



The City of Raleigh

Stormwater Management Advisory Commission

December 7, 2017

3:00 pm

Conference Room 305
Raleigh Municipal Building

3:00 **Welcome, Introductions, Excused Absences**

3:05 **Approval of the Minutes – October 5, 2017 Meeting**

3:10 **Stormwater Staff Report**

- Staffing Update
- Environmental Awards Update

3:15 **Stormwater Quality Cost Share Projects** (*Lory Willard, EI, Project Engineer*)

Staff has received two applications for participation in the Water Quality Cost Share Program:

1. 211 Plainview Avenue: Chris Sexton has petitioned to remove 690 square feet of concrete at his residence at 211 Plainview Avenue. The project includes soil remediation and replanting the area with grass to maintain perviousness. The residence is located in the Pigeon House Creek Watershed, which is eligible for a 90% reimbursement. The total project cost is \$5,445, with the petitioner's share being \$4,901.
2. 809 Welford Road: Robert Mathews has petitioned for reimbursement of the installation of a 325 gallon cistern on his property at 809 Welford Road. The project has already been constructed, and captures runoff from 1,283 square feet of residential roof. The project is located in the Crabtree Creek Watershed and is eligible for a 75% reimbursement. The total project cost is \$4,116.26, with the petitioner's share being \$3,087.20.

Additional information is provided in the attached backup information.

Commission Action: Recommend approval or denial of the project to the City Council.

3:45 **Update to the Guidelines to Land Disturbing Activities** (*Lauren Witherspoon, Stormwater Inspections Supervisor*)

During the April 6, 2017 Commission meeting, Stormwater staff proposed text changes to Section 9.4 of the Unified Development Ordinance (UDO). This section of the UDO covers Erosion and Sediment Control requirements and the City's enforcement capability. The Commission supported the proposed text changes with the inclusion of a few comments.

Prior to presenting the text changes to City Council, staff reevaluated the content of the Guidelines for Land Disturbing Activities (GLDA). This is a document that is incorporated into Section 9.4 of the UDO by reference, thus necessitating a formal text change each time the Guidelines are updated. GLDA is geared toward policy and how staff permits, inspects, and

enforces Sections 9.2 (Stormwater Management), 9.3 (Floodprone Area Regulations), 9.4 (Erosion & Sedimentation Control), and 9.5 (Watershed Protection Areas) of the UDO. There are very few items in GLDA that need to be enforceable, thus this document's reference in the UDO could be removed if all enforceable provisions were relocated into the UDO itself. Given the benefit of doing so, staff proposes removal of the reference to this document in the UDO and the transfer of three items from GLDA to the UDO. This change will clarify the role of GLDA as being a guidance document and provide for the enforcement of City standards via the UDO.

A staff presentation will be provided.

Commission Action: Provide comment and establish opinion on this change.

4:30 **Stormwater Quality Cost Share Policy Revisions** (*Kevin Boyer, PE, Water Quality Manager*)

Stormwater Management staff previously discussed with the Commission a range of potential changes to the City's Stormwater Quality Cost Share Program. Staff has continued to identify and evaluate options for the Commission's consideration and will address the following topics: review previous topics discussed with Commission and input received; review draft revisions to the Stormwater Quality Cost Share Policy; introduce the potential for revising the Policy to allow stormwater control measures (SCMs) to be located within City street rights-of-way; introduce the potential for revising the Policy to allow modification of regulated SCMs to be eligible for Program funding under certain conditions; and discuss possibly requiring designs and implementation of cistern projects to include passive drawdown of stored water levels to provide runoff retention benefit.

Commission Action: Provide feedback to staff and/or vote to recommend the revised Policy to the City Council.

