

**AGENDA OF THE
SUMMERFIELD ZONING BOARD
SUMMERFIELD COMMUNITY CENTER
July 25, 2011
7:00 P.M. Public Hearings**

1. CALL TO ORDER

2. INTRODUCTIONS

3. CONSENT AGENDA

(A) Approval of Agenda

(B) Approval of Minutes from March 28, 2011 meeting

4. NEW BUSINESS:

(A) Consideration of Model Local Stormwater Program for New Development. This model program will be used to help reduce phosphorous and nitrogen from entering the watershed for Jordan Lake. Town Council needs to approve and submit the program to the State before September 10, 2011

5. OTHER BUSINESS:

(A) Updates from committee members:

A. Development Ordinance Advisory Group

B. Summerfield Rd Special Area Plan

C. Guilford County Open Space Committee

(B) Updates from Town Planner

A. Revisit by-laws

6. ADJOURN

MINUTES OF THE
SUMMERFIELD ZONING BOARD
SUMMERFIELD COMMUNITY CENTER
March 28, 2011

NOTE: The official minutes are a CD recording of the meeting. The following is a summary of the events of the meeting.

The meeting was called to order at 7:05 pm by Nancy Hess.

2. INTRODUCTIONS:

Nancy Hess, Chair

Trudy Whitacre

Kathy Rooney

Jeff Davis, Alternate

Scott Henson, Alternate

Will Rozelle, Town Attorney

Chris Anderson, Town Planner

Carrie Spencer, Clerk to the Board

3. CONSENT AGENDA

Ms. Hess made a motion to add an agenda item to discuss the April meeting date, Mr. Henson seconded, and the motion passed unanimously. Ms. Rooney made a motion to approve the agenda, Mr. Davis seconded, and the motion passed unanimously. Ms. Whitacre made a motion to approve the minutes for the February 28, 2011 meeting as corrected, Ms. Hess seconded, and the motion passed unanimously with Mr. Henson abstaining as he had not attended the meeting.

4. NEW BUSINESS

A. Rezoning Case #01-11 RS-30, SC to CU-LB, SC.

Mr. Anderson presented the case, reading from the staff report. He added that the Development Conditions were taken from a previous staff report and should be stricken from the report. In answer to a question, Mr. Anderson stated that the one person who attended the Open House was in favor of the proposal due to the past performance of the existing business. Anderson clarified the fact that the house on the property under consideration is not a historic structure and as far as he knows there is not a current plan to combine the properties. There was a question as to what uses the applicant wanted to have at the property, and Mr. Anderson stated that the requested uses match those of the adjacent property.

Public Hearing

In favor:

Patrick Jenks, 404 Liguria Ct, Summerfield, applicant, spoke in favor of the request. He stated that their intent is to use the cottage for a bridal cottage for brides to dress, and for a space for Danielle to work away from Forestry Systems. He added that he has never received a negative comment in the 8 years with Forestry Systems, and the 3 years with the Gardens at Gray Gables. He felt that he has contributed to the town with a Northwest High School athletics banquet, Santa in the Garden, and 21 weddings last year. They plan on building 4 or 5 more parking spaces including a handicap space, a handicap

ramp, new bathroom, continuous hedgerow around the property, and a sunroom to the south side of the cottage when finances allow. He expects (very few) people for 1 to 3 hours at a time. He quoted an article in the NW Observer that included positive comments about Forestry Systems. He added that they have drawn up plans for a trail stop for the trail that will be built near the property. He stated that the Santa event they held was very successful, filling 18 ½, boxes or 3 ½ truckloads, of toys for an estimated 800 children. He added that the cottage will be called "The Stantliff Bridal Cottage" with a picture of Mrs. Stantliff in the den. When asked, Mr. Jenks stated that he also owns the property across from Brisbane.

With no further comments in favor, and none against, Ms. Hess closed the public hearing.

There was discussion about the staff report's reference to the property as historic, since it was built in 1972. There was concern that the cottage match the historic nature of the existing Forestry Systems building.

There was concern about the list of potential uses for the property, and Mr. Jenks stated that he had been advised to include the same conditions as the existing commercially zoned property. Mr. Jenks stated that he would be willing to limit the uses to only a Special Events Facility. Ms. Hess listed some conditions that seem inappropriate for Brisbane Rd, such as Office Machine Sales.

Ms. Hess called for a 5 minute recess, and the meeting resumed at 7:36.

The applicant offered to remove conditions 5, 6, 7, 12, 19, 20, 24, and 25 from the list.

Ms. Whitacre complimented the existing business and the property as a good example of integrating historic properties into the community as businesses. Ms. Whitacre made a motion to approve the rezoning request with presented conditions as amended. Mr. Davis seconded, and the motion passed unanimously. Ms. Hess reminded the applicant that the Zoning Board is a recommending body and the case will go before the Town Council on April 12.

B. Site Plan Review

Anderson presented the case, pointing out the property on the plan. He added that the applicant wanted to install 2 gas and diesel tanks on the property. He stated that the site plan was originally approved for an additional building behind the Brick Store and the applicant does not want to withdraw that approval. Mr. Anderson stated that the applicant has placed structural concrete block storage areas where the new building is sited. Mr. Anderson passed out some pictures of the site that show the storage bins, pointing out that the Scenic Corridor does not allow outside storage within view of the road. Anderson stated that the applicant had taken care to prevent the area from being seen from the scenic corridor. When asked, Mr. Anderson stated that the gas and diesel tanks would be installed above ground. The applicant stated that they would be two 500 gallon tanks, and agreed with a comment that they would be similar to residential fuel oil

tanks. Mr. Anderson pointed out that the applicant planted understory trees in excess of the requirement, instead of shrubs, and the intent of the landscape buffer had been met. Ms. Rooney asked if there would be a containment facility planned for underneath the tanks and Mr. Bryant stated that they have to meet certain specs when they get an electrical permit, to include a concrete trough to catch overflow.

Ms. Hess opened the floor to the public. Pete Bryant, 2313 Creekmoor Ct, Summerfield, stated that he had purchased the building in 2007. He stated that they enjoy the historic nature of Summerfield and had wanted to enhance the character of the building. He added that Guilford County historic staff visited the site and gave permission for the tanks. He stated that there is a fence that will hide the tanks. Mr. Bryant stated that the storage bins are constructed of completely movable concrete block.

Ms. Hess closed the floor to the public.

When asked if he planned to add additional landscaping, Mr. Bryant stated that he did not plan to plant more heavily because he did not want to hide the building. He would add more plant material in the interior of the property. Mr. Anderson added that alternate methods of complying with the landscape buffer are allowed as long as they perform equivalently to the ordinance.

Ms. Whitacre stated that the existing gate and patio area is attractive and well designed. She added that the caps on the storage blocks make them look good, the bins are well labeled, and it shows what he does with the business. Ms. Whitacre made a motion to pass the site plan revision, Ms. Rooney seconded, and the motion passed unanimously.

Mr. Bryant asked about the timing of his existing plan, and Mr. Anderson stated that the previous site plan is good until Dec 31, 2013.

5. OTHER BUSINESS

A. Mr. Anderson stated that the Development Ordinance Advisory Group has looked at a new Table of Contents, and is going through the whole ordinance article by article. The last meeting, March 15, was about non conforming issues and there was a lot of discussion about rebuilding restrictions for non conforming buildings that are mostly destroyed.

Ms. Rooney, speaking for the Summerfield Rd Special Area Plan Steering Committee, stated that they had a great meeting last time and the committee talked about what they knew about the properties along Summerfield Rd. It was like an inventory of property in the area. In answer to a question, Mr. Anderson stated that the meetings are open to the public to attend and listen.

Ms. Whitacre stated that the Open Space committee is working on properties for the remaining \$3.8 million in the bond referendum. They are considering properties along the Atlantic and Yadkin Railroad. This Thursday, Dewey Trogden will give a historic

review of the A&Y railroad at 7pm at Town Hall. She discussed the difficulty of a stewardship plan for the Open Space properties, with some offering only guided trails. They are trying to acquire properties in different parts of the county to disperse Open Space throughout. She described an urban property that has been recommended for purchase in a lower economic area of town near Benbow Park that consists of a few overgrown acres, cleared by the prison farm for use as a neighborhood park. There are clubs in town that will also help to clear vines for the property.

B. Mr. Anderson stated that the Watershed Modification case was approved by Town Council. He added that the rezoning case proposed by Donny Wright was withdrawn prior to the Town Council meeting. He stated that Mr. Stratton's request for a wine bar was considered by the BOA since Mr. Anderson had made the determination that a wine bar is like a bar, which is not allowed in the Hillsdale Village zoning district. The applicant had argued that the ABC board requires a large percentage of food on the menu to operate a wine bar, making it more like a restaurant.

Ms. Rooney asked about a meeting for Rails to Trails and wanted to know what is going on. Mr. Anderson stated that the Parks and Recreation Committee has a subcommittee for trails, adding that he believes they will plan a walk along the rail trail. Ms. Whitacre suggested better coordination between the various groups working on trail and Open Space.

Mr. Anderson stated that there is nothing on the agenda for an April meeting. Ms. Hess and Ms. Rooney can not attend, and since there is no agenda it was decided to cancel the meeting.

Ms. Hess asked about the tent installed on the Gray Gables property, and Mr. Anderson suggested an administrative change to the site plan that indicates the tent location.

Ms. Rooney made a motion to adjourn, Mr. Davis seconded, and the meeting adjourned at 8:27pm.



To: Members of the Summerfield Zoning Board
From: Christopher Anderson
RE: Zoning Board meeting July 25, 2011
Date: 7/5/11

Model Local Stormwater Program for New Development.
Jordan Lake Nutrient Management Strategy

As noted to you previously, the next step in the adoption of various rules for the Jordan Lake Watershed is the adoption of a Local Stormwater Program for New Development. The attached is the Local Program submitted for your review. I am asking for your comments and approval before presenting this before the Town Council.

The latest program for addressing the pollution factors impacting Jordan Lake are for new developments to create devices that will reduce phosphorous and nitrogen prior to surface water reaching the lake. This can be done through numerous methods, much of which will be at the discretion of the developer. Increased stormwater runoff created by adding impervious surface will need to be contained, and these elements reduced. Methods, such as rain ponds, level spreaders, retention ponds and the like all have the potential to remove a certain amount of these elements, and in combination, they will need to demonstrate that the target reductions are met. This will be addressed by an ordinance that will be used on future development projects. The model Ordinance is presented in the proposed program for reference.

The Guidance document is included for your reference as well. The Table of Contents for the program is taken from this document, starting on page 5. An appendix is also included showing maps, contacts, and copies of the various forms that will be used during review of the site plans for a proposed development.

Remember that this document is currently just the program, telling the State how we plan to address the issue of reducing phosphorous and nitrogen buildup. This is not the adoption of regulation language.

The appendices referenced in the Guidance document are not included, but are available. They total nearly 150 pages, much of which is directly including General Statute language

This Local Stormwater Program for New Development is to be sent back to NCDNER by September 10, 2011. They will have six months to review the submittals and make recommendations to the Commission. Assuming that the model program is approved, the Town of Summerfield would begin implementation of the program starting around August of 2012.

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***Model Local Stormwater Program for New
Development***

***As Required by the
Jordan New Development Stormwater Rule
15A NCAC 2B .0265***

***&
Guidance for Local Governments and
Developers***

***Approved by the
NC Environmental Management Commission
On March 10, 2011***

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Appendices

Appendix A	15A NCAC 02B .0265 – Jordan Water Supply Nutrient Strategy: Stormwater Management for New Development
Appendix B	15A NCAC 02B .0263 – Jordan Water Supply Nutrient Strategy: Definitions
Appendix C	15A NCAC 02B .0273 – Jordan Water Supply Nutrient Strategy: Options for Offsetting Nutrient Loads
Appendix D	15A NCAC 02B .0262 – Jordan Water Supply Nutrient Strategy: Purpose and Scope
Appendix E	15A NCAC 02B .0271 – Jordan Water Supply Nutrient Strategy: Stormwater Requirements for State and Federal Entities
Appendix F	15A NCAC 02B .0104 – Considerations/Assigning/Implementing Water Supply Classifications
Appendix G	15A NCAC 02B .0214 – Fresh Surface Water Quality Standards for Class C WS-II Waters
Appendix H	15A NCAC 02B .0215 – Fresh Surface Water Quality Standards for Class C WS-II Waters
Appendix I	15A NCAC 02B .0216 – Fresh Surface Water Quality Standards for Class C WS-II Waters
Appendix J	15A NCAC 02B .0240 – Nutrient Offset Payments
Appendix K	15A NCAC 02B .0274 – Nutrient Offset Payment Rates for the NC Ecosystem Enhancement Program
Appendix L	Session Law 2009-484 (.0265 revisions)
Appendix M	Session Law 2009-216 (Existing Development Requirements)
Appendix N	Jordan Model Ordinance
Appendix O	Jordan/Falls Accounting Tool Worksheets and Users' Manual
Appendix P	The Nitrogen Cycle
Appendix Q	Sources of Nitrogen in Developed Areas
Appendix R	Land Use Planning and Design Techniques
Appendix S	Example Forms
Appendix T	Example Conservation Easement
Appendix U	Self-Assessment Tool

Model Local Stormwater Program

The Jordan New Development Stormwater Rule, 15A NCAC 2B. 0265, sets out standards that named communities are to incorporate into local stormwater programs, and requires the Division of Water Quality to develop a model local stormwater program that embodies those standards to guide local program submittals. Following model approval by the NC Environmental Management Commission, local governments are given six months to return their programs for Commission approval.

This model local stormwater program identifies specific information that local governments will need to submit for their programs and provides a model local ordinance and nutrient load accounting tool as called for in the rule. We have divided the submittal requirements into three parts: 1) information that the Commission will approve, 2) appendices containing specific supporting information that will change over time, and 3) supplemental information that will aid the Division's review of program submittals.

Following this model program is a companion document containing guidance on implementing the rule. This guidance is written to assist local governments and developers. A set of appendices contains the model ordinance and a user's manual for the nutrient load accounting tool. It also includes reference information including: relevant rules from the Jordan nutrient strategy, other rules referenced by the Jordan New Development rule, session laws affecting the New Development rule, example forms, and other support information that affected parties may find useful.

Local Program Information for EMC Approval

Local programs will need to provide the following minimum information for Commission approval:

- **Proposed adoption timeline and effective date** – Commission approval of the Model Program is proposed for March 10, 2011. Section 1-D of the supplemental program guidance describes the rule timeline requirements for the submittal, review, and adoption and implementation of local programs.
- **Other Stormwater Programs** – The rule requires adherence to certain other state stormwater regulations. The program should identify existing stormwater regulations within the jurisdiction, including water supply watershed, whether designated under Phase II NPDES and status of Phase II implementation.
- **Statement of Riparian Buffer Ordinance Compliance** - One aspect of development application review required by the rule is ensuring protection of riparian buffers, as discussed in Chapter 2-C.3. Local governments will need to affirm in their programs that they will carry out the review process spelled out in Item (15)(e) of the buffer rule and quoted in Chapter 2-C.3., and state whether, and if so, where they include that process description in their ordinance.

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- **State and Federal Entities Implementation** – State whether the program will enforce the requirements of this rule on state and federal entities that do not have a Phase II NPDES stormwater permit. See Chapter 2-A.5. of the companion Guidance.
- **Area of Applicability** – Include description of planning jurisdiction, responsibility for program in ETJ, any inter-jurisdictional agreement, and if applicable, extent of implementation of rule requirements outside Jordan Watershed.
- **Minimum Qualifications of Stormwater Administrator** - State the minimum qualifications of the personnel who will be responsible for implementing the program, including stormwater plan review and BMP inspection. The Division prefers these persons to be registered North Carolina professional engineers with stormwater experience. Minimum qualifications are persons performing services only in their area of competence, including professional engineer, registered North Carolina professional surveyor, landscape architect, soil scientist, aquatic biologist, or a person certified by the North Carolina Cooperative Extension Service to approve stormwater management plans or to inspect BMPs.
- **Maintenance/Inspection Program** - Describe your intent regarding a program for ensuring maintenance of BMPs called for in the rule. Your maintenance program description should address the elements discussed in Section 2-D (BMP maintenance) of the companion Guidance document, including:
 - Owner inspection and reporting requirements, including qualifications required of BMP inspectors;
 - Local government inspection and oversight program, including frequency of local government inspections;
 - Financial surety for long-term function; and
 - Database of practices installed.
- **Forms in Administrative Manual** – Provide a listing of forms to be used in the permitting and compliance process (see Appendix S).
- **Ordinance** – Provide all sections of ordinance that will be necessary to implement the rule. This should include all subject areas covered by the model ordinance (see Appendix N).
- **Nutrient Loading Accounting Tool** – Provide a statement that you will use the Jordan/Falls Nutrient Load Accounting Tool provided in Appendix O or describe the method that will be used for accounting for nutrient loading and BMP implementation to meet rule requirements. In the latter case, please provide: documentation on that tool; an electronic version of the tool; a discussion of how it differs from the Jordan/Falls tool; and how it will be at least as protective as the Jordan/Falls tool.

