development hydrology
- Public education and cleanup campaigns
- Restoration of impaired streams and ecosystems

Some of the questions that should be resolved through the watershed planning process include:

- Which hydrologic variables do we want to manage in the subwatershed?
- What are the primary stormwater pollutants of concern?
- Which management practices should be avoided because of their environmental impacts?
- What is the most effective mix of structural and non-structural management practices that can meet the subwatershed goals?
- What is the most economical way to provide stormwater management?
- Which stormwater management practices are the least burdensome to maintain with local budgets?¹²

¹² Center for Watershed Protection.

A number of information sources are available to communities that wish to undertake a comprehensive watershed plan. The Center for Watershed Protection, for example, provides a variety of online resources at their website, <http://www.cwp.org>.

In summary, a comprehensive watershed approach is widely viewed as the most effective way to achieve water quality goals. It can also eliminate many of the burdens to local government and to property owners that arise from a site-by-site permitting and maintenance approach.

xx-305 STANDARDS FOR STORMWATER CONTROL MEASURES

(A) Evaluation According to Contents of Design Manual

All stormwater control measures 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, ~~and~~ constructed, and maintained in accordance with the criteria and specifications in the *Design Manual* 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.

(C) Separation from Seasonal High Water Table

For BMPs that require a separation from the seasonal high-water table, the separation shall be provided by at least 12 inches of naturally occurring soil above the seasonal high-water table.¹³

xx-306 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.

¹³ From SL 2006-246, § 9(k).

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.¹⁴

xx-307 VARIANCES

Commentary: This provision is adapted from the Coastal Area Management Act, N.C. Gen. Stat. § 113A-120.1

(A) Any person may petition the (name of local government) for a variance granting permission to use the person's land in a manner otherwise prohibited by this ordinance. To qualify for a variance, the petitioner must show all of the following:

- (1) Unnecessary hardships would result from strict application of this ordinance.
- (2) The hardships result from conditions that are peculiar to the property, such as the location, size, or topography of the property.
- (3) The hardships did not result from actions taken by the petitioner.
- (4) The requested variance is consistent with the spirit, purpose, and intent of this ordinance; will secure public safety and welfare; and will preserve substantial justice.

(B) The (name of local government) may impose reasonable and appropriate conditions and safeguards upon any variance it grants.

(C) Statutory exceptions

Notwithstanding subdivision (A) of this section, exceptions from the 30-foot landward location of built-upon area requirement as well as the deed restrictions and protective covenants requirements shall be granted in any of the following instances:

- (1) When there is a lack of practical alternatives for a road crossing, railroad crossing, bridge, airport facility, or utility crossing as long as it is located, designed, constructed, and maintained to minimize disturbance, provide maximum nutrient removal, protect against erosion and sedimentation, have the least adverse effects on aquatic life and habitat, and protect water quality to the maximum extent practicable through the use of BMPs.
- (2) When there is a lack of practical alternatives for a stormwater management facility; a stormwater management pond; or a utility, including, but not limited to, water, sewer, or gas construction and maintenance corridor, as long as it is located 15 feet landward of all perennial and intermittent surface waters and as long as it is located, designed, constructed, and maintained to minimize disturbance, provide maximum nutrient removal, protect against erosion and sedimentation, have the least adverse effects on aquatic life and habitat, and protect water quality to the maximum extent practicable through the use of BMPs.

¹⁴ From Virginia Stormwater Management Model Ordinance.

(3) A lack of practical alternatives may be shown by demonstrating that, considering the potential for a reduction in size, configuration, or density of the proposed activity and all alternative designs, the basic project purpose cannot be practically accomplished in a manner which would avoid or result in less adverse impact to surface waters.

These statutory exceptions were included in SL 2006-246, § 11.

xx-308 ADDITIONAL STANDARDS FOR SPECIAL SITUATIONS

Commentary: State law requires special, additional stormwater protection in areas that drain to certain classes of water: shellfish waters (SA), trout waters (TR), and nutrient sensitive waters (NSW). Each jurisdiction adopting this model ordinance should determine whether it is responsible for *development* or *redevelopment* in one of these areas. If so, it should adopt the following provisions, as appropriate.