5:10 **Other Business**



The City of Raleigh

Stormwater Management Advisory Commission

October 5, 2017
3:00 pm

Conference Room 305
Raleigh Municipal Building

Commission Members Present: Matthew Starr, Ken Carper, Vanessa Fleischmann, David Webb, Chris Bostic, Mark Senior, and Francine Durso

Commission Members Absent: Evan Kane and Kevin Yates

Staff Members Present: Blair Hinkle, Kelly Daniel, Suzette Mitchell, Dale Hyatt, Wenju Zhang, Scott Bryant, Veronica High, Kristin Freeman, Scott Smith, Ben Brown, Sheila Thomas-Ambat, Pete Duffy, Justin Harcum, Kevin Boyer, Carrie Mitchell, Janet Boyer, and Jason Palivoda

Guests: Chris Stanley, Keith Compson, Jon Becker, Tony Grubbs, Jim Alberque, and Tim Burr

Meeting called to order: at 3:01 pm by Matthew Starr (*chair*)

1. **Welcome, Introductions, Excused Absences**

- **Mr. Senior** made a motion to excuse Evan Kane and Kevin Yates from today's meeting and **Mr. Bostic** seconded. The motion was approved unanimously.

2. **Approval of the Minutes - September 7, 2017 Meeting**

- **Mr. Webb** made a motion to approve the minutes and **Mr. Senior** seconded. The motion was approved unanimously.

3. **Stormwater Staff Report - Blair Hinkle**

- **Staffing Update**
 - New Inspector - Jason Palivoda (*Engineer Specialist*)
 - New Development Plan Reviewer - Janet Boyer (*Senior Engineer*)
- **Policy Initiative Updates**
 - Lake Preservation Policy - *Remains in City Attorney's Office for review.*
 - Erosion Sediment Control - *Currently bringing the text changes up-to-date with State law. Staff is working to prepare text changes to go through the authorization process.*
 - Guidelines for Land Disturbing Manual - *Will present at next Commission meeting and also will go through the text change process.*
 - Stormwater Utility Fee Credit Manual - *Updates will be incorporated into the stormwater design manual.*
 - Stormwater Cost Share Policy - *Discussion on design parameters at December's Commission meeting.*
- **Duke Energy Diesel Spill**

Pete Duffy (*Illicit Discharge Detection and Elimination Coordinator*) provided the Commission with a summary of the diesel spill at Duke Energy. The Fire Department notified staff that Duke Energy generators (*Wilmington Street*) had discharged 3,500 gallons of diesel fuel in the storm

system on October 1. Pete worked with the Raleigh Fire Department to contain the spill. Some of the sheen from the spill was located at Martin Luther King, Jr., Blvd. at the head of the culvert and most was located at Chavis Park (*between East St. and Martin Luther King, Jr. Blvd.*). Once the consultants (*hired by Duke Energy*) arrived, we checked and found the product was in the storm system and a great majority in the outfall. Our evaluation determined that it was a hose rupture from a generator that kicked on the pump, which started losing pressure and releasing fuel. We started implementing a plan once everything was under control. Environmental Protection Agency (*EPA*) was notified and indicated they would be sending a representative down on Sunday night. On Monday, we all met to come up with a more contingent plan. Between Sunday and Monday morning, 75 percent of the product was picked up, and by Wednesday it was at 98 percent with the storm system completely cleaned out. We will go back to the site tomorrow to have booms set in place as instructed by EPA. We will monitor it through the next few weeks and Duke will be monitoring until next spring. The EPA is closely watching and the State is aware of it.

Blair Hinkle thanked Pete Duffy for his efforts, coordination, and response to this emergency.