Appendix of Supporting Information

Local programs are to include an appendix that contains detailed supporting information that will be updated periodically. Future revisions to this information will not require Commission or Division Director approval. The Program appendix shall include the following information:

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- **Program Contacts and Professional Qualifications** – Names and contact information for the Stormwater Administrator and other personnel responsible for reviewing stormwater designs and performing and reviewing inspections.
- **Stormwater Map** – Provide most current map of jurisdictional boundaries. This map should be at a scale or resolution useful for implementation purposes, and be one that you will be prepared to update periodically as needed and report on in annual reports. This map may differ from a map you provided as part of your Jordan Existing Development Stage I programs, since those requirements applied only to the area covered by your police powers. This map should include the following:
 - Preferably a zoning map.
 - Identify limits of planning jurisdiction.
 - Include delineation of Jordan boundaries.
 - Identify date of map.We prefer that you make the map available on a website and provide a link to that site. You may also submit the map as a digital file or a printed map.
- **Forms** – Provide a copy of all forms that you will use to carry out permitting and compliance, which should include the following:
 - Stormwater Permit Application
 - Sample Permit
 - As-Built Submittal Form w/ BMP Certification Statements
 - Operation and Maintenance Agreements for BMPs
 - Example Access Easement
 - Example Conservation Easement

Supplemental Information

Local governments are asked to provide the following supplemental information to aid the Division's review of your programs:

- **Program Approval** – Describe your local approval process and the status of your program's approval prior to submittal to the Division. Include a description of approval steps following Commission approval leading to implementation.
- **Ordinance Changes** – Provide a listing of ordinance sections created or revised to address the rule's requirements. If a local government finds a subject covered by the model ordinance unnecessary, provide a statement identifying the model ordinance section(s) and any supporting discussion to support your position.
- **Land use planning** – State whether you have conducted a review of local ordinances to identify potential modifications that would 1) reflect improved growth management practices 2) allow developers adequate flexibility to utilize planning measures to reduce impervious surfaces and 3) reduce untreated nutrient loading rates from developments as discussed in Chapter 2-E - Land Use Planning. If such a review has been conducted, please provide a summary of your findings and any actions taken.

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- **Appeals Process** – (optional) Summarize the appeals processes that are described in your ordinance.
- **Exceeding Minimum Requirements** – (optional) Identify significant aspects of your proposed local program that go beyond the minimum requirements established in the rule, potentially including any of the following:
 - New Development Definition
 - Disturbance thresholds
 - Loading rate targets
 - Off-site thresholds
 - If your jurisdiction is partly outside the Jordan watershed, whether you propose to apply the rule jurisdiction-wide
 - Redevelopment - require treatment on redevelopment that does not increase built-upon area?
- **Permitting Process** – (optional) Provide an outline and fact sheet describing the steps of the local permitting process for developers and engineers subject to the program requirements.

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***Supplemental Program Guidance
for Local Governments and
Developers***

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1. Introduction to the New Development Rule

The Jordan New Development Stormwater Rule, 15A NCAC 02B .0265, is one of a comprehensive set of thirteen rules known as the Jordan Nutrient Strategy. This chapter provides an overview of the Jordan New Development Rule requirements and program implementation timeline. Guidance on how local governments can implement these requirements is provided in Chapter 2 of this document.

The following conventions will be used throughout document, unless otherwise stated:

- References to “the Rule” mean the Jordan New Development Stormwater Rule, 15A NCAC 02B .0265 unless stipulated otherwise.
- The New Development Rule and any other DWQ rules referenced in the text are provided as appendices.
- References to “the Division” mean the Division of Water Quality unless stipulated otherwise.
- References to “the Model Ordinance” mean the Jordan Model Stormwater Ordinance for New Development” developed the UNC School of Government.
- References to “the Tool” mean the Jordan/Falls Lake Stormwater Load Accounting Tool developed by North Carolina State University.
- Quoted rule text is set off with indents, italics, and quotation marks. Bold text is emphasis added by the Division.

1-A. Background of Jordan Nutrient Strategy

Jordan Lake is an impoundment in the central Piedmont that drains a mixture of agricultural and urbanized lands forming the upper Cape Fear River Basin, including the west side of the Triangle and much of the Triad region. The lake serves as a water supply for almost a half-million people and also has significant recreational use. The Division has determined that the entire lake does not meet the water quality standard for chlorophyll *a*, and portions of the lake do not meet the standard for pH, as a result of excess nutrient inputs from its watershed.

Session Law 1997-458, also known as HB 515, required wastewater dischargers in Nutrient Sensitive Waters to meet a specific concentration of nitrogen and of phosphorus at permitted flow, or alternatively comply with results of a calibrated nutrient response model. In the Jordan Lake watershed, this mandate prompted a modeling process initiated by a group of Haw watershed dischargers in 1998. Model results indicated the need for controls addressing a range of point and nonpoint sources. HB 515 also required the Division to develop plans for all point and nonpoint sources in nutrient sensitive watersheds to jointly share the responsibility of reducing nutrient inputs “in a fair, reasonable, and proportionate manner”. As a result, the Division conducted an extensive stakeholder input process beginning in 2003 that carried through a formal public comment period on draft rules in summer 2007. The resulting set of rules was approved by the Environmental Management Commission in May 2008, followed by approval of the Rules Review Commission over five

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meetings from June through November 2008. The rules were then reviewed by the 2009 session of the General Assembly. Five of the rules were either replaced or revised by legislation, and the remaining rules were approved by the General Assembly unchanged.

The Jordan New Development Rule was revised by SL 2009-484. The session law revised the nitrogen loading rate thresholds that need to be achieved onsite, before using offsite measures to meet full requirements, from 4 and 8 lbs/ac/yr to 6 and 10 lbs/ac/yr for residential and commercial development, respectively. This is described more in Section 2-B-4. The session law also added minimum onsite stormwater treatment requirements for any development above the loading rate targets. This is described in Section 2-B-3.

The Jordan Nutrient Strategy is generally designed to reduce excess nutrients impacts, specifically nitrogen and phosphorus, into Jordan Lake to reduce algal growth and other nutrient related water quality problems. The requirements of the strategy are similar to those already in place in the Neuse and Tar-Pamlico River Basins. The rules require major sources of nutrients to reduce loading that makes its way to Jordan Lake to meet specific model-established percent reduction goals needed to restore water quality standards and full uses of the lake. The Jordan strategy goes beyond previous strategies in requiring *all* local governments in the watershed to implement new development permitting requirements, in requiring load reductions from existing developed lands, and in directly regulating state and federal entities for stormwater control from both new and existing development.

1-B. Purpose of the New Development Rule

The Purpose Item of the New Development Rule sets out its purposes :

“(a) To achieve and maintain the nitrogen and phosphorus loading goals established for Jordan Reservoir in Rule 15A NCAC 02B .0262 from lands in the Jordan watershed on which new development occurs;”

The applicable loading goals in the reference Jordan Purpose and Scope Rule are defined in terms of percent reductions in annual mass loading of nitrogen and phosphorus for each of the three subwatersheds in the Jordan watershed, relative to a modeled baseline condition representing the time period 1997 through 2001. These percent goals are as follows:

Table 1 – Percent Reduction Goals

<u>Subwatershed</u>	<u>Reduction Goals</u>	
	N	P
Upper New Hope	35%	5%
Lower New Hope	0%	0%
Haw	8%	5%

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“(b) To provide control for stormwater runoff from new development in Jordan watershed to ensure that the integrity and nutrient processing function of receiving waters and associated riparian buffers are not compromised by erosive flows;” and

Peak flow rates matching requirements included in the rule are intended to limit erosive flows. Peak flow requirements are discussed in Section 2-C-2.

“(c) To protect the water supply uses of Jordan Reservoir and of designated water supplies throughout the Jordan watershed from the potential impacts of new development.”

The rule identifies specific elements of Water Supply Watershed Rules that retain applicability in addition to nutrient reduction requirements imposed by this rule. Chief among those are the density thresholds at which treatment is required and the development density ceilings.

1-C. Applicability of the New Development Rule

The rule requires all local governments in the Jordan watershed to implement requirements on new development activities within their planning jurisdictions as state in Items 2 and 3 of the rule:

“(2) APPLICABILITY. This Rule shall apply to those areas of new development, as defined in Rule 15A NCAC 02B .0263, that lie within the Jordan watershed and the planning jurisdiction of a municipality or county that is defined in Rule 15A NCAC 02B .0262.”

“(3) REQUIREMENTS. All local governments subject to this Rule shall develop stormwater management programs for submission to and approval by the Commission, to be implemented in areas described in Item (2) of this Rule, based on the standards in this item:”

The affected local governments that are listed in the Jordan Purpose and Scope Rule, 15A NCAC 02B .0262, and are the following:

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Municipalities

Alamance
Apex
Burlington
Carrboro
Cary
Chapel Hill
Durham
Elon
Gibsonville
Graham
Green Level
Greensboro
Haw River
Kernersville

Mebane
Morrisville
Oak Ridge
Ossipee
Pittsboro
Pleasant Garden
Reidsville
Sedalia
Stokesdale
Summerfield
Whitsett

Counties

Alamance
Caswell
Chatham
Durham
Guilford
Orange
Rockingham
Wake

To assist local governments and others in determining the relationship of watershed boundaries to other geography, we provide a GIS layer of the Jordan Watershed and the three subwatershed boundaries on the Division's Jordan website:

<http://portal.ncdenr.org/web/wq/ps/nps/jordanlake>. This will be particularly useful for jurisdictions that straddle the Jordan watershed boundaries or are located in more than one of the three subwatersheds. As described in the Model Program, local governments are required to develop maps of their jurisdictions with the Jordan watershed boundaries overlaid and include these in their program appendix.

1-D. Implementation Timeframe of the New Development Rule

Item (4) of the rule establishes timeframes for implementation. We compile those here for reference, noting any assumptions made to derive dates from relative timespans used in the rule.

- August 11, 2009: Effective date of the Rule.
- March 10, 2011: Division takes Model Stormwater Program to the Commission for approval.

Assuming model approval by the Commission in March 2011:

- March 10, 2011: Local governments begin informing non-DOT state/federal entities who apply for local stormwater permits that they are subject to permitting by the Division under Rule 2B .0271. See Section 2-A-5 for further information.
- September 2011: Deadline for submittal of local Stormwater Programs to the Division.
- May 2012: DWQ to bring recommendations on local programs to Commission.

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Assuming Commission approval of local programs in May 2012:

- August, 2012: Implementation of local programs. This may include, by local determination, permitting of non-DOT state/federal entities. See Section 2-A.5. for further discussion.
- August, 2013 and annually: Local governments submit annual progress reports to the Commission. This date coincides with the due date for Jordan Stage I Existing Development annual reports.

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2. Guidance to Local Governments on Implementing Rule Requirements

This chapter provides supplemental guidance for local governments and developers explaining how to implement or comply with the requirements of the New Development Rule. Local governments should refer to the Model Local Stormwater Program located at the beginning of this document for specific requirements for their local program submittals to the Division.

Local governments are required to adopt a new ordinance or revise existing ordinance to incorporate the Rule requirements to ensure compliance. A Model Ordinance can be found in Appendix N. The Model Ordinance is intended to serve as an acceptable ordinance design for meeting the local program requirements set out in Item (3) of the rule. Local governments may find some aspects of the model more comprehensive than the rule requirements. In some cases, differences are intentional and mirror Phase II NPDES Stormwater or Water Supply Watershed model language so that local governments may avoid having additional definitions to meet this rule and other state stormwater rules. We attempt to identify such cases in this guidance. In any case, we recognize that the model ordinance is not necessarily the only design for complying with the requirements of this rule.

For new development that exceeds certain land disturbance thresholds, developers will be required to submit stormwater management plans to the local governments demonstrating that rule requirements have been met. Local governments shall review these stormwater plans for compliance.

2-A. Development Subject to Rule Requirements

Item (3) of the rule sets out requirements to which local governments shall hold “new development”. New development is defined in the Jordan Definitions Rule as any development that is not “existing development”. That rule then gives a definition for “existing development” and, more fundamentally, “development”. We explain these definitions and how the model ordinance definitions fit with them below, but first we note the subsequent criteria that a local government would apply to “new development” to determine their appropriate action:

- For “new development”, the rule sets out land disturbance thresholds that trigger the requirement for a stormwater management plan.
- Development that triggers submittal of a stormwater management plan will not necessarily be required to achieve nutrient reductions. This will depend on the untreated nutrient loading rates estimated for that development. This determination is described in Sections 2-B-1 and 2-B-2.

The set of definitions in the Jordan New Development rule and supporting definitions found in other rules in the same section of rules, Section 2B of Title 15A, are the benchmarks to

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which we will compare your ordinance. In the following subsection, we repeat those definitions regarding new development, then discuss the differences in these definitions from the model ordinance and local government options.

But first, why do model ordinance definitions sometimes vary from Jordan rule definitions? This was done intentionally to mirror definitions used in the Phase II NPDES Stormwater Model Ordinance and Water Supply Watershed Model Ordinance, to minimize the need for local governments to add definitions to satisfy this rule. In general, where the same term is defined slightly differently between the model ordinance and the rule or other rule in Section 2B of Title 15A, the Model Ordinance definitions carry sufficiently close meaning to meet the requirements of the rule. We believe that adopting the set of definitions used in the model ordinance regarding development will meet the requirements of the Jordan New Development rule without the need to also adopt a definition for “new development”. A similar discussion is provided in a comment box in the model ordinance.

1. New Development

The Jordan definitions Rule, 15A NCAC 02B .0263 provides these definitions for the terms used in the rule:

“(20) ‘New development’ means any development project that does not meet the definition of existing development set out in this Rule”

“(10) ‘Existing development’ means development, other than that associated with agricultural or forest management activities that meets one of the following criteria:

a) It either is built or has established a vested right based on statutory or common law as interpreted by the courts, for projects that do not require a state permit, as of the effective date of either local new development stormwater programs implemented under Rule 15A NCAC 02b .0265 [Jordan New Stormwater Rule] or, for projects requiring a state permit, as of the applicable compliance date established in Rule 15A NCAC 02B .0271 (5) and (6) [Jordan State and Federal Entities Stormwater Rule].; or

b) It occurs after the compliance date set out in Sub-Item (4)(d) of Rule .0265 [New Development Rule] but does not result in a net increase in built-upon area.”

The Jordan Definitions Rule refers to another rule in the same section of administrative code, Rule 15A NCAC 2B .0202, to define the following term:

“(23) Development means any land disturbing activity which adds to or changes the amount of impervious or partially impervious cover on a land

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area or which otherwise decreases the infiltration of precipitation in the soil.”

In short, “new development” under the Jordan New Development rule is any development that is not vested and that results in a net increase in built-upon area. This would apply equally to development on previously undeveloped lands, or greenfield development, and redevelopment. For elaboration on loading requirements on redevelopment, please see Section 2-B-5.

The definition of new development under this rule has a slightly narrower coverage than the foundation term “development” has, since “development” also includes disturbance that “otherwise decreases the infiltration of precipitation into the soil.” The model ordinance definitions for “development” and “existing development” match the slightly broader foundation definition for “development” in Jordan. The reason, again, is that the broader definition matches those used in the model ordinances for Phase II and WSW. By staying with the broader term, the Jordan model ordinance allows local governments that implement one or both of these other stormwater programs to avoid adopting additional definitions for the slightly narrower scope of Jordan “new development”. However, local governments may certainly choose to add the rule’s definition for “new development”.

Rule 2B .0202 also defines built-upon area, which is used in the definition of “existing development” above:

“(13) Built-upon area means that portion of a development project that is covered by impervious or partially impervious cover including buildings, pavement, gravel areas (e.g. roads, parking lots, paths), recreation facilities (e.g. tennis courts), etc. (Note: Wooden slatted decks and the water area of a swimming pool are considered pervious.)”

The model ordinance uses a more updated form of this definition that additionally excludes pervious pavement from built-upon area *to the extent* that it allows infiltration of water. While the Division has not to date assigned pervious pavement specific infiltration credit in the Piedmont, such a refinement could occur in the future. Since the model ordinance definition makes the fate of pervious pavement conditional on its performance, the definition presents no conflict with the narrower 2B .0202 definition. By using the model ordinance definition, local governments can avoid that potential definition change in the future if the Division does credit pervious pavement with infiltration.

2. Land Disturbance Thresholds

The Rule establishes land disturbance thresholds that any activity that meets the definition of new development must exceed before a stormwater management plan is required:

*“(3)(a) An approved stormwater management plan shall be required for all proposed new development disturbing **one acre or more** for single family and duplex residential*

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property and recreational facilities, and one-half acre or more for commercial, industrial, institutional, multifamily residential, or local government property.”