(A) [SA Waters]

[In addition to the standards for stormwater handling set out in the *design manual, development and redevelopment* that drains in whole or part to class SA waters shall design and implement the best stormwater practices that ensure reduction of fecal coliform loading. The best practices are ones that result in the highest degree of fecal die-off and control sources of fecal coliform to the maximum extent practicable while still meeting the other requirements of this ordinance. Wet detention ponds designed in accordance with the requirements of this ordinance may be used for projects draining to Class SA waters.

(1) [Pet waste]

Commentary: Some jurisdictions have existing pet waste ordinances, or cover pet waste in their littering ordinance. If the jurisdiction does not have a pet waste program or an ordinance regarding pet waste, and has development or redevelopment draining to class SA waters, the following language should be considered for adoption..

(a) Dogs At Large Prohibited¹⁵

It shall be unlawful for the owner of any dog to allow the animal to be off the premises of his owner and not on a leash in (name of local government).

(b) Restrictions on Pet Waste

(i) It shall be unlawful for the owner or custodian of any dog to take it off the owner's own property limits without the means to properly remove and dispose of the dog's feces from any public or private property.

(ii) It is the responsibility of a dog's owner or custodian to clean up the dog's feces from any public or private property outside of the dog's owner's

¹⁵ Adapted from the Town of Wrightsville Beach.

own property limits. Such property includes, but is not limited to, parks, rights-of-way, paths, and public access areas.

(iii) “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 dog 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.

(iv) This provision shall not apply to handicapped persons assisted by trained guide or assistance dogs.

(v) “Public nuisance” is defined to include “a dog which deposits feces on public property or on private property without the consent of the owner or person in lawful possession of the private property, and the person owning, possessing, harboring or having the care, charge, control or custody of the dog fails to remove the feces so deposited. Provided, however, this definition shall not apply to any dog assisting a handicapped person.

(2) No Direct Discharge or Expansion of Discharges to SA Waters

No new direct points of stormwater discharge to SA waters or increases in the volume of stormwater flow through conveyances or increases in capacity of conveyances in existing stormwater conveyance systems that drain to Class SA waters are permitted. Any modification or redesign of a stormwater conveyance system within the contributing drainage basin must not increase the net amount or rate of stormwater discharge through existing outfalls to Class SA waters. Diffuse flow of stormwater at a nonerosive velocity to a vegetated buffer or other natural area capable of providing effective infiltration of the runoff from the one-year, 24-hour storm shall not be considered a direct point of stormwater discharge. Consideration shall be given to soil type, slope, vegetation, and existing hydrology when evaluating infiltration effectiveness.^{16]}

(B) [Trout Waters]

[In addition to the standards for handling stormwater set out in the *design manual*, *development* and *redevelopment* that drains in whole or part to class TR waters shall design and implement the best stormwater practices that do not result in a sustained increase in receiving water temperature, while still meeting the other requirements of this ordinance.]

(C) [Nutrient Sensitive Waters]

In addition to the standards for stormwater handling set out in the *design manual*, *development* and *redevelopment* that drains in whole or part to class NSW waters shall design and implement the best stormwater practices that reduce nutrient loading, while still meeting the other requirements of this ordinance.]

¹⁶ SL 2006-246, §9(h).

Commentary: This requirement, for choosing BMPs that reduce nutrient loading, is met already by jurisdictions with Department-approved NSW Urban Stormwater Management Programs in place. In addition to this ordinance requirement, Phase II jurisdictions with development or redevelopment draining to NSW waters are required to develop a nutrient application management program (for both inorganic fertilizer and organic nutrients) under state law.

xx-309 [ONSITE WASTEWATER]

Commentary: State law requires Phase II jurisdictions to implement an oversight program to ensure proper operation and maintenance of onsite wastewater treatment systems for domestic wastewater. This program should be coordinated with the county health department. The Department has determined that this requirement can be met simply by the Phase II jurisdiction coordinating with the county to ensure that onsite wastewater systems within the jurisdiction are properly permitted.

However, Phase II jurisdictions should be aware that health department standards for onsite systems generally cover only the approval of the technology and its installation, not the ongoing management of the systems. Therefore, some jurisdictions, particularly those that choose to set up stormwater enterprises, may wish to extend the maintenance obligations for stormwater BMPs to newly installed onsite wastewater systems. This optional language seeks to accomplish that. As a start, the jurisdiction should consider how to integrate the existing health department permit data for onsite systems into an inventory of onsite systems in the Phase II jurisdiction.