4. **Stormwater Program Financial and Rate Modeling Updates**

Wenju Zhang (*Financial Manager*) provided the Commission with a presentation on the Financial Rate Modeling program. The presentation overview consists of:

- *Key Components of Financial Model* – Rate analysis, operating revenue and expenses, fund balance reserves, PAYGO/Capital Improvement Program (*CIP*) funding levels, *CIP* expenditure projections, and revenue/expense assumptions;
- *Components of Financial Policies* – Program/background history, financial/rate model, *CIP* fund balance/reserves and references;
- *Operating and CIP Financial Updates* – FY04-FY17 operating revenues and expenses, FY04-FY17 *CIP* funding (\$104.2 million) and expenditures (\$63.6 million), and current *CIP* financial snapshot encumbrance and available budget equaling \$41.99 million; and,
- *Current Financial-related Priorities* - Review Utility Fee Rate Modeling for FY19 and beyond, finalize financial policies, work with the Stormwater team to finalize anticipated *CIP* capacity and *CIP* output projections using existing budgetary resources coupled with future planned budgetary resources, and begin preparing FY19 budget.

Blair Hinkle pointed out that our finances are monitored closely. Since the inception of the program, the first time a rate increase was done was in FY17. We don't want to get in a financial position where we go a long period of time without a rate increase and then have to do a big rate increase in order to maintain our level of service. We are planning out future small rate increases to keep our level of service consistent, to be responsive to our customers' needs, and to meet City management and Raleigh City Council's expectations.

5. **Regulatory Update: Flood Map Revisions**

Ben Brown stated today's presentation comes from a comment from the Commission several months ago on new preliminary Federal Emergency Management Agency (*FEMA*) maps. The presentation recaps Raleigh's current regulations, floodway and floodway fringe, Raleigh's current and existing maps, preliminary map process, and discussion of the updated *FEMA* maps.

6. **Smart Cities Partnering Project with NCSU MBA 590 Student Team**

Scott Bryant remarked the City of Raleigh has a Smart Cities partnership with North Carolina State University's (*NCSU*) MBA Program and that the representatives from the program will provide an overview of their Smart Cities project. The team is seeking to develop strategies to increase involvement in stormwater management practices at the residential level by working on fee credit and cost share enhancements and communication strategies for the program. It's about the City working with industry and academic leaders, having engaged discussions, and sharing ideas.

Stormwater may be one of the first examples of working with NCSU in a collaborative way on a real project just as this.

Tim Burr (NCSU) explained the project is a management strategy and hands-on practicum. We partner with Stormwater Management in improving adoption of stormwater management practices, coming up with different methodologies for reaching residential communities, and gaining residential community assistance with the stormwater program. The program has two major sections: (1) The analysis piece, which would be looking at political/economic influences, social/technology aimed at how it impacts willingness of residents to adopt independent stormwater management practice, and (2) How do we turn that knowledge and pair it with some goals, success factors, and turn the ideas into a actionable strategy that we can work with. We are zooming in on adoption by residents. **Keith Compson** (NCSU) added they focused on funding associated with the Stormwater Quality Cost Share Program for residents and businesses. They noticed it's well funded but it does not seem to have the volume, so this is where they would fit in and build that awareness. They have resources, but need to find a target market and where to increase the awareness and focus on the particular demographics. They have identified four characteristics of a location (*outlined in agenda packet*). They are looking for feedback from the Commission on where we would find a market like that and how they can better serve the Commission to get residents on board.

Discussion:

Mr. Senior replied the funds are available for usage, but we need to find:

- Those that are interested;
- Those with devices and what motivated them to get it;
- How to get others on board;
- If the cost share percentage motivates them; and,
- Who can buy into the cost share (*residential/commercial/developers/green communities*) and their reasoning for participating.

Tim Burr asked the Commission when reviewing projects have they noticed any common characteristics in terms of location and people.

Mr. Senior said it appears to be people that take a personal interest in water quality, and those who are willing to spend a certain amount of money to make it happen.

Ms. Durso asked staff when people come in how are they aware of these types of projects. **Kevin Boyer** said staff started asking participants how they found out about the program. Also, they found out about the program through communications initiative (*web site, social media*) and by visiting community groups. **Kristin Freeman** added that she's planning on doing a survey of completed projects so we can find out how they found out about the program.