The definition of “land-disturbing activity” in Rule 2B .0202, which provides a foundational reference for the word “disturbing” as used above, is identical to the definition provided in the model ordinance. Both read as follows (from 2B .0202):

“(37) Land-disturbing activity means any use of the land that results in a change in the natural cover or topography that may cause or contribute to sedimentation.”

The Division interprets these land disturbance thresholds as cumulative disturbances. If the project is part of a larger common plan of development or sale, and the larger common plan would exceed the applicable half-acre or acre threshold, even though multiple, separate or distinct activities take place at different times on different schedules, the development would require a stormwater plan.

3. Summary of Permitting Thresholds

In sum, local permitting thresholds are defined by narrowing from the broadest terms included in the definition to the most selective. That is, to require a stormwater plan under this rule, an activity must be land-disturbing, it must additionally be new development (in short, not vested and resulting in a net increase in built-upon area), and it must disturb at least the applicable acreage threshold of one-half or one acre. This logic would apply to not only to previously undeveloped, greenfield development but also to redevelopment projects.

Local governments may propose an alternative approach that tracks the rule more closely than the model ordinance, or any other approach that is at least as stringent as the requirements of the Rule.

Once a stormwater management plan is required, the proposed activity may be subject to nutrient reduction requirements, depending on whether it exceeds the rule’s loading rate targets.

Example: A proposal to build a house on an undeveloped 5-acre lot of record in the county. Plan proposes to disturb 1.1 acres to build a 3,000 square foot house with a 1,000 square foot shed and 200 ft of driveway. Assuming it's not vested, this would add impervious and would be residential that disturbs more than one acre, so it would qualify as “new development” and require a stormwater plan. Would it need to reduce nutrient loads? The Jordan/Falls accounting tool estimates untreated loads of approximately 1.63 lb N/ac/yr and .32 lb P/ac/yr, so even in the subwatershed with the most stringent rate targets, the Upper New Hope, no load reduction is necessary. Rerunning the same development but assuming a 2-acre lot yields untreated loads of approximately 2.07 lb N/ac/yr and .40 lb P/ac/yr. This would require no load reduction in the Haw or Lower New Hope subwatershed, but appears to be about the threshold at which some kind of treatment would be needed

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in the Upper New Hope if the specific case exceeds 2.2 lb N/ac/yr (note that impervious footprints could vary significantly and affect the load value).

***Below-Threshold Development
And Existing Development Requirements of SL 2009-216***

The land disturbance thresholds of one-half acre and one acre effectively set aside small-scale development such that its loads are not addressed under this rule, nor under the strategy except to the extent that such lands are previously developed. Such previously developed lands will potentially be captured in existing development load reduction assignments made to local governments. We recognize the small-scale gap in strategy coverage otherwise. A concerned local government may choose to close this gap by adopting lower disturbance thresholds.

Where below-threshold development occurs on previously developed lands, it presents a potential opportunity for local governments to achieve load reductions creditable under the existing development requirements provided such development reduces loads relative to the previous development. Conversely, below-threshold development on previously developed lands presents a potential liability to local governments under the existing development requirements if it increases loads relative to the previous development. The Redevelopment section below provides additional discussion on redevelopment relative to potential existing development requirements..

Vested Rights

The rule does not attempt to set any further procedural direction regarding vesting than that already in place in local government statute or derived from common law, as seen in the rule's definition of existing development above. Local governments shall be responsible for determining if a project is vested using existing process guidance.

4. Local Public Road Projects

The Rule explains how local government public road projects will be treated:

“(ii) Proposed new development undertaken by a local government solely as a public road project shall be deemed compliant with the purposes of the Rule if it meets the riparian buffer protection requirements of Rules 15A NCAC 02B .0267 and .0268 [Buffer Protection and Mitigation Rules]”

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As of August 2009, the Division began permitting these local government projects as part of the Buffer Rules implementation. Local governments are to seek Division approval of such road projects as required by the Buffer Rules.

This allowance does not apply to roads that are widened or created as part of a private development and then subsequently turned over to a government entity. Such cases do not face the same constraints that led to the inclusion of this allowance in the rule.

5. State and Federal Projects

The Jordan State and Federal Rule [Rule 15A NCAC 02B .0271] establishes stormwater requirements to be implemented by the Division for new development on state and federal lands beginning upon Commission approval of the Jordan/Falls Accounting Tool, scheduled for March 10, 2011. Local governments may interpret Session Law 2006-246 as requiring them to apply the requirements of this rule to state and federal projects that do not have an NPDES stormwater permit. Program submittal requirements in the model program include an item calling for local governments to state whether they intend to permit state and federal projects relative to the requirements of this rule. Until such local programs are approved and implemented, the Division will implement the requirements of 15A NCAC 02B .0271 on state and federal projects in the watershed.

2-B. Nutrient Control Requirements

1. Calculating Nitrogen and Phosphorus Export from New Development

The Rule describes the nutrient loading rate targets that new development must meet:

“(3)(a)(i) Nitrogen and phosphorus loads contributed by the proposed new development activity in a given sub watershed shall not exceed the unit-area mass loading rates applicable to that subwatershed as follows for nitrogen and phosphorus, respectively, expressed in units of pounds per acre per year: 2.2 and 0.82 in the Upper New Hope; 4.4 and 0.78 in the Lower new Hope; and 3.8 and 1.43 in the Haw. The developer shall determine the need for engineered stormwater controls to meet these loading rate targets by using the loading calculation method called for in Sub-Item (4)(a) or other equivalent method acceptable to the Division.”

The rate targets described in Item (3)(a)(i) were established by applying the strategy percentage reduction goals for each subwatershed to a weighted average loading rate of undeveloped, developable land cover types in that subwatershed. The strategy percent goals and corresponding loading rate targets are provided in Table 2.

Table 2. Nutrient Loading Rate Targets, Jordan New Development

<u>Subwatershed</u>	<u>Reduction Goals^a</u>		<u>Loading Rate Targets^b</u>	
	<u>N</u>	<u>P</u>	<u>(lbs/ac/yr)</u>	
			<u>N</u>	<u>P</u>
Upper New Hope	35%	5%	2.2	0.82
Lower New Hope	0%	0%	4.4	0.78
Haw	8%	5%	3.8	1.43

a: From Jordan Purpose and Scope rule, 15A NCAC 2B .0262

b: From Jordan New Development rule, Item (3)(a)(i)

Load Estimation Tool

The Rule requires that the Division develop an accounting tool for nitrogen and phosphorus:

“(4)(a) Within 18 months after the effective date of this Rule, the Division shall submit a model local stormwater program, including a model local ordinance, in conjunction with similar requirements in Rule 15A NCAC 02B .0266 [Existing Development Rule, which was modified by SL 2009-216], that embodies the criteria described in Item (3) of this Rule for the Commission approval. The model program shall include a tool that will allow developers to account for nutrient loading from development lands and loading changes due to BMP implementation to meet the requirements of Item (3) of this Rule....”

The Division contracted with the Stormwater Team of the NCSU Department of Biological and Agricultural Engineering to develop an accounting tool for this purpose. Local government stormwater staff, developers, and Division staff participated in workshops to review a beta version of the tool in July 2010. The final Jordan/Falls Nutrient Accounting Tool can be downloaded at the Division’s Jordan website: <http://portal.ncdenr.org/web/wq/ps/nps/jordanlake>. The users’ manual can be found in Appendix O along with printouts of key pages of the tool.

Local governments may propose alternative load calculation approaches or adapt the process to be more applicable to their jurisdictions where they demonstrate such modifications to be equivalent. Any changes to the method should be adequately explained and supported with appropriate technical information, and must be approved by the Division and the Commission.

The tool is based on Schueler’s Simple Method and runs either on Excel 2003 or 2007 spreadsheet software. For a given project, the methodology calculates an annual load export in lbs/ac/yr for both nitrogen and phosphorus based on event mean concentrations of nitrogen and phosphorus coupled with runoff flow estimates for each of a number of different urban land covers. The user inputs the square footage of each land cover on the site for pre- and post-development cases, selects the physiographic region, the soil hydrologic group, and the precipitation location of the site. The tool also provides the option of selecting generic lot sizes for residential development, as opposed to specific

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square footages of each land cover type on a development. When entering land use information into the tool, forested land must be considered as “managed pervious” or “lawn” unless it is subject to a conservation easement or another mechanism to insure it will not be managed by mowing, logging, fertilization etc. Examples of conservation easements can be found in Appendix T.

After the user inputs the required fields, the tool will calculate an average export loading rate for the development in lbs/ac/yr. The post-development nutrient loading rates will then be compared to the loading rate targets quoted above. If the post-development loading rates exceed the loading rate targets quoted above, then measures must be taken to reduce nutrients to those levels. The next two sections provide guidance on rule requirements and options for meeting loading rate targets.

It is likely that the accounting tool will be refined over time. The Division would provide those refinements to the jurisdictions for review and feedback as they are developed. For example, additional research may lead to refined export event mean concentration values for the various urban land covers.

2. Measures for Reducing Nitrogen and Phosphorus

The Jordan/Falls Accounting Tool described in the previous Section may be used to determine the pre- and post-development nutrient loading rates of the new development. If the post-development loading rates estimated by the accounting tool exceed the rate targets, measures must be taken to reduce the loading to meet them.

Planning measures can be used to reduce nutrient runoff from new development, and are discussed in Section 2-E. However, on-site nutrient-reducing BMPs are often necessary. Each BMP has different load reduction capabilities. BMPs can be selected in the Jordan/Falls Accounting Tool to see the reductions they achieve. Table 3 lists the set of current BMPs that can be used to achieve nutrient reductions. BMPs may be added to this list as better science is established. The rule requires that BMPs be built in accordance with the Division’s Stormwater BMP Manual, which is available at: <http://portal.ncdenr.org/web/wq/ws/su/bmp-manual>. While the Accounting Tool allows for undersizing of BMPs, this is currently not allowed by the Division for meeting rule requirements.

Table 3 – Stormwater BMP Performance Specifications

BMP	TSS Removal Efficiency ^a	Volume Reduction (Piedmont) ^b	Volume Reduction (Triassic) ^b	TN Effluent Concentration ^b (mg/L)	TP Effluent Concentration ^b (mg/L)
Stormwater Wetland	85%	20%	15%	1.08	0.12
Bioretention w/o IWS	85%	35%	15%	1.0	0.12
Bioretention w/ IWS	85%	50%	35%	0.95	0.12
Wet Detention Basin	85%	10%	5%	1.01	0.11
Dry Extended Detention Basin	50%	0%	0%	1.20	0.20
Permeable Pavement*	0%	0%	0%	1.44	0.39
Rainwater Harvesting*	n/a	user defined	user defined	1.08	0.15
Grassed Swale	35%	0%	0%	1.21	0.26
Infiltration Device	85%	n/a	n/a	n/a	n/a
Restored Riparian Buffer	60%	n/a	n/a	n/a	n/a
Level Spreader/Filter Strip	40%	40%	20%	1.20	0.15
Sand Filter	85%	5%	5%	0.92	0.14
Greenroof*	0%	50%	50%	1.08	.12

^a From DWQ Stormwater BMP Manual

^b From Jordan/Falls Lake Stormwater Load Accounting Tool

*DWQ will continue to evaluate data on BMP practices.

**For Piedmont Physiographic/Geologic Region

While the NC Stormwater BMP Manual provides nitrogen and phosphorus percent removal efficiencies for these BMPs, the new Jordan/Falls Accounting Tool introduces a new innovation that moves away from these fixed percent nutrient removal efficiencies. It instead assumes the fixed effluent concentrations shown in the table specific to each BMP, regardless of the influent concentration. The designers of the tool have determined the need for this innovation to more accurately represent actual stormwater treatment processes, as supported by research nationwide and in other countries that study these practices. This design shift has at least two notable effects for the user. One, higher inflow nutrient concentrations result in great treatment efficiencies, and two, effluent concentration is one of two key factors in BMP selection for nutrient control.

A second improvement in the new tool is that it accounts for infiltration that occurs as stormwater passes through a BMP, crediting this loss of volume toward nutrient load reduction. This function varies across BMPs, as also shown in Table 3. This function raises another implication for users considering serial BMPs. An additional BMP that does not have a lower effluent concentration than the previous BMP may still reduce loading further through infiltration.

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Session Law 2009-484 introduced minimum on-site BMP requirements for any development that exceeds the rate targets without BMPs. These minimum onsite BMP requirements are described in Section 2-B-3.

In addition to nutrient reducing planning measures and minimum onsite BMP requirements, developers have the option of providing full treatment onsite or using off-site options to partially offset their nitrogen and phosphorus reduction requirements, if specific offsite threshold rates are met. These offsite threshold rates and offsite options are described in Section 2-B-4. Full treatment onsite may require more than one BMP in series depending on the level of impervious cover and the subwatershed's loading rate targets.

3. Minimum Onsite Requirements

Part II, Section 7(a) of Session Law 2009-484 adds minimum on-site BMP requirements for development projects. This requirement was not in the rule adopted by the Commission (the Session Law requires that this requirement eventually be written into the New Development Rule, which we intend to do in the foreseeable future. However, that rulemaking action does not affect the implementation timeframes of this rule. It simply serves to consolidate all requirements of the Jordan Nutrient Management Strategy in one place). Section 7(a) of the session law overrides Item (3)(a)(vii) of the rule and reads as follows:

“New development that would exceed the nitrogen or phosphorus loading rate targets set out in sub-subdivision (i) of sub-subdivision (a) of subdivision (3) of New Development Rule 15A NCAC 02B .0265 without the use of engineered stormwater controls and that is not subject to more stringent stormwater requirements under Session Law 2006-246 or rules adopted pursuant to G.S. 143-214.5 shall have engineered stormwater controls that meet the design requirements set out in sub-subdivision (iv) of sub-subdivision (a) of subdivision (3) of New Development Rule 15A NCAC 02B .0265 and achieve eighty-five percent (85%) removal of total suspended solids.”

The rule's onsite BMP requirements include the following:

“(3)(a)(iv) Stormwater systems shall be designed to control and treat the runoff generated from all surfaces by one inch of rainfall. ...”

Taken together, we interpret these passages to mean that if a development exceeds the nutrient loading rate targets described in Table 2 before any BMPs are added, then treatment must be provided for runoff from the first inch of rainfall from all surfaces *that drain to that practice or practices* and that treatment shall achieve 85% removal of total suspended solids (TSS). BMPs' TSS removal efficiencies are provided in Table 3. BMPs can be used singly or in series, depending on their TSS removal efficiency, to meet the 85% mark. Of course, these BMPs will also be credited toward nutrient removal as estimated by the accounting tool.

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The interpretation above does not fully answer the question of the spatial extent of site area that should be treated. While the offsite loading rate thresholds described in 2-B-4 provide some level of backstop, our expectation is that runoff from at least all impervious surfaces is to be captured, along with resulting attendant pervious areas within the drainage envelope of the stormwater practices, and treated to 85% TSS removal, recognizing practical limitations, and that the offsite nutrient thresholds described in 2-B-4 must at least be met. This policy is consistent with Division policy under Phase II NPDES stormwater and WSW stormwater.

Do I Have to Treat Offsite Run-On?

In many projects, adjacent lands drain onto the project site, either overland or in defined conveyances. Designers have an option for dealing with this “offsite run-on”. They may choose to divert this runoff around or through their site without co-mingling it with site drainage. In this case, they are not required to provide any treatment or attenuation but need to be sure to respect downgradient property rights. Alternatively, they may choose to accept the offsite run-on and treat and attenuate it. In this case, they are required to size their practices to treat the entire catchment draining to them, including the offsite portion. When calculating the offsite run-on, it should be assumed that the catchment will be built out to maximum built-upon area based on zoning or a specific site-plan. If a site is designed to allow offsite run-on to drain to a BMP but the BMP is sized to handle only the onsite portion of the catchment, that BMP is in effect undersized and is not meeting requirements.

4. Offsite Partial Offset Options

Which Developments Can Use the Offsite Option?

Section (3)(a)(vii) of the New Development Rule allows for developers to achieve portions of their nutrient reduction needs through off-site offsets. SL 2009-484 included provisions that replaced this section of the Rule, but effectively revised only the two offsite threshold values. Section 7.(a) of Part II of the session law now sets this part of the offset requirements, and reads in part as follows (*emphasis added*):

- “(2) *A developer may offset part of the nitrogen and phosphorus load from a new development by implementing or funding off-site management measures in accordance with this subdivision. New development shall comply with requirements for engineered stormwater controls as set out in this act and in New Development Stormwater Rule 15A NCAC 02B .0265. On-site stormwater controls shall achieve a maximum nitrogen loading rate that does not exceed six pounds per acre per year for single-family detached and duplex residential development and 10 pounds per acre per year for other development, including multifamily residential, commercial, and industrial. Off-site management measures may be used to offset the difference between the nitrogen and phosphorus loading rates achieved through compliance with the stormwater control requirements of this act and the loading rate targets set out in sub-subdivision (i) of sub-subdivision (a) of subdivision (3) of New Development Rule 15A NCAC 02B .0265. Off-site offsetting measures shall achieve at least the reduction in nitrogen and phosphorus loading equivalent to the remaining reduction needed to comply with the loading rate targets set out in*

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sub-subdivision (i) of sub-subdivision (a) of subdivision (3) of New Development Rule 15A NCAC 02B .0265. A developer may make offset payments to the North Carolina Ecosystem Enhancement Program contingent upon acceptance of payments by that Program. A developer may use an offset option provided by the local government in which the development activity occurs. A developer may propose other offset measures to the local government, including providing his or her own off-site offset or utilizing a private seller. All offset measures identified above shall meet the requirements of subdivisions (2) through (4) of 15A NCAC 02B .0273.”