(A) Operation and Maintenance Requirements

New and replaced onsite systems for domestic wastewater installed after the effective date of this ordinance shall be subject to the same requirements for operation and maintenance as *structural BMPs* for stormwater, including, at a minimum, annual inspection reports and a recorded operation and maintenance agreement, pursuant to Section 4 of this ordinance.

(B) Standards for Operation and Maintenance

Onsite systems for domestic wastewater covered by this ordinance 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

xx-401 GENERAL STANDARDS FOR MAINTENANCE

Commentary: The long-term effectiveness of any structural BMP 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 *structural BMP* 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 *structural BMP* was designed.

(B) Annual Maintenance Inspection and Report

The person responsible for maintenance of any *structural BMP* installed pursuant to this ordinance shall submit to the Stormwater Administrator an inspection report 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 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 *structural BMP*;
- (3) A statement that an inspection was made of all *structural BMPs*;
- (4) The date the inspection was made;
- (5) A statement that all inspected *structural BMPs* are performing properly and are in compliance with the terms and conditions of the approved maintenance agreement required by this ordinance; and
- (6) The original signature and seal of the engineer, surveyor, or landscape architect.

All inspection reports shall be on forms supplied 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.¹⁷

¹⁷ Drawn from Wake County stormwater ordinance (based on Neuse Urban Stormwater program).

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 *structural BMP* pursuant to this ordinance, and prior to issuance of any permit for *development* or *redevelopment* requiring a *structural BMP* 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 *structural BMP*. Until the transference of all property, sites, or lots served by the *structural BMP*, 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* or *owners* to maintain, repair and, if necessary, reconstruct the *structural BMP*, and shall state the terms, conditions, and schedule of maintenance for the *structural BMP*. In addition, it shall grant to (name of local government) 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 *structural BMP*; however, in no case shall the right of entry, of itself, confer an obligation on (name of local government) to assume responsibility for the *structural BMP*.

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.¹⁸ A copy of the recorded maintenance agreement shall be given to the Stormwater Administrator within fourteen (14) days following its recordation.¹⁹

(B) Special Requirement for Homeowners' and Other Associations

For all *structural BMPs* 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 *structural BMPs*. If *structural BMPs* are not performing adequately or as intended or are not properly maintained, the (name of local government), in its sole discretion, may remedy the situation, and in such instances the (name of local government) shall be fully

¹⁸ 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.

¹⁹ Most of the following homeowners' association requirements are adapted from Neuse model program provisions as adopted in Wake County.

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 *structural BMPs*, 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 *structural BMPs*. 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 *structural BMPs*. 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 *structural BMPs*.
- (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 *structural BMPs* 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 *structural BMPs*, and the (name of local government) shall not be liable to any person for the condition or operation of *structural BMPs*.
- (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 structural BMP, 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.

xx-403 INSPECTION PROGRAM

Inspections and inspection programs by (name of local government) 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.²⁰

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) May Be Required²¹

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 prior to issuance of a permit in order to ensure that the *structural BMPs* 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

²⁰ Adapted from Stormwater Center/EPA and Metro North Georgia Water Management District Model Ordinances.

²¹ From Virginia Model Ordinance for Stormwater Management.

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.

Commentary: Use of this approach to maintenance security creates an incentive to choose the structural BMPs 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 3/16/05 at <http://www.bae.ncsu.edu/people/faculty/hunt/bmpcosts&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 *structural BMP* 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) shall not return any of the unused deposited cash funds or other security, which shall be retained for maintenance.²²

(3) Costs in Excess of Performance Security

If (name of local government) takes action upon such failure by the applicant or *owner*, the (name of local government) may collect from the applicant or *owner*

²² From Town of Cary Watershed Protection Ordinance.

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 *structural BMP* 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, *structural BMPs* 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.

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.

xx-406 RECORDS OF INSTALLATION AND MAINTENANCE ACTIVITIES

The *owner* of each *structural BMP* 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.²³

xx-407 NUISANCE

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

²³ Adapted from Metro North Georgia Water Management District Model Ordinance.

xx-408 [MAINTENANCE EASEMENT

Every *structural BMP* 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 case law.