Keith Compson asked when the program was created what was the end goal. **Mr. Senior** replied there were three purposes in mind when created: (1) Opportunity for retrofits, (2) Credit system for those with ponds, cisterns, etc., and (3) Public education awareness for water quality.

Tim Burr mentioned that it appears that Stormwater Management is going to a tiered structure.

Mr. Starr commented that he's excited about the tiered application approval process. He feels you will get a smaller and more densely populated area involved. **Blair Hinkle** added that the new approach offers a more user-friendly experience to participates and creates and more inviting program that gets people beyond the first hurdle.

Tim Burr asked what does it mean to have a successful program. **Blair Hinkle** replied the program would be a success if two conditions are met: (1) More interest in the program and more willingness to participate than we have money, and (2) The projects being built are high quality projects that have significant water quality benefits.

Ms. Fleischmann mentioned that it goes back to awareness and have you considered partnering with realtor associations. **Keith Compson** said they had not considered it, but thinking in terms of a marketing strategy for products, it's a fantastic channel to partner on something like this.

Jim Alberque (*GIS Manager*) said the United States Department of Transportation (*USDOT*) came up with an opportunity for one city to take all beyond traffic smarter cities with a \$50 million grant opportunity. NCSU reached out to the City to provide a proposal and we came up with how we leverage technology sensors and analytics to improve the lives of our citizens through advanced transportation, etc. He gave a brief presentation on what is smart cities, partnerships, collaboration, missed grants, technology, mobility, scenario development, engagement (*citizen*), a vibrant civic tech community, project (*FEMA remapping*), open data and collaboration, and integrating technology with normal interactions.

7. **Drainage Assistance Project – (Waxhaw Court)**

Dale Hyatt provided a presentation to the Commission on the one project up for review and recommendation under the new policy.

Estimated Project Costs	
6109 Waxhaw Court Drainage Improvement	\$73,000
FY18 Project Funds Approved to Date	\$665,000
Total Estimated Project Costs This Period	\$73,000
FY18 Budget	\$1,250,000
FY18 Remaining DA Funds	\$522,000

Mr. Bostic wanted to know if you could install the new pipe to a deeper elevation. **Dale Hyatt** said currently the outlet of the pipe is not deep, so there is enough fall between the area and the pond.

Motion:

Mr. Carper made a motion to approve the project and **Mr. Senior** seconded. The motion was approved unanimously.

8. **Other Business**

Blair Hinkle informed the Commission that staff is working on the Municipal Separate Storm Sewer System (MS4) renewal application. We are working on comments from both the City Attorney and staff. There will be upcoming meetings with the State to discuss permit provisions.

Adjournment: **Mr. Webb** made a motion to adjourn and **Mr. Carper** seconded. The motion was approved unanimously. The meeting adjourned at 4:42 pm.

Suzette Mitchell



TO: Stormwater Management Advisory Commission

FROM: Stormwater Program Manager

DATE: December 7, 2017

SUBJECT: Stormwater Quality Cost Share Petition – 211 Plainview Avenue

MESSAGE:

Chris Sexton petitioning the City for funding assistance in the amount of \$4,901 under the [Stormwater Quality Cost Share Program](#) to remove 690 square feet of impervious surface, remediate the soil, and replace the surface with grass.

The total estimated cost of the project is \$5,445. The project is within the Perry Creek Watershed and is eligible for a 90% City / 10% Petitioner cost share of the acceptable cost per the Stormwater Quality Cost Share Policy.

Staff has evaluated the project in the Integrated Stormwater Management Project Prioritization Model. The proposed project received a Total Project Score (TPS) of 32.4, a Safety Criticality Score (SCS) of 0 and a Mission Criticality Score (MCS) of 32.4 in the model. The total estimated project cost translates to \$340,313 per acre served and \$17,016 per pound of nitrogen removed annually. This is a similar cost to other pavement removal Cost Share projects.