Thus, development that loads below the applicable 10 lb N/ac/yr or 6 lb N/ac/yr offsite loading rate value once the 85% TSS requirement described in Section 2-B-3 is met may implement or fund offsite management measures that achieve the remaining nitrogen and phosphorus loading reductions needed to achieve the loading rate targets of Table 2 as opposed to meeting the rate targets through additional onsite treatment. Note that there is no offsite loading rate threshold for phosphorus; the offsite determination hinges entirely on nitrogen loading rate; once met, the remaining nitrogen or phosphorus load reductions may be achieved offsite.

Who Approves Offsets, and What Requirements Must Offsets Meet?

All nutrient offset projects are required to obtain Division approval to sell credits, and the Division oversees the depletion of credits by banks. Local governments will be responsible for verifying developers' calculated offsite reduction needs and that developers have obtained approved credits before approving their project applications.

The last sentence of the session law quoted above states that all offsets shall meet the requirements of rule **2B .0273, *Options for Offsetting Nutrient Loads***, also referred to as the Jordan trading rule, which is provided in Appendix C. The trading rule lays out basic requirements for parties who wish to buy or sell credits in Jordan watershed. It applies to all parties in the watershed who wish to do so.

Nutrient offset purchasers and providers are also required to comply with the ***Nutrient Offset Payment Rule, 15A NCAC 2B .0240***. This rule applies to all watersheds in the state where the offset option is in place and sets procedural requirements for all nutrient offset buyers, sellers and projects. The rule was amended effective September 2010 and revised procedures that had been mandated by session law up to that point. Local governments will need to ensure that developers meet certain requirements identified in this rule. The rule is provided in Appendix J.

A related rule, ***15A NCAC 2B .0274, Nutrient Offset Payment Rates for the NC Ecosystem Enhancement Program***, also effective September 2010, does not set requirements that local governments must implement, but it does dictate the price of offsets provided by the NC Ecosystem Enhancement Program. That rule establishes a process for the EEP to set its offset rates in all watersheds that have

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the offset option. That rule is provided in Appendix K. See the following webpage for a description of the EEP in-lieu payment process:
<http://www.nceep.net/pages/pay.htm>.

How Do Developers Calculate Offsite Reduction Needs?

The trading rule includes the following requirement:

“(2)(d)(i) Account for differences in instream nutrient losses between the location of the reduction need and excess loading reduction in reaching the affected arm of Jordan Reservoir;”

Developers need to convert the lb/yr of reduction needed at the project site for both N and P, or their at-source reduction need, to lb/yr reduction needed at Jordan Lake, or their delivered reduction need.

This is to be done using delivery factors that are specific to each small watershed within Jordan watershed. The watershed model done for Jordan watershed produced N and P delivery factors for each of 58 small watersheds, referred to as 14-digit hydrologic units, defined by the US Geological Survey. These delivery factors are simply percentage values of 100% reflecting the fraction of an at-source load or load reduction that is seen at Jordan Lake. The delivery factors are available on the Division’s Jordan website,
<http://portal.ncdenr.org/web/wq/ps/nps/jordanlake>.

In the permitting process, local governments will need to ensure that developers proposing to use offsets calculate delivered load reduction needs and obtain equal delivered load reduction credits.

The Division will provide additional guidance on the use of offsets in the near future.

5. Redevelopment

The rule sets out the following treatment expectations for redevelopment projects:

“(3)(a)(v) Proposed new development that would replace or expand structures or improvements that existed as of December 2001, the end of the baseline period, and that would not result in a net increase in built-upon area shall not be required to meet the nutrient loading targets or high-density requirements except to the extent that it shall provide stormwater control at least equal to the previous development. Proposed new development that would replace or expand existing structures or improvements and would result in a net increase in built-upon area shall have the option either to achieve at least the percentage loading reduction goals stated in Rule 15A NCAC 02B ,0262 as applied to nitrogen and phosphorus loading from the previous development for the entire project site, or to meet the loading rate targets described in

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Section (3)(a)(i). These requirements shall supersede those identified in Rule 15A NCAC 02B .0104(q)."

The two options for treatment of redevelopment that increases built-upon area as described in Item (3)(a)(v) above and exceed the land disturbance thresholds described in Section 2-A-2 are further explained as follows:

1. The pre-existing nitrogen and phosphorus loading rates shall first be determined by using the Accounting Tool described in Section 2-B-1. Then the strategy percent reduction goals found in Table 2 shall be applied to the pre-development loading rates to determine the post-development nutrient loading target rates that must be achieved by the entire site; or
2. The entire site must meet the loading rate targets listed in Table 2.

The first option becomes the less stringent option as the percent impervious cover of redevelopment sites increases above some threshold. Given that the majority of redevelopment sites subject to the rule may be commercial/industrial in nature, the first option may be developers' overwhelming choice in practice.

To be clear, where there is a net increase in built-upon area, the rule calls for the entire redevelopment project to meet the nutrient requirements, not just the net increased built-upon area. The same expectation holds for meeting the 85% TSS requirement; consistent with the guidance in the Minimum Onsite Treatment Requirements section above, all impervious should be captured and treated. In this case, this would be all impervious on the project site. This is a departure from the way redevelopment that increases built-upon area is handled under Phase II and WSW stormwater.

*The Relationship of Redevelopment
to Existing Development Requirements of SL 2009-216*

Overall, redevelopment presents a potential opportunity for local governments to make incremental progress toward existing development load reduction needs. Essentially all redevelopment occurs on previously developed lands, which contribute nutrient loads to the total that local governments would be required to reduce under a Stage 2 Existing Development requirement as described in Session Law 2009-216. Thus, any redevelopment that achieves net nutrient loading reductions relative to pre-existing conditions on that site generates creditable load reductions that local governments may use if Stage 2 Existing Development requirements are triggered. Those potential existing development requirements can be found in Section 3.(d)(2) of Session Law 2009-216.

Redevelopment that increases built-upon area and exceeds the land disturbance thresholds is required to reduce loads to a choice of two standards as described above, so it will necessarily generate load reductions that a local government may credit toward its existing development requirements.

Redevelopment that does not yield a net increase in built-upon area is not required to control nutrients except to the extent controlled by the previous development, which yields no change in nutrient loading. Local governments may elect to require nutrient reductions on this type of redevelopment project, and credit those load gains toward potential Stage 2 existing development requirements in the future.

2-C. Related Requirements

1. Meeting Other Regulations

The Jordan New Development Rule describes how new development in the Jordan watershed is affected by other regulations in addition to the Rule:

“(3)(i)(iii) Proposed new development subject to NPDES, water supply, and other state-mandated stormwater regulations shall comply with those regulations in addition to the other requirements of this Sub-Item. Proposed new development in any water supply watershed in the Jordan watershed designated WS-II, WS-III, or WS-IV shall comply with the density-based restrictions, obligations, and requirements for engineered stormwater controls, clustering options, and 10/70 provisions described in Section (3)(b)(i) and (3)(b)(ii) of the applicable Rule among Rules 15A NCAC 02B .0214 through .0216.”

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In accordance with this sub-item, new development will continue to have to comply with the other state regulations including NPDES Stormwater and Water Supply Watershed Rules. Rules .0214 through .0216 are the Water Supply Rules for Class WS-II, WS-III, and WS-IV respectively. Section (3)(b)(i) of each of the rules lays out the WS requirements throughout the WS Watershed, including the low and high density options and the 10/70 provision. Item (3)(b)(ii) of each rule lays out the requirements for areas within the critical area of the WS watershed, including low and high density options. These three WS rules are located in Appendices F through I.

Probably the most important aspects of the retained Water Supply Watershed requirements, once overlaid with requirements of this rule, are the density thresholds requirement treatment and the density ceilings. In the Haw and Lower New Hope, Jordan load rate targets are sufficiently high that Waters Supply Watershed built-upon area thresholds may require treatment where none is required by Jordan. Since this rule sets no absolute limit on built-upon area, the Water Supply Watershed density ceilings serve as an additional limitation in all cases.

2. Calculating Peak Runoff Volume

Item (3)(a)(iv) of the rule describes the peak flow requirements:

“(3)(a)(iv) Stormwater systems shall be designed to control and treat the runoff generated from all surfaces by one inch of rainfall. The treatment volume shall be drawn down pursuant to standards specific to each practice as provided in the July 2007 version of the Stormwater Best Management Practices Manual published by the Division, or other at least technically equivalent standards acceptable to the Division. To ensure that the integrity and nutrient processing functions of receiving waters and associated riparian buffers are not compromised by erosive flows, stormwater flows from the new development shall not contribute to degradation of waters of the State. At a minimum, the new development shall not result in a net increase in peak flow leaving the site from pre-development conditions for the one-year, 24-hour storm.”

The main reason that the rule requires a 1-year design storm for peak flow control is to protect stream channels from erosion. Development on land causes many changes in stormwater hydrology. One of the major causes of streambank erosion in urban streams is the increase in the frequency of the bankfull-flooding event. The bankfull-flooding event generally occurs at approximately a 1.5-year frequency. The Rule requires control of the 1-year storm to predevelopment levels to insure that the rate of release will be below bankfull and therefore less erosive to the stream channel.

Protecting streambanks from erosion is a crucial part of the overall Jordan Strategy. Riparian buffers are protected under this program because in most situations they are effective at removing nitrogen resulting from nonpoint source pollution. The use of nitrogen reducing BMPs on new development does not obviate the need to maintain valuable riparian buffers.

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Refer to Chapter 3.2 and 3.3 of the NC DWQ Stormwater BMP Manual for guidance on calculating peak flow: <http://portal.ncdenr.org/web/wq/ws/su/bmp-manual>

3. Protecting Riparian Buffer Areas on New Development

In addition to the requirements of the Rule, new development must also adhere to the requirements of the Jordan Buffer Protection and Mitigation Rules, as stated in the New Development Rule:

“(3)(a)(vi) Proposed new development shall comply with the riparian buffer protection requirements of Rules 15A NCAC 02B .0267 and .0268.”

Item (15)(e) of the Buffer Rule describes the project review requirements that local governments shall meet regarding buffers on development proposals:

“(15)(e) Within 2 months after the Commission's approval of local buffer programs, local governments shall implement programs to ensure that existing land use activities and proposed development complies with local programs. A local government shall issue an approval for new development only if the development application proposed to avoid impacts to riparian buffers defined in Item (4) of this Rule, or where the application proposes to impact such buffers, it demonstrates that the applicant has done the following, as applicable:

- (i) Determined that the activity is exempt from requirements of this Rule;*
- (ii) Received an Authorization Certificate from the Division pursuant to Item (11) of this Rule for uses designated as Allowable or Allowable with Mitigation;*
- (iii) For uses designated as Allowable with Mitigation, received approval of a mitigation plan pursuant to Rule 15A NCAC 02B .0268; and*
- (iv) Received a variance pursuant to Item (12) of this Rule:”*

Most local governments in the Jordan Watershed adopted riparian buffer programs in late 2010 that were approved by the Commission as being at least as stringent as the requirements of the Jordan buffer requirements. For the purposes of this rule, local governments will need to affirm in their programs that they will carry out the review process called for above. We do not believe that this process needs to be included in ordinance, but a local government may do so if it wishes.

2-D. BMP Maintenance

Where BMPs are implemented to achieve the nitrogen and phosphorus loading and flow attenuation requirements for a development, then pursuant to Item (3)(b) of the rule the local government is responsible for ensuring that BMPs continue to function for the life of the development. The Division believes that at minimum, annual inspection of BMPs by qualified personnel is needed to ensure ongoing performance.

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To ensure annual maintenance, a local government may choose to charge property owners annual inspection fees or inspection and maintenance fees and assume responsibility for inspecting or maintaining all practices itself. A local government may instead choose to require the property owner to conduct annual inspections, while the local government establishes an inspection oversight program on a less frequent basis. Section 4 of the Model Ordinance provides for the latter approach. For local governments that choose the latter approach, the Division would expect the local government to conduct routine review of all inspection reports submitted as well as site review of all permitted projects at least once every five years, or site inspections on a minimum of 20% of permitted projects each year.

For practices that are to be maintained by an association of owners, to address the need for major repair or complete replacement, the Division encourages local governments to require financial surety of the developer and subsequent owners as detailed in the model ordinance.

Local governments are encouraged to use the model ordinance language at Section 401(B) that requires inspections to be performed by qualified personnel of at least one of the types listed. The list includes individuals who have been “certified by the NC Cooperative Extension Service for stormwater treatment practice inspection and maintenance”. We believe this provides a useful minimum standard of qualifications.

Under any approach, local governments will be expected to maintain a database of BMPs installed to comply with the requirements of this rule, to track activities associated with those BMPs, and to provide the Division access to this information upon request.

Example stormwater maintenance agreements and program are provided in Appendix S.

2-E. Land Use Planning Provisions (Optional)

The site performance standard design of the rule provides local governments the opportunity to potentially aid developers from the standpoint of reducing a project’s untreated loading rates via modifications to various ordinances that reflect improved growth management practices. A review of ordinances for this purpose would be elective on the part of local governments. For example, ordinance modifications that result in reduction of impervious surfaces reduce the need for BMPs to control nitrogen and phosphorus loading rates and peak stormwater flows and also reduce associated BMP maintenance concerns.

In developing local programs for submittal, affected jurisdictions are encouraged to review their local ordinances with regard to the following topics and show that they have provided adequate flexibility for developers to utilize planning measures to reduce impervious surfaces. This elective review is intended to look for opportunities where these measures could be allowed, or where obstacles to their use could be removed.

The Division asks that each jurisdiction report in their program submittal on whether that they have reviewed and considered the following planning techniques, and whether they made or will propose any changes as a result.

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- Reducing road widths
- Reducing minimum parking requirements
- Minimizing use of curb and gutter
- Cluster or open-space developments
- Traditional neighborhood developments
- Mixed-use developments
- Low Impact Development principles
- Other impact-reducing approaches

Descriptions of these techniques are provided in Appendix R, and a Jurisdiction Self-Assessment Tool is found in Appendix U.

2-F. Annual Reports

Item (4)(e) of the New Development Rule requires local governments to submit annual reports after implementation begins:

“Upon implementation, subject local governments shall submit annual reports to the Division summarizing their activities in implementing each of the requirements in Item (3) of this Rule, including changes to nutrient loading due to implementation of Sub-Item (3)(a) of this Rule”

We support the concept of consolidating reporting requirements to the greatest extent feasible. It appears that the July-August timeframe would allow local governments to report on Phase II stormwater, Jordan Existing Development Stage I, and this rule in one report. We propose then to require submittal of annual reports in August each year.

The requirements of Item (3) of the Rule are laid out in Chapter 2 of this model program. Components of the annual report shall include:

- Staffing changes of rule implementation staff since last year.
- Updated jurisdictional map with revision date, or statement of no changes from last year.
- Acres greenfield development and redevelopment by type (residential, commercial, and industrial) and acres of impervious land cover, based on plan approvals.
- Acres of greenfield development and redevelopment by type that exceed loading rate targets.
- # of BMPs by type implemented on-site, and pounds of nitrogen and phosphorus reduced by these BMPs.
- # and types of offsite options used and pounds reduced by these options
- Summary of maintenance activities conducted on BMPs constructed under this program:
 - # of inspection reports received;

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- # of site inspections by local government personnel;
 - Summary characterization of types of maintenance needed (optional)
- # and nature of any enforcement actions taken for violations of program requirements.

TOWN OF SUMMERFIELD



Local Stormwater Program for New Development
JORDAN NEW DEVELOPMENT STORMWATER RULE
15A NCAC 2B.0265

for Submittal to NCDENR
by September 10, 2011

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INTRODUCTION

The Town of Summerfield is located in northwest Guilford County, North Carolina. Incorporated in 1996, it has a current area of 25 square miles and a population of 7,906 (2008). The Town is immediately North of the City of Greensboro (Appendix B, Map 1).