SECTION 5: ENFORCEMENT AND VIOLATIONS

xx-501 GENERAL

Commentary: 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 (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 (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* or *redevelopment* approval or authorization granted pursuant to this ordinance, is unlawful and shall constitute a violation of this ordinance.²⁴

(C) Each Day a Separate Offense

Each day that a violation continues shall constitute a separate and distinct violation or offense.²⁵

(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, 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.²⁶

²⁴ From Town of Apex Unified Development Ordinance.

²⁵ Adapted from Town of Cary Land Development Ordinance.

²⁶ Adapted from Hall County, Georgia, Unified Development Ordinance.

For the purposes of this article, responsible person(s) shall include but not be limited to:²⁷

(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, *development* or *redevelopment* 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 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) 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 (insert title of municipal or county manager, or, if there is no municipal manager, of the

²⁷ An inclusive approach to “responsible persons” drawn from the Town of Apex UDO.

town clerk or the governing board), 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), 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.]²⁸

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. As a practical matter, if a legal challenge is brought to a local government's use of a stop work order, it is unlikely to result in negative consequences for the local government, since the legal remedy would likely consist of the court's invalidation of the stop work order.

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

Violation of this ordinance may subject the violator to a civil penalty to be recovered in a civil action in the nature of a debt if the violator does not pay the penalty within 30 days after notice of the violation is issued by the Stormwater Administrator. Civil penalties may be assessed up to the full amount of penalty to which (name of jurisdiction) is subject for violations of its Phase II Stormwater permit, or if no Phase II Stormwater permit exists for the jurisdiction, civil penalties may be assessed up to the full amount allowed by law.

Commentary: Based on experience with enforcement of locally delegated erosion and sediment control programs and other code enforcement experience, it would be a good practice for a jurisdiction to agree on

²⁸ Adapted from Metro North Georgia Water Management District Model Ordinance.

a set of normal civil penalties to be assessed for any commonly experienced violations. This assists the Stormwater Administrator and other officials in making reasonable and equitable penalty assessments.

(C) Criminal Penalties

Violation of this ordinance may be enforced as a misdemeanor subject to the maximum fine permissible 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.²⁹

(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 (name of law enforcement or code enforcement personnel), 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.³⁰

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

²⁹ From Town of Cary Land Development Ordinance.

³⁰ From Town of Apex Unified Development Ordinance.

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 _____ days. The Stormwater Administrator may grant _____-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.³¹

(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. If the violation is not corrected, the Stormwater Administrator may act to impose one or more of the remedies and penalties authorized by this ordinance.³²

(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.

³¹ From Town of Apex Unified Development Ordinance.

³² From Town of Apex Unified Development Ordinance.

SECTION 6: DEFINITIONS

Commentary: Session Law 2004-163 states in “SECTION 12. Definitions” that “The following definitions apply to this act and its implementation: (1) The definitions set out in 40 Code of Federal Regulations § 122.2 (Definitions) and § 122.26(b) (Storm Water Discharges) (1 July 2003 Edition). (2) The definitions set out in G.S. 143-212 and G.S. 143-213. (3) The definitions set out in 15A NCAC 2H .0103 (Definitions of Terms).”

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.

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.³³

Department

The North Carolina Department of Environment and Natural Resources.³⁴

Design Manual

The stormwater design manual approved for use in Phase II jurisdictions by the *Department* [developed by (name of jurisdiction) and certified by this jurisdiction [approved by the *Division*] as at least as stringent as the stormwater design manual approved for use in Phase II jurisdictions by the *Department*] for the proper implementation of the requirements of the federal Phase II stormwater program. All references herein to the *Design Manual* are to the latest published edition or revision.³⁵

Commentary: Phase II 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 how 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.³⁶

³³ From S.B. 1210.

³⁴ From temporary rule.

³⁵ Adapted from North Georgia M.O.

³⁶ From North Carolina Model Ordinance for Water Supply Watershed Protection and 15A NCAC 2B.0202(23).

Compare the definition of “development” in the Coastal Area Management Act, Gen. Stat. § 113A-103(5a), which only covers specified types of activities done in particular areas of environmental concern. Coastal communities who are used to the CAMA definition of “development” need to note the broader definition used here and in the Environmental Management Commission’s surface water rules.

Division

The Division of Water Quality in the *Department*.³⁷

High-density project

Any project that exceeds the *low-density* threshold for dwelling units per acre or *built-upon area*.