The project has met each of the qualifying criteria for petitions seeking funding from the program:

1. The property owners are paying the stormwater utility fee and there is no outstanding balance.
2. The project is not for compliance with stormwater regulations.
3. Funding is available. The account currently has \$452,346.
4. The property owners agree to a 10-year maintenance term.



TO: Stormwater Management Advisory Commission

FROM: Stormwater Program Manager

DATE: December 7, 2017

SUBJECT: Stormwater Quality Cost Share Petition – 809 Welford Road

MESSAGE:

Robert Mathews is petitioning the City for funding assistance in the amount of \$3,087.20 under the [Stormwater Quality Cost Share Program](#) to reimburse the installment of a 325-gallon underground cistern to collect rooftop runoff from 1,283 square feet of impervious surface. This project has already been installed at the property.

The total cost of the project was \$4,116.26. The project is within the Crabtree Creek Watershed and is eligible for a 75% City / 25% Petitioner cost share of the acceptable cost per the Stormwater Quality Cost Share Policy.

Staff has evaluated the project in the Integrated Stormwater Management Project Prioritization Model. The proposed project received a Total Project Score (TPS) of 26.0, a Safety Criticality Score (SCS) of 0 and a Mission Criticality Score (MCS) of 19.3 in the model. The total estimated project cost translates to \$137,209 per acre served and \$29,402 per pound of nitrogen removed annually. This is an average cost compared to other underground cistern Cost Share projects.

The project has met each of the qualifying criteria for petitions seeking funding from the program:

1. The property owners are paying the stormwater utility fee and there is no outstanding balance.
2. The project is not for compliance with stormwater regulations.
3. Funding is available. The account currently has \$452,346.
4. The property owners agree to a 10-year maintenance term.

Proposed Text Changes for Article 9.4 (Erosion and Sedimentation Control) of the UDO