The Town is within the Haw River sub-basin of the Cape Fear River Basin (Appendix B, Map 2), and is divided into three additional local sub-basins: Reedy Fork, Mears Fork, and the Haw River. The Reedy Fork (approximately 50% of the Town) is part of the Greensboro Water Supply Watershed (Water Supply Watershed III). This sub-basin is further divided into a General Watershed Area and a Watershed Critical Area. A Watershed Protection Ordinance has been in effect since 1992 (originally adopted by Guilford County, now under Town jurisdiction). The Mears Fork and Haw River sub-basins have not been under watershed protection ordinances until the adoption of the Jordan Lake Nutrient Management Strategy by the State in August 2009 and the Jordan Lake Buffer Ordinance adopted September, 2010. The Town of Summerfield is deemed compliant under Session Law 2006-246 for Non-Phase II Municipalities.

The entire Town uses on-site wastewater treatment and private or community wells for domestic water supply. Summerfield is exempt from the *Phase II National Pollution Discharge Elimination System* (NPDES) permitting requirements due to size of population and absence of a municipal owned MS4 and concentrated flow of storm water from public streets and properties.

Jordan Lake

The B. Everett Jordan Reservoir is a multi-use impoundment operated by the US Army Corps of Engineers formed by the construction of a dam on the Haw River east of Pittsboro in Chatham County, NC. The lake is operated for flood control, water quality, fish and wildlife conservation, recreation, and water supply. There are two arms of the Reservoir—the Haw River and the New Hope Creek. The watershed encompasses 1,686 square miles and includes parts of Alamance, Caswell, Chatham, Durham, Forsyth, Guilford, Orange, Randolph, Rockingham, and Wake counties. The reservoir is considered to be a *nutrient sensitive watershed*, causing algae blooms, and taste and odor problems in drinking water.

The Jordan Lake Nutrient Management Strategy (“Jordan Lake Rules”) aims to restore and maintain the water quality, protect the lake’s classified uses, and maintain or enhance protections currently implemented by local governments in existing water supply watersheds. The *Total Maximum Daily Load* for nutrients was established to provide specific limits to the amount of nitrogen and phosphorus entering the lake to control the algae blooms and associated problems. This is being done through a series of rules and regulations aimed at New Development, Existing Development, Agricultural Activities, Fertilizer Management, Riparian Buffers, and Wastewater Discharge activities.

The *Local Stormwater Program for New Development* is one of a comprehensive set of thirteen rules known as the Jordan Nutrient Strategy. This Strategy is generally designed to reduce excess nutrient

impacts, specifically nitrogen and phosphorus, into Jordan Lake to reduce algal growth and other nutrient related water quality problems.

1. Proposed adoption timeline and Effective Date.

- August 11, 2009: Effective date of the Rule
- March 10, 2011: Division takes Model Stormwater program to the Commission for approval
- March 10, 2011: Town of Summerfield begins informing non-DOT state/federal entities who apply for local stormwater permits that they are subject to permitting by the Division under Rule 2B .0271. See Section 2-A-5 for further information.
- July 25, 2011: Zoning Board to consider proposed Model Stormwater Program.
- August 9, 2011: Town Council to consider proposed Model Stormwater program and vote to submit to DWQ.
- September 2011: Deadline for submittal of local Stormwater Programs to the Division.
- May 2012: DWQ to bring recommendations on local programs to the Commission.
- August 2012: Implementation of local programs. This may include, by local determination, permitting of non-DOT state/federal entities. See Section 2-A-5 for further discussion.
- August 2013 and annually: Local governments submit annual progress reports to the Commission. This date coincides with the due date for Jordan Stage 1 Existing Development annual reports.

The Local Stormwater Program for New Development is scheduled for adoption by Town Council August 9, 2011 at the regular August meeting. The effective date will be September 1, 2011.

2. Other Stormwater programs

The Town of Summerfield operates a stormwater program that monitors stormwater devices Town-wide on an annual basis. These stormwater devices are checked yearly for compliance with planned development and to insure that these devices are serving their intended purposes.

Approximately one-half of the Town of Summerfield lies within range of the Greensboro water supply watershed, and applies regulations accordingly. The entire Town lies within the Jordan Lake watershed.

Summerfield is not a designated Phase II NPDES community. The Town of Summerfield is deemed compliant under Session Law 2006-246 for Non-Phase II Municipalities.

3. Statement of Riparian Buffer Ordinance Compliance

The Town of Summerfield adopted the Jordan Lake Buffer Ordinance based on a State Model in October of 2010. The buffer ordinance was found by the North Carolina Department of Environment and Natural Resources (DNER) to comply with all State requirements.

The Town of Summerfield affirms our program and will carry out the review process spelled out in item (15)(e) of the buffer rule. This process is described in the Town of Summerfield Development Ordinance under Article 7, Environmental Regulations, Section 7-6.9, Permits Procedures, Requirements, and approvals, beginning on page 7-50.

4. State and Federal Entities Implementation

The Jordan State and Federal Rule [Rule 15A NCAC 02B .0271] establishes stormwater requirements to be implemented by the Division of Water Quality for new development on state and federal lands beginning upon Commission approval of the Jordan/Falls Accounting Tool, scheduled for March 10, 2011. The Town of Summerfield interprets Session Law 2006-246 as requiring the town to apply the requirements of this rule to state and federal projects that do not have an NPDES stormwater permit.

The Town of Summerfield intends to permit state and federal projects relative to the requirements of this rule. Until the town's program is approved and implemented, the Division of Water Quality will implement the requirements of 15A NCAC 02B .0271 on state and federal projects in the watershed.

5. Area of Applicability

The Jordan new Development Stormwater Rule will apply all the property located within the Town limits of the Town of Summerfield

6. Minimum Qualifications of Stormwater Administrator

The Town of Summerfield shall establish the minimum qualifications of the Stormwater Administrator (Town Manager or designee) who will be responsible for implementing the local stormwater program for new development as required by the Jordan New Development Stormwater Rule (15A NCAC 2B.0265). The Stormwater Administrator preferably shall also be responsible for stormwater plan review and Best Management (BMP) inspection. The Stormwater Administrator shall be a currently licensed North Carolina professional engineer with stormwater experience. At a minimum the qualifications shall be for persons performing services only in their area of competence, including professional engineer, registered North Carolina professional surveyor, landscape architect, soil scientist, aquatic biologist, or a person certified by the North Carolina cooperative Extension Service, to approve stormwater management plans and to inspect BMPs.

The Stormwater Administrator shall be either an employee of the Town of Summerfield or a consultant acting on the behalf of the Town of Summerfield

7. Maintenance/Inspection Program

Where BMPs are implemented to achieve compliance with the water supply watershed regulations, the nitrogen and phosphorus loading, and flow attenuation requirements for a development, then the Town of Summerfield is responsible for ensuring that BMPs continue to function for the life of the development. The Town of Summerfield believes that an annual inspection of a BMP by qualified town staff is needed to ensure ongoing performance.

Maintenance of runoff control structures shall be performed at such time as the designated sediment storage volume of the structure has been lost to sediment or a part of the installation is not functioning as originally designed. The Summerfield Zoning Board shall have the responsibility to inspect runoff control structures annually, to record the results on forms approved or supplied by the N. C. Division of Water Quality, and to notify the responsible property owner or owner's association when maintenance or repairs are required. All required repairs and maintenance shall be performed within ninety (90) days after such notice. In case of failure by the responsible party to perform the required maintenance or repairs within the stated period, the jurisdiction may perform such maintenance or repairs and recover all costs attendant thereto from the property owner or owner's association.

The Town of Summerfield will maintain a database of BMPs installed to comply with the requirements of the Ordinance, to track activities associated with those BMPs, and to provide the Division of Water Quality access to this information upon request.

When runoff control structures serve more than one lot, an owner's association or binding contract for the purpose of maintenance shall be required.

8. Forms in Administrative Manual

Forms have been copied from DWQ site and are available for use.

The following is a list of forms included in Appendix C:

1. Watershed Protection Inspection Report
2. Bioretention Area Certification
3. Bioretention Area Checklist
4. Wet Detention Pond Certification
5. Wet Detention Pond Checklist
6. Sand Filter Certification
7. Sand Filter Checklist
8. Extended Detention Wetland Certification
9. Extended Detention Wetland Checklist

Stormwater devices are to be reviewed as part of a submission for a building permit or a site plan review for a particular development. Operation and Maintenance Agreements will be treated similar to the current process according to the Town Development Ordinance.

9. Ordinance

The following sections of the ordinance will be necessary to implement the rule:

Section 1: General Provisions

101 Title

This ordinance shall be officially known as “The Jordan Watershed Stormwater Ordinance for new Development.” It is referred to herein as “this ordinance.”

102 Authority

The Town Council is authorized to adopt this ordinance pursuant to North Carolina law, including but not limited to Article 14, Section 5 of the Constitution of North Carolina; North Carolina General Statutes Chapter 143-214.7 and rules promulgated by the Environmental Management Commission thereunder; Chapter 143-215.6A; Session Laws 2009-216, 2009-484; Chapter 153A-454; Chapter 160A, §§ 174, 185, 459.

103 Findings

It is hereby determined that:

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

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

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

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

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

104 Purpose

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

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

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

1. Establishing decision-making processes for development that 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 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 BMP's that may be used to meet the minimum post-*development* stormwater management standards;
5. Encourage 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 Town of Summerfield Development Ordinance, Articles 4 and 5, and the Town of Summerfield Comprehensive Plan, Chapters 2, 3, 6, 7, and 8 as appropriate;
9. Controlling erosion and sedimentation from construction activities.

105 Applicability and jurisdiction

(A) General

Beginning with and subsequent to its effective date, this ordinance shall be applicable to all development and redevelopment, including, but not limited to, site plan applications, subdivision applications, and grading applications, unless exempt pursuant to this ordinance.

(B) Exemptions

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

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

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

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

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

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

The Stormwater Map shall be kept on file by the Stormwater Administrator and shall be updated to take into account changes in the land area covered by this ordinance and the geographic location of all engineered stormwater controls permitted under this ordinance. In the event of a dispute, the applicability of this ordinance to a particular area of land or BMP shall be determined by reference to the North Carolina Statutes, the North Carolina Administrative Code, and local zoning and jurisdictional boundary ordinances.

106 Interpretation

(A) Meaning and Intent
All provisions, terms, phrases, and expressions contained in this ordinance shall be construed according to the general and specific purposes set forth in Section 104, Purpose. If a different or more specific meaning is given for a term defined elsewhere in the Town of Summerfield's Development Ordinance, the meaning and applications of the term in this ordinance shall control for purposes of application of this ordinance.

(B) Text Controls in Event of Conflict
In the event of a conflict or inconsistency between the text of this ordinance and any heading, caption, figure, illustration, table, or map, the text shall control.

(C) Authority for Interpretation

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

(D) References to Statutes, Regulations, and Documents

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

(E) Computation of Time

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

(F) Delegation of Authority

Any act authorized by this ordinance to be carried out by the Stormwater Administrator of the Town of Summerfield may be carried out by his or her designee.

(G) Usage

(1) Mandatory and Discretionary Terms

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

(2) Conjunctions

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

(3) Tense, Plurals, and Gender

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

(H) Measurement and Computation

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

107 Design Manual

(A) Reference to Design Manual

The Stormwater Administrator shall use the policy, criteria, and information, including technical specifications and standards, in the *design manual* as the basis for decisions about stormwater

permits and about the design, implementation and performance of *engineered stormwater controls* and other practices for compliance with this ordinance.

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

(B) Relationship of Design Manual to other Laws and Regulations

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

(C) Changes to Standards and Specifications

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

108 Relationship to other laws, regulations and private agreements

(A) Conflict of laws

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

(B) Private Agreements

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

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.

110 Effective Date and Transitional Provisions

(A) Effective Date

This ordinance shall take effect on _____, 201__

(B) Final Approvals, Complete Applications

All *development* and *redevelopment* projects for which complete and full applications were submitted and approved by the Town of Summerfield prior to the effective date of this ordinance and which remain valid, unexpired, unrevoked and not otherwise terminated at the time of *development* shall be exempt from complying with all provisions of this ordinance dealing with the control and/or management of stormwater.

A phased development plan shall be deemed approved prior to the effective date of this ordinance if it has been approved by all necessary government units, it remains valid, unexpired, unrevoked and not otherwise terminated, and it shows:

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

(C) Violations Continue

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

Section 2: Administration and Procedures

201 Review and Decision-making Entities

(A) Stormwater Administrator

(1) Designation

A Stormwater Administrator shall be designated by the Town of Summerfield to administer and enforce this ordinance

(2) Powers and Duties

In addition to the powers and duties that may be conferred by other provisions of the Town of Summerfield Development Ordinance 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 Town of

Summerfield Town Council on applications for *development or redevelopment* approvals.

- d. To enforce the provisions of this ordinance in accordance with its enforcement provisions.
- e. To maintain records, maps, forms, and other official materials as they relate to the adoption, amendment, enforcement, and administration of this ordinance.
- f. To provide expertise and technical assistance to the Town of Summerfield Town Council, upon request.
- g. To designate appropriate other *person(s)* who shall carry out the powers and duties of the Stormwater Administrator.
- h. To take any other action necessary to administer the provisions of this ordinance.

202 Review Procedures

(A) Permit Required; Must Apply for Permit

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

(B) Effect of Permit

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

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

(C) Authority to File Application

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

(D) Establishment of Application Requirements, Schedule, and Fees

(1) Application Contents and Form

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

(2) Submission Schedule

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

(3) Permit Review Fees

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

(4) Administrative Manual

For applications required under this code, the Stormwater Administrator shall compile the application requirements, submission schedule, fee schedule, a copy of this ordinance, and information on how and where to obtain the Design Manual in an Administrative manual, which shall be made available to the public.

(E) Submittal of Complete Application

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

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

(F) Review

Within _____ 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.

(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 the opportunity to submit a revised application.

(3) Revision and Subsequent Review

A complete revised application shall be reviewed by the Stormwater Administrator within 5 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.

203 Applications for approval

(A) Concept Plan and Consultation Meeting

Before a stormwater management permit application is deemed complete, the Stormwater Administrator or developer may request a consultation on a concept plan for the post-construction stormwater management system to be utilized in the proposed *development* project. The consultation meeting should take place at the time of the preliminary plan of subdivision or other early step in the *development* process. The purpose of this meeting is to discuss the stormwater management measures necessary for the proposed project, as well as to discuss and assess constraints, opportunities and potential approaches to stormwater management designs before formal site design engineering is commenced. Local watershed plans, the Summerfield Comprehensive Plan 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; stream and other buffers and features used in designing buffers and meeting any applicable buffer requirements; boundaries of existing predominant vegetation; proposed limits of clearing and grading; and location of existing and proposed roads, buildings, parking areas and other impervious surfaces.

(2) Natural Resources Inventory

A written or graphic inventory of natural resources at the site and surrounding area as it exists prior to the commencement of the project. This description should include a discussion of soil conditions, forest cover, geologic features, topography, wetlands, and native vegetative areas on the site, as well as the location and boundaries of other natural feature protection and conservation areas such as lakes, ponds, floodplains, stream buffers and other setbacks (e.g.,

drinking water well setbacks, septic setbacks, etc.). Particular attention should be paid to environmentally sensitive features that provide particular opportunities or constraints for *development* and stormwater management.

(3) Stormwater Management System Concept Plan

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

(B) 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 202(E).

(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 Town of Summerfield 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 Town of Summerfield Planning Department may elect to withhold a percentage of permits or certificates of occupancy until as-built plans are submitted and final inspection and approval has occurred.

204 Approvals

(A) Effect of Approval

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

(B) Time Limit/Expiration

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

In granting the 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.

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 within 30 days. Appeals of variance requests shall be made as provided in the Section of variances. In the case of requests for review of proposed civil penalties for violations of this ordinance, the Board of Adjustment shall make a final decision on the request for review within 90 days of receipt of the date the request for review is filed.

Section 3: Standards

301 General Standards

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

302 Nitrogen and Phosphorus Loading

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

(B) Notwithstanding 15A NCAC 2B.104(q), *redevelopment* subject to this ordinance that would replace or expand existing structures or improvements and would result in a net increase in *built upon area* shall have the option of either meeting the loading standards identified in subsection (A) or meeting a loading rate that achieves the following nutrient loads compared to the *existing development*: 8 percent and 5 percent reduction for nitrogen and phosphorus, respectively.

(C) The developer shall determine the need for engineered stormwater controls to meet these loading rate targets by using the *approved accounting tool*.

303 Nitrogen and Phosphorus Standard is Supplemental; TSS Removal

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

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

304 Control and Treatment of Runoff Volume

Stormwater systems shall be designed to control and treat the runoff generated from all surfaces by one inch of rainfall. The treatment volume shall be drawn down pursuant to standards specific to each practice as provided in the *Design Manual*. To ensure that the integrity and nutrient processing functions of receiving waters and associated riparian buffers are not compromised by erosive flows, stormwater flows from the *development* shall not contribute to degradation of waters of the State. At a minimum, the *development* shall not result in a net increase in peak flow leaving the site from pre-development conditions for the *one-year, 24-hour storm* event.