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.³⁸

Low-density project

For a project that is not located within one-half mile of and draining to *Shellfish Resource Waters*: the project is a low -density project if it has no more than two dwelling units per acre or twenty-four percent *built-upon area* (BUA) for all residential and non-residential *development*.

For a project that is located within one-half mile of and draining to *Shellfish Resource Waters*: the project is a low-density project only if it contains no more than twelve percent *built-upon area* (BUA).

A project with an overall density at or below the relevant low-density threshold, but containing areas with a density greater than the overall project density, may be considered low density as long as the project meets or exceeds the post-construction model practices for low-density projects and locates the higher density in upland areas and away from surface waters and drainageways to the maximum extent practicable.

1-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 12 months and with a duration of 24 hours.³⁹

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.

³⁷ From S.B. 1210.

³⁸ Definition adapted from EPA Storm Water Phase II Compliance Assistance Guide.

³⁹ From S.B. 1210.

Redevelopment

Any *development* on previously-developed land , other than a rebuilding activity that results in no net increase in *built-upon area* and provides equal or greater stormwater control than the previous *development*.

Shellfish Resource Waters

Class SA waters that contain an average concentration of 500 parts per million of natural chloride ion. Average concentration is determined by averaging the chloride concentrations of five water samples taken one-half mile downstream from the project site that are taken on separate days, within one hour of high tide, and not within 48 hours following a rain event. The chloride ion concentrations are to be determined by a State-certified laboratory.⁴⁰

Structural BMP

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. Structural BMP includes physical practices such as constructed wetlands, vegetative practices, filter strips, grassed swales, and other methods installed or created on real property. “Structural BMP” 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.

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. ⁴¹

⁴⁰ From SL 2006-246.

⁴¹ Adapted from Town of Cary Land Development Ordinance.

[SECTION 7: ILLICIT DISCHARGES

xx-701 ILLICIT DISCHARGES AND CONNECTIONS⁴²

Commentary: The federal Phase II rule specifies that local communities shall prohibit any discharge to a municipal separate storm sewer unless it:

- consists of a discharge pursuant to an NPDES permit; or
- consists of a discharge from fire fighting activities; or
- consists of a discharge in any of the following categories, *and* the operator of the small MS4 has not identified that category as a significant contributor of pollutants to its small MS4:

Water line flushing; landscape irrigation; diverted stream flows; rising ground waters; uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)); uncontaminated pumped ground water; discharges from potable water sources; foundation drains; air conditioning condensation; irrigation water; springs; water from crawl space pumps; footing drains; lawn watering; individual residential car washing; flows from riparian habitats and wetlands; dechlorinated swimming pool discharges; and street wash water.

(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;

⁴² Drawn from Raleigh and Greenville ordinances.

- (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) 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 (name of Phase II jurisdiction).

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 subsection (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.
- (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:

1. The quantity and complexity of the work,

2. The consequences of delay,
3. The potential harm to the environment, to the public health, and to public and private property, and
4. 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 (title of the individual in charge of managing accidental hazardous material releases in the local jurisdiction, such as a city 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) Nuisance

Illicit discharges and illicit connections which exist within the (city limits or planning jurisdiction of the city) (county) (insert whichever text is applicable) 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 section ____ (insert cross-reference to nuisance abatement section of code, if applicable).]

Appendix: Sources consulted or from which provisions were drawn for this Model Ordinance

Model Ordinance for Post-Development Stormwater Management for New Development and Redevelopment (Metropolitan North Georgia Water Management District)

Model Ordinance for Water Supply Watershed (NC Division of Water Quality)

Neuse River Basin Model Stormwater Program for Nitrogen Control

Tar-Pamlico Basin Nutrient-Sensitive Waters Management Strategy

Model Stormwater Ordinance (Center for Watershed Protection, Inc. ["Stormwater Center"])

Model Stormwater Ordinance (US EPA)

Unified Development Ordinance (Hall County, Georgia)

Unified Development Ordinance (Town of Apex, NC)

Land Development Ordinance (Town of Cary, NC)

Watershed Protection Ordinance (Town of Cary, NC)

Stormwater Management Model Ordinance (State of Virginia)

Town Code of Wrightsville Beach, NC

Illicit discharge provisions: Raleigh, NC; Greenville, NC; Franklin, TN

Stormwater Management Ordinance (Wake County, NC)