Current UDO Text	Proposed UDO Text	Explanation/Comments
<p>Sec. 9.4.1. Applicability</p> <p>A. This Article applies to all land-disturbing activities with the following exclusions:</p> <ol style="list-style-type: none"> 1. Land-disturbing activities, including but not limited to, the breeding and grazing of livestock undertaken on agricultural land for the production of plants and animals useful to man, including but not limited to: <ol style="list-style-type: none"> a. Livestock, including beef cattle, sheep, swine, horses, ponies, mules or goats; b. Bees and apiary products; and c. Fur-producing animals. 2. Land-disturbing activities undertaken on forest land for the production and harvesting of timber and timber products and conducted in accordance with Forest Practice Guidelines Related to Water Quality, Title 15A North Carolina Administrative Code, Subarticle 11, sections 1.010-.0209, as adopted by the North Carolina Department of Environment, Health and Natural Resources. If land-disturbing activity undertaken on forestland for the production and harvesting of timber and timber products is not conducted in accordance with best management practices set out in Forest Practice Guidelines Related to Water Quality, Title 15A North Carolina Administrative Code, Subarticle 11, sections 1.010-.0209, the provisions of this Article shall apply to such activity and any related land-disturbing activity on the tract. 3. Activities for which a permit is required under the Mining Act of 1972, N.C. Gen Stat., Chapter 74, Article 7. 4. Land-disturbing activities undertaken for the duration of an emergency, activities essential to protection of human life. 	<p>Sec. 9.4.1. Applicability</p> <p>A. This Article applies to all land-disturbing activities with the following exclusions:</p> <ol style="list-style-type: none"> 1. Land-disturbing activities <u>undertaken on agricultural land relating or incidental to, including but not limited to, the breeding and grazing of livestock undertaken on agricultural land for</u> the production of plants and animals useful to man, including but not limited to: <ol style="list-style-type: none"> a. <u>Crops, including but not limited to, forages and sod-crops, grains and feed-crops, tobacco, cotton and peanuts;</u> a-b. <u>Fruits and vegetables;</u> b-c. <u>Dairy animals and dairy products;</u> c-d. <u>Poultry and poultry products;</u> d-e. <u>Livestock, including, but not limited to, beef cattle, llamas, sheep, swine, horses, ponies, mules, and-or goats;</u> d. Bees and apiary products; and e. <u>Fur-producing animals; and-</u> e-f. <u>Mulch, ornamental plants, and other horticultural products. For purposes of this section, "mulch" means substances composed primarily of plant remains or mixtures of such substances.</u> 2. Land-disturbing activities undertaken on forest land for the production and harvesting of timber and timber products and conducted in accordance with <u>best management practices set out in</u> Forest Practice Guidelines Related to Water Quality, Title 15A North Carolina Administrative Code, Subarticle 11, sections 1.010-.0209, as adopted by the North Carolina Department of Environmental Quality- <u>Health and Natural Resources</u>. If land-disturbing activity undertaken on forestland for the production and harvesting of timber and timber products is not conducted in accordance with best management practices set out in Forest Practice Guidelines Related to Water Quality, Title 15A North Carolina Administrative Code, Subarticle 11, sections 1.010-.0209, the provisions of this Article shall apply to such activity and any related land-disturbing activity on the tract. 3. <u>Land-disturbing a</u>Activities for which a permit is required under the Mining Act of 19721, N.C. Gen. Stat., Chapter 74, Article 7. 4. <u>Land-disturbing activities undertaken for the duration of an emergency, activities essential to protection of human life, including activities specified in an executive order issued under N.C. Gen. Stat. § 166A-19.30(a)(5).</u> 5. <u>Land-disturbing activities undertaken to restore the wetland functions of converted wetlands to provide compensatory mitigation to offset impacts permitted under Section 404 of the Clean Water Act.</u> 4-6. <u>Land-disturbing activities undertaken pursuant to Natural Resources Conservation Service standards to restore the wetlands functions of converted wetlands as defined in Title 7 Code of Federal Regulations § 12.2 (January 1, 2014 Edition).</u> 	<p>A. Add new exemptions per GS113A-52.01</p>
<p>Sec. 9.4.2. Guidelines Incorporated</p>	<p>Sec. 9.4.2. Guidelines Incorporated The Raleigh Guidelines for Land Disturbing Activities and amendments, on file in the City Clerk's Office, is adopted by reference as part of this UDO.</p>	
<p>Sec. 9.4.4 Standards for Land Disturbing Activities</p> <p>A. General Requirements</p> <ol style="list-style-type: none"> 1. Prior Plan Approval <ol style="list-style-type: none"> b. In any Reservoir Watershed Protection Area or for relocation of any natural watercourse or when off-site sedimentation occurs, an approved erosion and 	<p>Sec. 9.4.43 Standards for Land Disturbing Activities</p> <p>A. General Requirements</p> <ol style="list-style-type: none"> 1. Prior Plan Approval <ol style="list-style-type: none"> a. An erosion and sedimentation control plan must be approved by the Engineering Services Director at least 30 days prior to any land-disturbing activity of 12,000 square feet or greater. 	<p>a. Add per GS113A-54.1</p>

Proposed Text Changes for Article 9.4 (Erosion and Sedimentation Control) of the UDO