305 Partial Offset of Nutrient Control Requirements

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

306 Evaluation of Standards for Stormwater Control Measures

(A) Evaluation According to Contents of Design Manual

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

(B) Determination of Adequacy; Presumptions and Alternatives

Stormwater treatment practices that are designed, constructed, and maintained in accordance with the criteria and specifications in the *Design Manual* and the *approved accounting tool* will be presumed to meet the minimum water quality and quantity performance standards of this ordinance. Whenever an applicant proposes to utilize a practice or practices not designed and constructed in accordance with the criteria and specifications in the *Design Manual*, the applicant shall have the burden of demonstrating that the practice(s) will satisfy the minimum water quality and quantity performance standards of this ordinance. The Stormwater Administrator may require the applicant to provide the documentation, calculations, and examples necessary for the Stormwater Administrator to determine whether such an affirmative showing is made.

307 Dedication of BMPs, Facilities & Improvements

The Town of Summerfield 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.

308 Variances

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

- (1) there are practical difficulties or unnecessary hardships that prevent compliance with the strict letter of the ordinance;
- (2) the variance is in harmony with the general purpose and intent of the local watershed protection ordinance and preserves its spirit; and
- (3) in granting the variance, the public safety and welfare have been assured and substantial justice has been done.

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

(C) The Town of Summerfield may attach conditions to the *major* or *minor* variance approval that support the purpose of the local watershed protection ordinance. If the variance request qualifies as a *major variance*, and the Town of Summerfield decides in favor of granting the *major variance*, the Board shall then prepare a preliminary record of the hearing and submit it to the *Commission* for review and approval. If the *Commission* approves the *major variance* or approves

with conditions or stipulations added, then the *Commission* shall prepare a *Commission* decision which authorizes the Town of Summerfield to issue a final decision which would include any conditions or stipulations added by the *Commission*. If the *Commission* denies the major variance, then the *Commission* shall prepare a decision to be sent to the Town of Summerfield. The Town of Summerfield shall prepare a final decision denying the *major variance*.

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

Section 4: Maintenance

401 General Standards for Maintenance

(A) Function of BMPs as Intended

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

(B) Annual Maintenance Inspection and Report

The *person* responsible for maintenance of any *engineered stormwater control* installed pursuant to this ordinance shall submit to the Stormwater Administrator on 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 *engineered stormwater control*;
- (3) A statement that an inspection was made of all *engineered stormwater controls*;
- (4) The date the inspection was made;
- (5) A statement that all inspected *engineered stormwater controls* 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.

402 Operation and Maintenance Agreement

(A) In General

Prior to the conveyance or transfer of any lot or building site to be served by a *engineered stormwater control* pursuant to this ordinance, and prior to issuance of any permit for *development* requiring a *engineered stormwater control* pursuant to this ordinance, the applicant or *owner* of the site must execute an operation and maintenance agreement that shall be binding on all subsequent *owners* of the site, portions of the site, and lots or parcels served by the *engineered stormwater control*. Until the transference of all property, sites, or lots served by the

engineered stormwater control, the original *owner* or applicant shall have the 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 *engineered stormwater control*, shall state the terms, conditions, and schedule of maintenance for the *engineered stormwater control*. In addition, it shall grant to the Town of Summerfield a right of entry in the event that the Stormwater Administrator has reason to believe it has become necessary to inspect, monitor, maintain, repair, or reconstruct the *engineered stormwater control*; however, in no case shall the right of entry, of itself, confer an obligation on the Town of Summerfield to assume responsibility for the *engineered stormwater control*.

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

(B) Special Requirement for Homeowners' and Other Associations

For all *engineered stormwater controls* required pursuant to this ordinance and that are to be or are owned and maintained by a homeowners' association, property owners' association, or similar entity, the required operation and maintenance agreement shall include all of the following provisions:

- (1) Acknowledgement that the association shall continuously operate and maintain the stormwater control and management facilities.
- (2) Establishment of an escrow account, which can be spent solely for sediment removal, structural, biological or vegetative replacement, major repair, or reconstruction of the *engineered stormwater controls*. If *engineered stormwater controls* are not performing adequately or as intended or are not properly maintained, the Town of Summerfield, in its sole discretion, may remedy the situation, and in such instances the Town of Summerfield shall be fully reimbursed from the escrow account. Escrowed funds may be spent by the association for sediment removal, structural, biological or vegetative replacement, major repair, and reconstruction of *engineered stormwater controls*, provided that the Town of Summerfield 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 occur first, the developer shall pay into the escrow account an amount equal to fifteen (15) per cent of the initial construction cost of the *engineered stormwater controls*. Two-thirds (2/3) of the total amount of sinking fund budget shall be deposited into the escrow account within the first five (5) years and the full amount shall be deposited within ten (10) years following initial construction of the *engineered stormwater controls*. Funds shall be deposited each year into the escrow account. A portion of the annual assessments of the association shall include an allocation into the escrow account. Any funds drawn down from the escrow account shall be

replaced in accordance with the schedule of anticipated work used to create the sinking fund budget.

(4) The percent of developer contribution and lengths of time to fund the escrow account may be varied by the Town of Summerfield depending on the design and materials of the stormwater control and management facility.

(5) Granting to the Town of Summerfield a right of entry to inspect, monitor, maintain, repair, and reconstruct *engineered stormwater controls*.

(6) Allowing the Town of Summerfield to recover from the association and its members any and all costs the Town of Summerfield expends to maintain or repair the *engineered stormwater controls* or to correct any operational deficiencies. Failure to pay the Town of Summerfield all of its expended costs, after forty-five days written notice, shall constitute a breach of the agreement. In case of a deficiency, the Town of Summerfield 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 Town of Summerfield to maintain or repair *engineered stormwater controls*, and the Town of Summerfield shall not be liable to any *person* for the condition or operation of *engineered stormwater controls*.

(8) A statement that this agreement shall not in any way diminish, limit, or restrict the right of the Town of Summerfield to enforce any of its ordinances as authorized by law.

(9) A provision indemnifying and holding harmless the Town of Summerfield for any costs and injuries arising from or related to the engineered stormwater control, unless the Town of Summerfield has agreed in writing to assume the maintenance responsibilities for the BMP and has accepted dedication of any and all rights necessary to carry out that maintenance.

403 Inspection Program

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

If the *owner* or occupant of any property refuses to permit such inspection, the Stormwater Administrator shall proceed to obtain an administrative search warrant pursuant to G.S. 15-27.2 or its successor. No *person* shall obstruct, hamper or interfere with the Stormwater Administrator while carrying out his or her official duties.

404 Performance Security for Installation and Maintenance

(A) May be Required

The Town of Summerfield may, at its discretion, require the submittal of a performance security bond with surety, cash escrow, letter of credit or other acceptable legal arrangement prior to issuance of a permit in order to insure that the engineered stormwater controls are

(1) Installed by the permit holder as required by the approved stormwater management plan, and/or

(2) Maintained by the owner as required by the operation and maintenance agreement.

(B) Amount

(1) Installation

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

(2) Maintenance

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

(C) Uses of Performance Security

(1) Forfeiture Provisions

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

(2) Default

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

(3) Costs in Excess of Performance Security

If the Town of Summerfield takes action upon such failure by the applicant or *owner*, the Town of Summerfield may collect from the applicant or *owner* the difference between the amount of the reasonable cost of such action and the amount of the security held, in addition to any 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.

405 Notice to Owners

(A) Deed Recordation and Indications On Plat

The applicable operations and maintenance agreement [, conservation easement, or dedication and acceptance into public maintenance (whichever is applicable)] pertaining to every *engineered stormwater control* shall be referenced on the final plat and shall be recorded with the County Register of Deeds upon final plat approval. If no subdivision plat is recorded for the site, then the operations and maintenance agreement [, conservation easement, or dedication and acceptance into public

maintenance (whichever is applicable)] shall be recorded with the County Register of Deeds so as to appear in the chain of title of all subsequent purchasers under generally accepted searching principles.

(B) Signage

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

406 Records of Installation and Maintenance Activities

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

407 Nuisance

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

408 Maintenance Easement

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

Section 5: Enforcement and Violations

501 General

(A) Authority to Enforce

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

(B) Violation Unlawful

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

(C) Each Day a Separate Offense

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

(D) Responsible Persons/Entities

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

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

- (1) *Person* Maintaining Condition Resulting in or Constituting Violation

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

(2) Responsibility for Land or Use of Land

The *owner* of the land on which the violation occurs, any tenant or occupant of the property, any *person* who is responsible for stormwater controls or practices pursuant to a private agreement or public document, or any *person*, who has control over, or responsibility for, the use or *development* of the property.

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 Zoning Board may disapprove, any request for permit or *development* approval or authorization provided for by this ordinance or the zoning or subdivision, as appropriate, for the land on which the violation occurs.

(3) Injunction, Abatements, etc.

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

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

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

(B) Civil Penalties

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

(C) Criminal Penalties

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

503 Procedures

(A) Initiation/Complaint

Whenever a violation of this ordinance occurs, or is alleged to have occurred, any person may file a written complaint. Such complaint shall state fully the alleged violation and the basis thereof, and shall

be filed with the Stormwater Administrator, who shall record the complaint. The complaint shall be investigated promptly by the Stormwater Administrator.

(B) Inspection

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

(C) Notice of Violation and Order to Correct

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

The Stormwater Administrator may deliver the notice of violation and correction order by any means authorized for the service of documents by Rule 4 of the North Carolina Rules of Civil Procedure.

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

(D) Extension of Time

A *person* who receives 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.

(E) Enforcement After Time to Correct

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

(F) Emergency Enforcement

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

Section 6: Definitions

601 Terms Defined

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

Approved Accounting Tool

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

Built-upon Area (BUA)

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

Commission

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

Department

The North Carolina Department of Environmental and Natural Resources.

Design Manual

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

Development

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

Division

The Division of Water Quality in the *Department*

Existing Development

Development not otherwise exempted by this ordinance that meets one of the following criteria:

- (a) It either is built or has established a statutory or common-law vested right as of the effective date of this ordinance; or
- (b) It occurs after the effective date of this ordinance, but does not result in a net increase in built-upon area and does not decrease the infiltration of precipitation into the soil.

Engineered Stormwater Control

A physical device designed to trap, settle out, or filter pollutants from stormwater runoff; to alter or reduce stormwater runoff velocity, amount, timing, or other characteristics; to approximate the pre-development hydrology on a developed site; or to achieve any combination of these goals. *Engineered stormwater control* includes physical practices such as constructed wetlands, vegetative practices, filter strips, grassed swales, and other methods installed or created on real property. "Engineered stormwater control" is synonymous with "structural practice," "stormwater control facility," "stormwater control practice," "stormwater treatment practice," "stormwater management practice," "stormwater control measures," "structural stormwater treatment systems," and similar terms used in this ordinance. It is a broad term that may include practices that do not require design by a professionally licensed engineer.

Land Disturbing Activity

Any use of the land that results in a change in the natural cover or topography that may cause or contribute to sedimentation.

Larger Common Plan of Development or Sale

Any area where multiple separate and distinct construction or *land-disturbing activities* will occur under one plan. A plan is any announcement or piece of documentation (including but not limited to a sign, public notice or hearing, sales pitch, advertisement, loan application, drawing, permit application, zoning request, or computer design) or physical demarcation (including but not limited to boundary signs, lot stakes, or surveyor markings) indicating that construction activities may occur on a specified plot.

Major Variance

A variance from the minimum statewide watershed protection or Jordan rules that results in the relaxation, by a factor greater than five percent of any buffer, density or built-upon area requirement under the high density option; any variation in the design, maintenance or operation requirements of a wet detention pond or other approved stormwater management system; or relaxation by a factor greater than 10 percent, of any management requirement under the low density option. For provisions in this ordinance that are more stringent than the state's minimum water supply protection rules and Jordan rules, a variance to the ordinance is not considered a *major variance* as long as the result of the variance is not less stringent than the state's minimum requirements.

Minor Variance

A variance from the minimum statewide watershed protection or Jordan rules that results in a relaxation, by a factor of up to five percent of any buffer, density or built-upon area requirement under the high density option; or that results in a relaxation by a factor up to 10 percent, of any management requirements under the low density option.

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.

Outfall

A point at which stormwater (1) enters surface water or (2) exits the property of a particular *owner*.

Owner

The legal or beneficial owner of land, including but not limited to a mortgagee or vendee in possession, receiver, executor, trustee, or long-term or commercial lessee, or any other *person* or entity holding proprietary rights in the property or having legal power of management and control of the property. "Owner" shall include long-term commercial tenants; management entities, such as those charged with or engaged in the management of properties for profit; and every other *person* or entity having joint ownership of the property. A second lender not in possession of the property does not constitute an owner, unless the secured lender is included within the meaning of "owner" under another description in this definition, such as a management entity.

Person

Includes, without limitation, individuals, firms, partnerships, associations, institutions, corporations, municipalities and other political subdivisions, and governmental agencies.

Redevelopment

Any *development* on previously-developed land. *Redevelopment* of structures or improvements that (i) existed prior to December 2001 and (ii) would not result in an increase in *built-upon area* and (iii) provides stormwater control at least equal to the previous development is not required to meet nutrient loading targets of this ordinance.

Stormwater System

All engineered stormwater controls owned or controlled by a *person* that drain to the same *outfall*, along with the conveyances between those controls. A system may be made up of one or more stormwater controls.

Substantial Progress

For the purposes of determining whether sufficient progress has been made on an approved plan, one or more of the following construction activities toward the completion of a site or subdivision plan shall occur: obtaining a grading permit and conducting grading activity on a continuous basis and not discontinued for more than thirty (30) days; or installation and approval of on-site infrastructure; or obtaining a building permit for the construction and approval of a building foundation. "Substantial progress" for the 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.

10. Nutrient Loading Accounting Tool

The Town of Summerfield will use the Jordan/Falls Nutrient Load Accounting Tool as provided in the Jordan Model Program Appendices – Appendix O.

Appendix A, Program Contact and Professional Qualifications

Michael Brandt, Town Manager, AICP

Chris Anderson, Town Planner, AICP

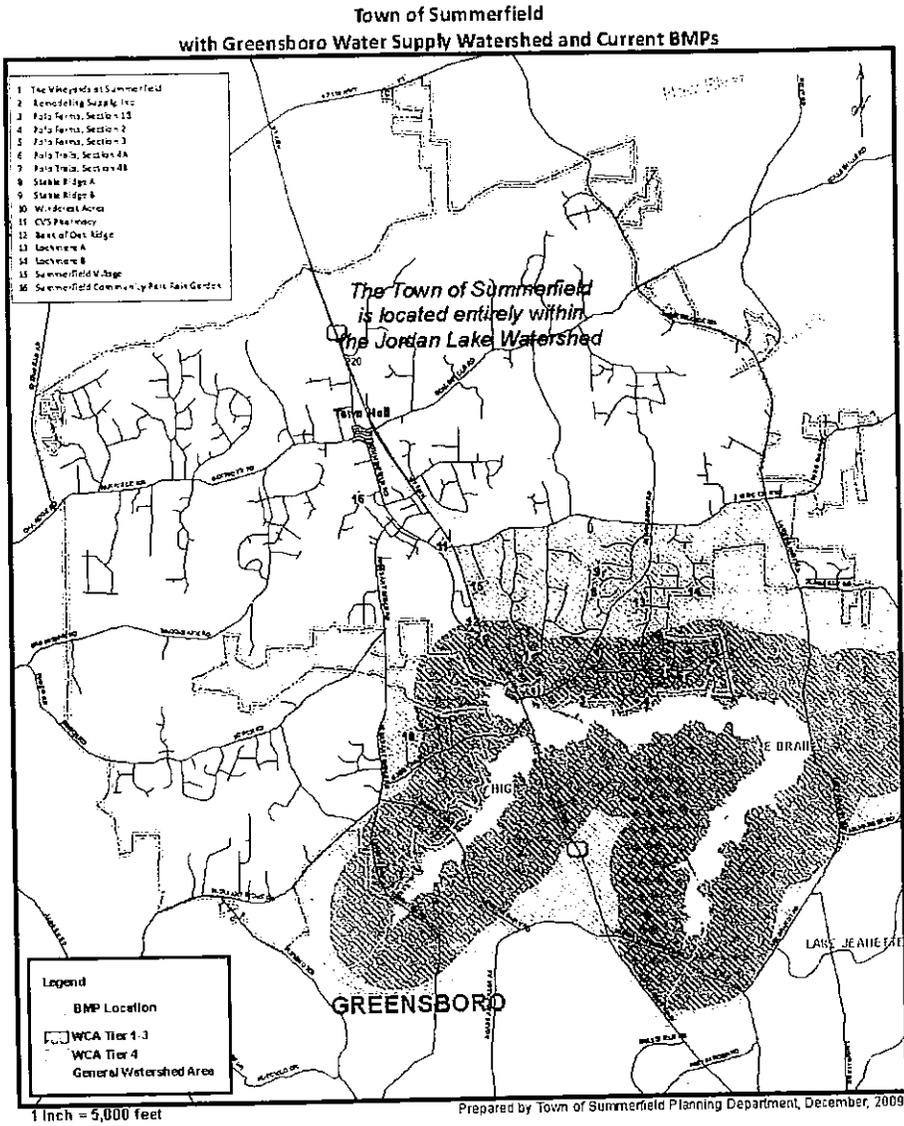
Town of Summerfield
PO Box 970
4117 Oak Ridge Road
Summerfield, NC 27358
(336) 643-8655
FAX (336) 643-8654