<p>sedimentation control plan is required for land-disturbing activity in areas below 12,000 square feet.</p>	<p>This does not restrict the initiation of land-disturbing activities when the plan is approved and the permit is issued in less than 30 days from initial submission. Failure to approve, approve with modifications, or disapprove a completed draft erosion and sedimentation control plan within 30 days of receipt shall be deemed approval of the plan.</p> <p>b. <u>When determining the area of land-disturbance, the square footage of land disturbance of all properties being developed as a unit shall be aggregated, regardless of whether under single or diverse ownership.</u></p> <p>c. A surety is required for the total disturbed acreage as identified in the submitted plans. The surety will ensure that stabilization is achieved throughout the disturbed areas in the event the Financially Responsible Party/Owner is unable to complete such task. The surety will be assessed using the following criteria:</p> <p>i. \$2,000/acre of land disturbance rounded to the nearest 1/10 acre.</p> <p>d. <u>An approved erosion and sedimentation control plan is required for land-disturbing activity in areas below 12,000 square feet for the following:-</u></p> <p>i. <u>Land disturbing activity in any Primary Reservoir Watershed Protection Area;</u></p> <p>ii. <u>Relocation of any natural watercourse; or</u></p> <p>iii. <u>Upon the occurrence of off-site sedimentation.</u></p>	<p>b. Add per Section 4f of the Model Ordinance that will cover single family lots in same subdivision and are not adjoining.</p> <p>c. Add surety information from GLDA so it is enforceable through the UDO</p> <p>d. Not consistent with Sec 9.4.6(b). Change to Primary Reservoir Watershed</p>
<p>Sec. 9.4.4 Standards for Land Disturbing Activities A. General Requirements Self-Inspections are not addressed in the current UDO</p>	<p>Sec. 9.4.34 Standards for Land Disturbing Activities A. General Requirements</p> <p>3. More Restrictive Rules Shall Apply <u>Whenever conflicts exist between Federal, state, or local laws, ordinances, regulations or rules, the more restrictive provision shall apply. This includes, but is not limited to, design and performance standards as outlined in the State of North Carolina "Erosion and Sediment Control Planning Design Manual".</u></p> <p>5. Phased Inspections <u>When the area of land disturbance is one (1) acre or greater, the landowner, the financially responsible party, or the landowner's or financially responsible party's agent shall perform an inspection after each phase of an erosion and sedimentation control plan has been completed and after establishment of temporary ground cover in accordance with N.C. Gen. Stat. § 113A-57(2) and Title 15A North Carolina Administrative Code, Subarticle 4B, section .0131.</u></p> <p><u>Documentation of inspections shall submitted to the City and shall be maintained and made available to the City inspector(s) at the site of the land-disturbing activity. The record shall set out any significant deviation from the approved erosion control plan, identify any measures that may be required to correct the deviation, and document the completion of those measures. The record shall be maintained until permanent groundcover has been established and a Certificate of Completion has been issued by the City.</u></p> <p><u>The inspections required by this subsection shall be in addition to any other inspections required by this Article.</u></p>	<p>4. Add per Section 6(q) of Model Ordinance, 15A NCAC 048 .0131, GS 113A-54.1(e)</p>
<p>Sec. 9.4.4 Standards for Land Disturbing Activities B. Adequate Erosion Control Measures</p>	<p>Sec. 9.4.34 Standards for Land Disturbing Activities B. Adequate Erosion Control Measures Adequate erosion control measures shall be provided in accordance with Sec. 9.2.2.E.</p>	<p>Delete this section to add new B(3) below.</p>
<p>Sec. 9.4.4 Standards for Land Disturbing Activities</p>	<p>Sec. 9.4.34 Standards for Land Disturbing Activities</p>	

Proposed Text Changes for Article 9.4 (Erosion and Sedimentation Control) of the UDO