Warren Simmons, PE, PLS, CFM

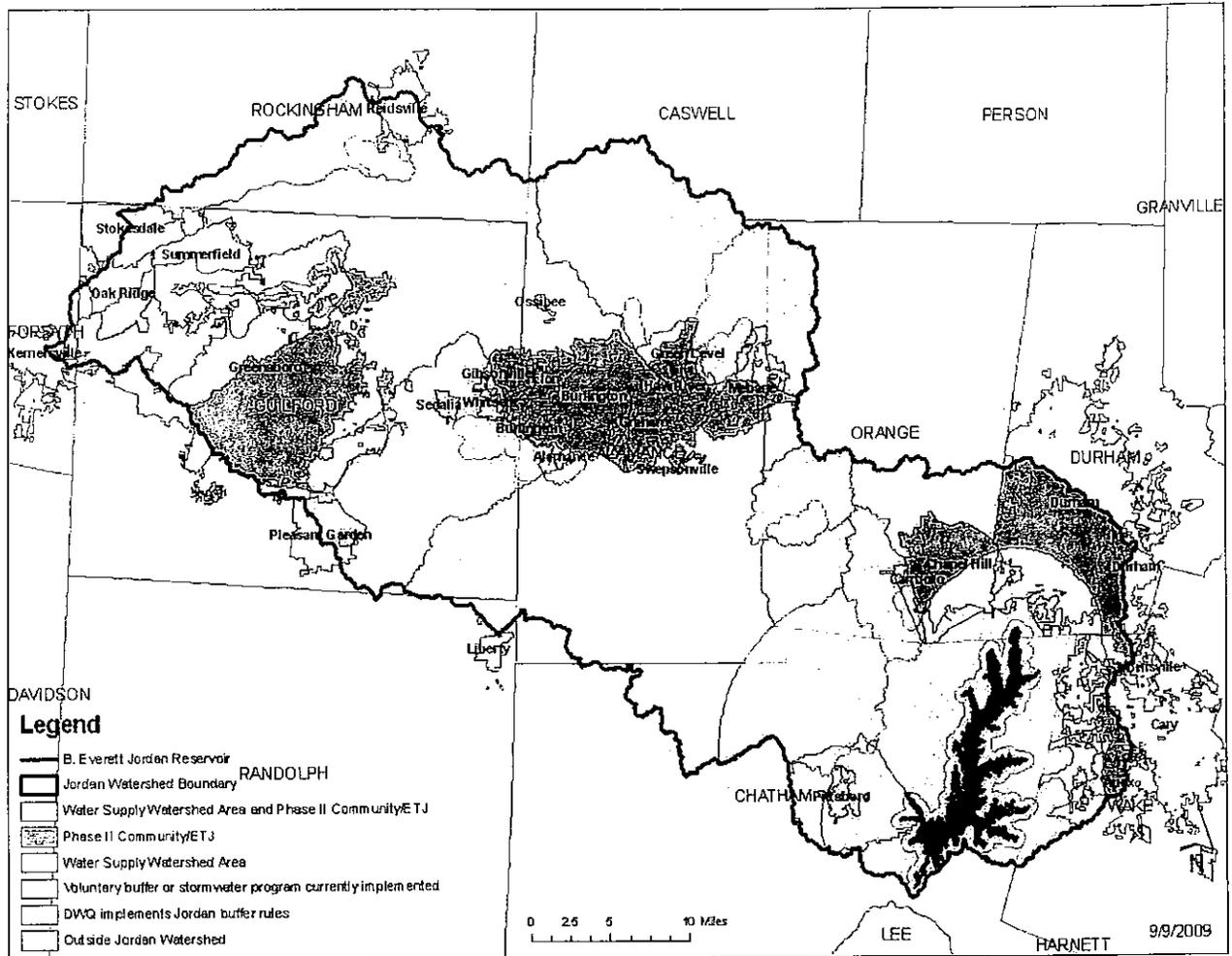
Anderson and Associates, Inc.
406 Gallimore Dairy Road
Greensboro, NC 27409
(336) 931-0910
FAX (336) 931-0990

Appendix B, Map 1

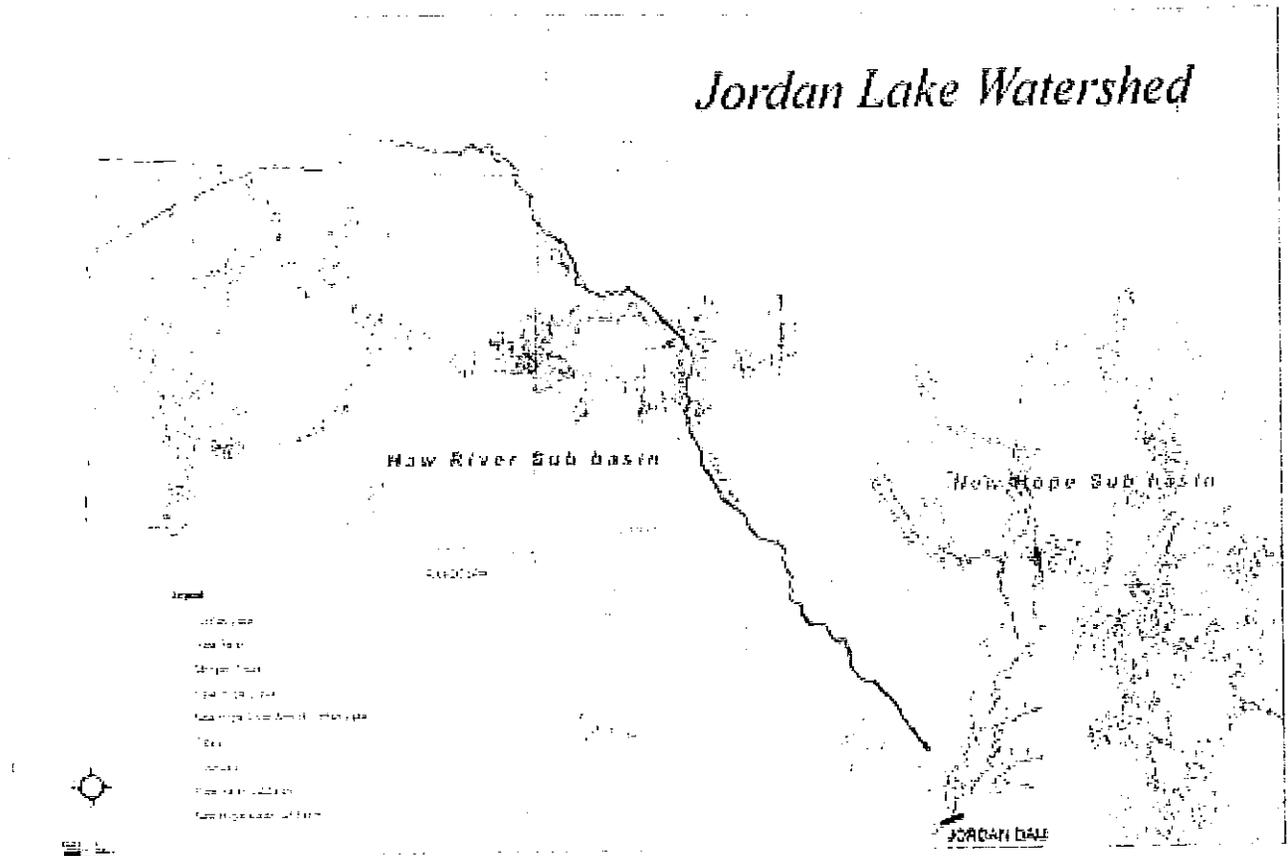
Location Map



Map 2, Jordan Lake Watershed Jurisdictional Map



Map 3, The Jordan Lake Watershed, North Carolina



Town of Summerfield
WATERSHED PROTECTION INSPECTION REPORT
 Inspection Date: _____

The Town of Summerfield Development Ordinance requires that runoff control structures be inspected annually to insure they are being maintained and are functioning as originally designed.

A. General Information:

Project Name: _____	Owner/Contact Name: _____
Location: _____	Owner/Contact Address: _____
Index No.: _____	_____
Water Supply Watershed: _____	Receiving Stream: _____

B. The following stormwater runoff controls are found at this project site:

Wet Detention Pond	Sand Filters	Extended Dry Detention	Infiltration Devices
Extended Detention Pond	Bio-retention Area	Filter Strips	Stream Buffers: _____ ft
Grassed Swales	Pocket Wetlands	Other: _____	

C. THE RESULTS OF THIS YEAR'S INSPECTION ARE AS FOLLOWS:

<input type="checkbox"/>	VISUAL INSPECTION FOUND NO APPARENT PROBLEMS.
<input type="checkbox"/>	COMPLETE THE REPAIR AND/OR MAINTENANCE ITEMS INDICATED BELOW WITHIN 90 DAYS OF THIS REPORT:

D. Repair and/or Maintenance Items to be Completed Within 90 Days:

<p>Ponds/Basins:</p> <p><u>DAM TOP & SLOPES / FACES</u> Remove trash & high bushes. Repair (applicable problems circled): <i>holes, slides, depressions, cracks.</i> Evidence of (applicable problems circled): <i>seepage, overtopping.</i> Repair eroded areas Seed bare areas.</p> <p><u>EMERGENCY SPILLWAY</u> Remove trees and high bushes. Repair eroded areas. Seed bare areas. Repair displaced rip-rap Remove obstructions from spillway. Enlarge spillway to adequate capacity</p> <p>Other Controls: Restore sheet flow Remove debris/trash Restore vegetation Other. Location: _____</p>	<p><u>PRINCIPAL & WO SPILLWAYS</u> Clear obstructed water quality hole or riser. Repair riser/barrel (applicable problems circled): <i>leaking, cracked, deteriorated, collapsed, damaged.</i> Repair concrete spillway (applicable problems circled): <i>leaking, cracked, deteriorated, spalling, damaged.</i> Outlet end of barrel is eroded or blocked. Filter rock is clogged.</p> <p><u>IMPOUNDMENT</u> Repair eroded inlet channel and/or drains. Repair eroded slopes Clean sediment from forebay area. Permanent pool less than 3 feet. Perform pond volume check. Clean clogged filter surface.</p> <p>OTHER: _____</p>
--	---

E. Additional Comments/Recommendations:

Please notify us when work is complete or if you have questions. Inspection by: _____

Bioretention Area
Record of Construction
Engineer's Statement of Completion

Project: _____ Date: _____

	Description	Design	As-built
1.	Surface area		
2.	Elevations of the following:		
a.	Bottom of planting soil		
b.	Top of planting soil		
c.	Top of mulch layer		
3.	Emergency spillway or top of berm – base width and elevation		
4.	Ponding depth (3 - 2c)		
5.	Runoff volume captured (1 x 4)		
6.	Underdrain system:		
a.	Size and type of material		
b.	Number of lines		
c.	Invert elevation of underdrain		
d.	Invert elevation of outflow pipe at outlet		
7.	Planting soil (attach soil test reports)		
a.	Depth (2b - 2a)		
b.	Percentage clay		
c.	Percentage silt		
d.	Percentage sand		
e.	Percentage of organic material		
f.	pH		
8.	Plants:		
a.	Number of trees		
b.	Number of shrubs		
c.	Groundcover (if applicable)		

ENGINEER'S STATEMENT OF COMPLETION

I state to the best of my knowledge and belief that the permanent runoff control structure for _____ is duly recorded in the Office of the Guilford County Register of Deeds and has been completed in conformance with the approved plans and specifications dated _____.

(name of plat) *(approval date)*

SIGNATURE _____

DATE _____

(P.E. SEAL)

PROJECT: _____

DATE: _____

BIORETENTION AREA CONSTRUCTION PLAN CHECKLIST

GENERAL INFORMATION:

- _____ BIO-CELL LOCATION
- _____ EX. & PROP. TOPOGRAPHY
- _____ ACCESS & MAINTENANCE EASEMENT
- _____ VICINITY MAP
- _____ NORTH ARROW & GRAPHIC SCALE
- _____ PE SEAL & SIGNATURE

- _____ COORD. WITH CITY REQUIREMENTS
- _____ UTILITY CONFLICTS
- _____ 100 YR. FLOODPLAIN
- _____ LABEL CELL "PERMANENT BIORETENTION AREA"
- _____ CERTIFICATION OF RUNOFF CONTROL
- _____ ENGINEER - NAME, ADDRESS, TELEPHONE
- _____ OWNER - NAME, ADDRESS, TELEPHONE

CELL DESIGN:

- _____ DRAINAGE AREA < 5 ACRES
- _____ LAYOUT DIMENSIONS
- _____ CROSS SECTION
- _____ SURFACE AREA
- _____ PONDING DEPTH (6" MAXIMUM)
- _____ RUNOFF VOLUME CAPTURED
- _____ HARDWOOD MULCH (2"-3", SHREDDED, AGED)
- _____ WATER TABLE 2' BELOW BOTTOM OF CELL
- _____ DIVERSION DITCHES

- _____ INLET PROTECTION
- _____ BYPASS OUTLET
- _____ OUTLET PROTECTION
- _____ SLOPE ON EMBANKMENT (3:1 MIN.)
- _____ 10' BENCH FOR MAINT. AROUND FILTER
- _____ UNDERDRAIN SYSTEM (SIZE & TYPE OF MATERIAL)
- _____ NUMBER OF UNDERDRAIN LINES
- _____ GRAVEL ENVELOPE 2" OVER UNDERDRAIN

PLANTS:

- _____ HERBACIOUS GROUND COVER
- _____ TREE DENSITY (100 TREES PER ACRE)
- _____ SHRUB DENSITY (300 SHRUBS PER ACRE)
- _____ SIZE REQUIREMENTS MET
- _____ PLANT SPECIES

PLANTING SOIL:

- _____ DEPTH
- _____ CLAY (15% MAXIMUM)
- _____ SILT (25% MAXIMUM)
- _____ SAND (65% - 75%)
- _____ ORGANIC MATERIAL (0 - 10%)
- _____ Ph (5.5 - 6.5)

NOTES:

- _____ POND MAINTENANCE RESPONSIBILITY
- _____ PRECONSTRUCTION MEETING
- _____ FULL DESIGN VOLUME

- _____ PE CERTIFICATION OF COMPLETION
- _____ RIGHT OF ACCESS FOR INSPECTION

OTHER:

- _____ OPERATION & MAINTENANCE MANUAL
- _____ SPECIFICATIONS

- _____ OTHER PERMITS (WETLAND, FLOODPLAIN, DAM SAFETY)

COMMENTS:

Wet Detention Pond
Record of Construction
Engineer's Statement of Completion

Project: _____

Date: _____

	<u>Description</u>	<u>Design</u>		<u>As-built</u>	
1	Slope of embankments (3:1)				
2	Elevations on the following:				
a	Bottom of pond				
b	Bottom of riser				
c	Top of riser				
d	Water quality hole				
e	Invert of inflow and outflow pipes				
3	Top of dam: Elevation and width				
4	Width of maintenance benches				
5	Anti-seep collars - size				
6	Size and material of riser/barrel				
7	Verification of volume:				
a	Permanent Sediment Storage (CF)				
b	Permanent Water Quality (SF)				
c	Temporary Water Quality (CF)				
8	Baffle location and top elevation				
9	Emergency Spillway - Width and Elevation				
10	Waterstops installed (if applicable)				
11	Reinforcing according to plan (if applicable)				
12	Size of footing (if applicable)				

ENGINEER'S STATEMENT OF COMPLETION

I state to the best of my knowledge and belief that the permanent runoff control structure for _____ is duly recorded in the Office of the Guilford County Register of Deeds and has been completed in conformance with the approved plans and specifications dated _____.

(name of plat) *(approval date)*

SIGNATURE _____

DATE _____

(P.E. SEAL)

PROJECT: _____ DATE: _____

WET DETENTION POND CONSTRUCTION PLAN CHECKLIST

GENERAL INFORMATION:

- | | |
|-------------------------------------|---|
| _____ POND LOCATION | _____ COORD. WITH CITY REQUIREMENTS |
| _____ EX. & PROP. TOPOGRAPHY | _____ UTILITY CONFLICTS |
| _____ ACCESS & MAINTENANCE EASEMENT | _____ 100 YR. FLOODPLAIN |
| _____ VICINITY MAP | _____ POND LABEL |
| _____ NORTH ARROW & GRAPHIC SCALE | _____ CERTIFICATION OF RUNOFF CONTROL |
| _____ PE SEAL & SIGNATURE | _____ ENGINEER - NAME, ADDRESS, TELEPHONE |
| | _____ OWNER - NAME, ADDRESS, TELEPHONE |

POND DESIGN:

- | | |
|------------------------------------|---|
| _____ LAYOUT DIMENSIONS | _____ TRASH RACK |
| _____ CROSS SECTION | _____ W. Q. RELEASE HOLE |
| _____ SEDIMENT STORAGE | _____ TRASH GUARD FOR WQ HOLE |
| _____ PERMANENT WATER QUALITY | _____ ANTISEEP COLLAR (BAR. DIA. + 4 FT.) |
| _____ TEMPORARY WATER QUALITY | _____ COLLAR LOCATED DOWNSTR. OF DAM CL |
| _____ PRINCIPAL SPILLWAY | _____ FLANGE JOINTS W/ GASKET(CAP) OR O-RING(RCP) |
| _____ EMERGENCY SPILLWAY | _____ CUT-OFF TRENCH (4' WIDTH) |
| _____ INLET & OUTLET VELOCITY PADS | _____ CL OF TRENCH @ CL OF DAM |
| _____ FLOTATION OF RISER | _____ SLOPE ON EMBANKMENT (3:1 MIN.) |
| _____ RIP-RAP BAFFLE | _____ 10' BENCH FOR MAINT. AROUND POND |
| _____ POND DRAIN W/ HANDLE | _____ <u>CONCRETE CONSTRUCTION:</u> |
| _____ 50' SEPARATION FROM WELL | _____ THICKNESS OF SLAB OR WALL |
| _____ 50' SEPARATION FROM SEPTIC | _____ REINFORCING |
| | _____ STRENGTH OF CONCRETE |
| | _____ WATERSTOPS |
| | _____ JOINT SPACING |

NOTES:

- | | |
|---------------------------------------|--------------------------------------|
| _____ POND MAINTENANCE RESPONSIBILITY | _____ PE CERTIFICATION OF COMPLETION |
| _____ PRECONSTRUCTION MEETING | _____ RIGHT OF ACCESS FOR INSPECTION |
| _____ FULL DESIGN VOLUME | |

OTHER:

- | | |
|--|----------------------|
| _____ OPERATION & MAINTENANCE MANUAL | _____ SPECIFICATIONS |
| _____ OTHER PERMITS (WETLAND, FLOODPLAIN,
DAM SAFETY) | |

COMMENTS: _____

Sand Filter
Record of Construction
Engineer's Statement of Completion

Project: _____ Date: _____

	<u>Description</u>	<u>Design</u>	<u>As-built</u>
1	Sediment Chamber:		
a	Bottom Elevation		
b	Depth of Chamber		
c	Surface Area		
d	Volume		
2	Weir Elevation		
3	Sand Chamber:		
a	Top of Sand Elevation		
b	Depth of Sand		
c	Surface Area		
d	Volume		
e	Sand Particle Size		
4	Underdrain System:		
a	Size and type of perforated pipe		
b	Number of lines		
c	Invert elevation of underdrain		
d	Invert elevation of outflow pipe at outlet		
5	Dissipator Pad, Length and Width		

ENGINEER'S STATEMENT OF COMPLETION

I state to the best of my knowledge and belief that the permanent runoff control structure for _____ is duly recorded in the Office of the Guilford County Register of Deeds and has been completed in conformance with the approved plans and specifications dated _____.

(name of plat) *(approval date)*

SIGNATURE _____

DATE _____

(P.E. SEAL)

PROJECT: _____

DATE: _____

SAND FILTER CONSTRUCTION PLAN CHECKLIST

GENERAL INFORMATION:

____ FILTER LOCATION
____ EX. & PROP. TOPOGRAPHY
____ ACCESS & MAINTENANCE EASEMENT
____ VICINITY MAP
____ NORTH ARROW & GRAPHIC SCALE
____ PE SEAL & SIGNATURE

____ COORD. WITH CITY REQUIREMENTS
____ UTILITY CONFLICTS
____ 100 YR. FLOODPLAIN
____ FILTER LABEL
____ CERTIFICATION OF RUNOFF CONTROL
____ ENGINEER - NAME, ADDRESS, TELEPHONE
____ OWNER - NAME, ADDRESS, TELEPHONE

FILTER DESIGN:

____ DRAINAGE AREA < 5AC.
____ LAYOUT DIMENSIONS
____ CROSS SECTION
____ SEDIMENT CHAMBER VOLUME
____ SEDIMENT CHAMBER SURFACE AREA
____ SEDIMENT CHAMBER DEPTH
____ SAND CHAMBER VOLUME
____ SAND CHAMBER SURFACE AREA
____ SAND CHAMBER DEPTH

____ UNDERDRAIN LINE W/ SOCK OR GRAVEL JACKET
____ 6" MAX. UNDERDRAIN
____ MIN. 12" SAND OVER UNDERDRAIN
____ DIVERSION DITCHES NEEDED
____ TOP OF SAND 2" - 6" BELOW WEIR
____ SLOPE ON EMBANKMENT (3:1 MIN.)
____ 10' BENCH FOR MAINT. AROUND FILTER
____ INLET PROTECTION

CONCRETE CONSTRUCTION:

____ THICKNESS OF SLAB OR WALL
____ REINFORCING
____ STRENGTH OF CONCRETE
____ WATERSTOPS
____ JOINT SPACING

NOTES:

____ SAND FILTER MAINTENANCE RESPONSIBILITY
____ PRECONSTRUCTION MEETING
____ FULL DESIGN VOLUME

____ PE CERTIFICATION OF COMPLETION
____ RIGHT OF ACCESS FOR INSPECTION

OTHER:

____ OPERATION & MAINTENANCE MANUAL
____ OTHER PERMITS (WETLAND, FLOODPLAIN,
DAM SAFETY)

____ SPECIFICATIONS

COMMENTS:

Extended Detention Wetland
Record of Construction
Engineer's Statement of Completion

Project: _____

Date: _____

	<u>Description</u>	<u>Design</u>		<u>As-built</u>	
1	Slope of embankments (3:1)				
2	Elevations on the following:				
a	Bottom of pond				
b	Bottom of riser				
c	Top of riser				
d	Water quality hole				
e	Invert of inflow and outflow pipes				
3	Top of dam: Elevation and width				
4	Width of maintenance benches				
5	Anti-seep collars - size				
6	Size and material of riser/barrel				
7	Verification of volume:				
a	Permanent Sediment Storage (CF)				
b	Permanent Water Quality (SF)				
b(i)	Perm. Pool 0" – 18" (Surf. Area)				
b(ii)	Perm. Pool 0" – 9" (Surf. Area)				
b(iii)	Perm. Pool 9" – 18" (Surf. Area)				
c	Temporary Water Quality (CF)				
8	Pool @ Principal Spillway				
9	Micropool (SF)				
10	Emergency Spillway - Width and Elevation				

ENGINEER'S STATEMENT OF COMPLETION

I state to the best of my knowledge and belief that the permanent runoff control structure for _____ is duly recorded in the Office of the Guilford County Register of Deeds and has
(name of plat)
 been completed in conformance with the approved plans and specifications dated _____
(approval date)

SIGNATURE _____

DATE _____

(P.E. SEAL)

PROJECT: _____

DATE: _____

EXTENDED DETENTION WETLAND CONSTRUCTION PLAN CHECKLIST

GENERAL INFORMATION:

- _____ WETLAND LOCATION
- _____ EX. & PROP. TOPOGRAPHY
- _____ ACCESS & MAINTENANCE EASEMENT
- _____ VICINITY MAP
- _____ NORTH ARROW & GRAPHIC SCALE
- _____ PE SEAL & SIGNATURE

- _____ COORD. WITH CITY REQUIREMENTS
- _____ UTILITY CONFLICTS
- _____ 100 YR. FLOODPLAIN
- _____ LABEL AS PERM. EXTENDED DETENTION WETLAND
- _____ CERTIFICATION OF RUNOFF CONTROL
- _____ ENGINEER - NAME, ADDRESS, TELEPHONE
- _____ OWNER - NAME, ADDRESS, TELEPHONE

POND DESIGN:

- _____ LAYOUT DIMENSIONS
- _____ DRAINAGE AREA > 10 ACRES
- _____ CROSS SECTION
- _____ SEDIMENT STORAGE (FOREBAY)
- _____ PERMANENT WATER QUALITY (3' PRM. POOL)
- _____ PERM. POOL 0" - 18" (70% SA)
- _____ PERM. POOL 0" - 9" (35% SA)
- _____ PERM. POOL 9" - 18" (35% SA)
- _____ TEMPORARY WATER QUALITY
- _____ PRINCIPAL SPILLWAY
- _____ EMERGENCY SPILLWAY
- _____ INLET & OUTLET VELOCITY PADS
- _____ FLOTATION OF RISER
- _____ MICROPPOOL (15% SURFACE AREA)
- _____ POND DRAIN W/ HANDLE

- _____ TRASH RACK
- _____ W. Q. RELEASE HOLE
- _____ TRASH GUARD FOR WQ HOLE
- _____ ANTISEEP COLLAR (BAR. DIA. + 4 FT.)
- _____ COL. LOCATED DOWNSTR. OF DAM CL
- _____ FLANGE JOINTS W/ GASKET(CAP) OR O-RING(RCP)
- _____ CUT-OFF TRENCH (4' WIDTH)
- _____ CL OF TRENCH @ CL OF DAM
- _____ SLOPE ON EMBANKMENT (3:1 MIN.)
- _____ 10' BENCH FOR MAINT. AROUND POND
- _____ PLANTING PLAN & SCHEDULE
- _____ POND BUFFER > 30'
- _____ 50' SEPARATION FROM WELL
- _____ 50' SEPARATION FROM SEPTIC FIELD

NOTES:

- _____ POND MAINTENANCE RESPONSIBILITY
- _____ PRECONSTRUCTION MEETING
- _____ FULL DESIGN VOLUME

- _____ PE CERTIFICATION OF COMPLETION
- _____ RIGHT OF ACCESS FOR INSPECTION

OTHER:

- _____ OPERATION & MAINTENANCE MANUAL
- _____ OTHER PERMITS (WETLAND, FLOODPLAIN,
DAM SAFETY)

- _____ SPECIFICATIONS

COMMENTS:

**RULES OF PROCEDURE/BYLAWS
SUMMERFIELD ZONING BOARD
SUMMERFIELD, NORTH CAROLINA**

The Summerfield Zoning Board, realizing that rules and regulations are necessary for the orderly and proper discharge of its business and duties, adopts these rules of procedure to expedite the handling of matters coming before the Board.

I. General Rules.

The Summerfield Zoning Board shall be governed in its organization and operation by the terms of G.S. 160A-360, and other general and special state laws relating to planning in the Town of Summerfield, as well as by the resolutions of the Town Council relating to Planning and Zoning in Summerfield. All Board members shall become thoroughly familiar with the provisions of the statutes concerning town planning. All references to "Board members" in this document shall also apply to alternative Board members, unless otherwise noted.

II. Officers and Duties.

A. The Chairperson. A Chairperson shall be elected by the Zoning Board from among its members.

1. The term of the Chairperson shall be for one year, beginning as of the first meeting of January.
2. The Chairperson shall decide all matters of order and procedure, subject to these rules, unless directed otherwise by a majority of the Board in session at the time.
3. The Chairperson shall appoint any committees found necessary to investigate any matter before the Board.
4. The Chairperson shall perform such other duties as directed by a majority of the Board.

B. The Vice-Chairperson. A Vice-Chairperson shall be elected by the Zoning Board from among its members.

1. The term of the Vice-Chairperson shall be for one year, beginning as of the first meeting of January.
2. The Vice-Chairperson shall preside in the absence of the Chairperson, fill any unexpired term of the Chairperson,

and assume all duties and responsibilities delegated by the Chairperson.

3. The Vice-Chairperson shall perform other such duties and may be directed by a majority of the Board.
4. In the event the office of Chairperson becomes vacant, the Vice-Chairperson shall serve the unexpired term of the Chairperson and a Vice-Chairperson shall be elected to serve the unexpired term of the former Vice-Chairperson.

C. The Secretary. A secretary shall be appointed by the Chairperson of the Zoning Board, either from within or outside its membership.

1. The Secretary shall hold office during the term of the Chairperson and/or until a successor secretary shall have been appointed.
2. The Secretary shall be eligible for reappointment.
3. The Secretary, subject to the direction of the Chairperson and the Board, shall keep all records, conduct all correspondence of the Board, and generally supervise the clerical work of the Board.
4. The Secretary shall keep the minutes of every meeting of the Board, which shall be public record. The minutes shall show the record of all important facts pertaining to every meeting and hearing, every resolution acted upon by the Board, and all votes of Board members upon any resolution or upon the final determination of any question, indicating the names of members abstaining from voting.
5. If the Secretary is chosen from outside the membership of the Board, he shall not be eligible to vote upon any matter.

D. Other Officers. Should the Chairperson and Vice-Chairperson both be absent at any meeting, the Board shall elect a temporary chairperson to serve at the meeting. Should the Secretary be absent, a temporary secretary shall be appointed from the Chair.

III. Meeting

A. Regular Meetings. Regular meetings of the Zoning Board shall be held once a month, as needed, at 7:00 P.M. at the Summerfield Community Center, Summerfield, North Carolina; provided that upon direction of the Chairperson or a majority of the Board, any

meeting may be held at any other time or place in the Town. A regular monthly meeting date shall be calendared six months in advance by the Secretary and approved by the Board.

- B. Special Meetings. Special meetings of the Zoning Board may be called any time by the Chairperson as law provides.
- C. Cancellation of Meetings. Whenever there is no business for the Board, the Chairperson may dispense with a regular meeting by giving notice to all the members of the Board not less than twenty-four (24) hours prior to the time set for the meeting; provided that the Board shall meet at least once in each ninety (90) day period.
- D. Quorum. A quorum shall consist of three (3) members of the Board.
- E. Vote. The vote of a majority of those members present shall be sufficient to decide matters before the Board, provided a quorum is present; provided, however, that as to zoning map amendments, the provisions of Section 3-12 of the Town of Summerfield Development Ordinance are met.
- F. Role of Alternate Board Members Not Seated on the Board. When not seated on the Board, alternate Board members shall not comment on any matter before the Board during the public meeting.
- G. Meeting Procedures.
 - 1. All meetings shall be open to the public.
 - 2. The order of business at regular meetings shall be at the discretion of the presiding Chairperson. Normally for rezoning cases proponents and opponents each will have twenty (20) minutes to present their side, and an additional five (5) minutes to proponents and opponents for rebuttal. At the discretion of the Chairperson, these time limits may be waived.
 - 3. At the close of discussion of matters heard in public hearing, the Chairperson may:
 - a. Call for a formal motion, a second, and a vote by the members for or against the motion.
 - b. Call for a vote on the item without calling for a formal motion.

- c. Call for a formal motion, a second, and a vote by the members to continue, to a date and time certain, the matter being heard until such time as additional necessary information may be obtained.

IV. Personal Conduct of Zoning Board Members.

- A. Membership on the Zoning Board is accepted as a public service.
- B. Board members are not paid for attending meetings and mileage for expenses to each Board meeting.
- C. Except at public meetings of the Board, its members do not discuss their personal opinions concerning specific zoning cases scheduled or likely to come before the Board with proponents, opponents, or others with a direct interest.
- D. Board members shall devise a method whereby insofar as possible the site of each zoning request will be inspected by all Board members.
- E. When a Board member concludes that a matter before the Board involves or could involve a conflict of interest on his part or his voting might not be in the public interest, he promptly informs the Board Chairperson. The Board member then refrains from any discussion or comment on the particular case and abstains from voting.
- F. Each Board member decides which invitations to attend or participate in public and private functions he can appropriately accept as a member of the Board. He is careful to indicate when he is representing the Board rather than acting or speaking for himself.
- G. Board members do not engage in any private and profitable employment, or in any personal business transaction in which the fact of membership on the Board or any knowledge of its actions unique to membership would be qualification for such employment or a significant reason for the personal business transaction.
- H. Board members do not accept gifts from applicants, their representatives, or other persons and institutions concerned with matters which have been or might come before the Board. However well intended, acceptance of such gifts could lead to misconceptions by the prospective donor or the public generally.

- V. Absentee Policy. If any Zoning Board member or alternate member is unable to attend a regular or special meeting of the Board, that member shall notify the Chairperson of his or her absence at least 24 hours prior to the meeting. Three (3) unexcused absences in one calendar year shall constitute a resignation.
- VI. Amendment. These rules of procedure may be amended, within the limits allowed by law, at any time by an affirmative vote of not less than three (3) members of the Zoning Board, provided that such amendment is presented in writing at a regular or special meeting preceding the meeting at which the vote is taken.
- VII. Reports to Town Council. All Board members are required to submit written reports/ comments for any matter forwarded from the Zoning Board to the Town Council, prior to the next scheduled Town Council meeting.

Adopted by the Summerfield Zoning Board on _____

Secretary _____

Chairperson _____