<p>C. Design and Performance Standards and Guidelines Not addressed in this section of the UDO</p>	<p>B. Design and Performance Standards and Guidelines <u>3. For any denuded areas between 5 and 15 acres in size the peak stormwater runoff leaving the site at each discharge point for the two-year storm and 10-year storm shall be no greater during construction than for pre-development conditions.</u> <u>4. For any denuded areas greater than 15 acres in size, the peak stormwater runoff leaving the site at each discharge point for the two-year storm, 10-year storm and 25-year storm shall be no greater during construction than for predevelopment conditions.</u> <u>5. This regulation shall not be applicable when the development site conforms to the following:</u> a. <u>The two-year peak discharge for the disturbed condition, for all points of discharge, is less than 10% of the peak discharge from the contributing watershed as measured at the nearest receiving watercourse .</u></p>	<p>Add here and remove from Sec 9.2 Stormwater Runoff Controls</p>
<p>Sec. 9.4.4 Standards for Land Disturbing Activities</p>	<p>9.3.34 Standards for Land Disturbing Activities G. Stabilization <u>Prior to issuance of Certificate of Completion, permanent stabilization must be attained. When utilizing grass for stabilization, it must be at a mowable height with 100% coverage and 80% growth throughout the site, with no large bare patches or evidence of erosion. Stabilization requirements may prevent the issuance of a Certificate of Occupancy, therefore, if the project is scheduled for completion during a poor growing season or on a short time frame, it is best to plan on utilizing sod.</u></p>	<p>Added new section to capture stabilization requirements that were in GLDA.</p>
<p>Sec. 9.4.4 Standards for Land Disturbing Activities Falls Lake Watershed requirements are not addressed in the current UDO</p>	<p>Sec. 9.4.34 Standards for Land Disturbing Activities K. Falls Lake Watershed Protection Overlay District (-FWPOD) and Swift Creek Watershed Protection Overlay District (-SWPOD) <u>Within the –FWPOD and -SWPOD the following additional design standards shall apply:</u> 1. <u>Erosion and sedimentation control measures, structures, and devices shall be planned, designed, and constructed to provide protection from the runoff of the 25-year storm that produces the maximum peak rate of runoff as calculated according to procedures set out in the United States Department of Agriculture Soil Conservation Service's "National Engineering Field Manual for Conservation Practices" or according to procedures adopted by any other agency of the State or the United States.</u> 2. <u>Sediment basins shall be planned, designed, and constructed so that the basin will have a settling efficiency of at least 70 percent for the 40-micron size soil particle transported into the basin by the runoff of the two-year storm that produces the maximum peak rate of runoff as calculated according to procedures in the United States Department of Agriculture Soil Conservation Service's "National Engineering Field Manual for Conservation Practices" or according to procedures adopted by any other agency of the State or the United States.</u> 3. <u>Newly constructed open channels shall be planned, designed, and constructed with side slopes no steeper than two horizontal to one vertical if a vegetative cover is used for stabilization unless soil conditions permit steeper side slopes or where the side slopes are stabilized by using mechanical devices, structural devices, or other ditch liners sufficient to restrain accelerated erosion. The angle for side slopes shall be sufficient to restrain accelerated erosion.</u> 4. <u>For an area of land-disturbing activity where grading activities have been completed, temporary or permanent ground cover sufficient to restrain erosion shall be provided as soon as practicable, but in no case later than seven calendar days after completion of grading. For an area of land-disturbing activity where grading activities have not been completed, temporary ground cover shall be provided as</u></p>	<p>K. Falls Lake Info Required per 15A NCAC 04B .0132, Added Swift Creek to keep standards consistent between Watersheds</p>

Proposed Text Changes for Article 9.4 (Erosion and Sedimentation Control) of the UDO

	<p>follows:</p> <p>(a) For an area with no slope, temporary ground cover shall be provided for the area if it has not been disturbed for a period of fourteen (14) calendar days.</p> <p>(b) For an area of moderate slope, temporary ground cover shall be provided for the area if it has not been disturbed for a period of ten (10) calendar days. For purposes of this Item, "moderate slope" means an inclined area, the inclination of which is less than or equal to three units of horizontal distance to one unit of vertical distance.</p> <p>(c) For an area of steep slope, temporary ground cover shall be provided for the area if it has not been disturbed for a period of seven (7) calendar days. For purposes of this Item, "steep slope" means an inclined area, the inclination of which is greater than three units of horizontal distance to one unit of vertical distance.</p>																																	
<p>Sec. 9.4.5. Maintenance</p> <p>C. Whenever a permanent erosion and sediment control measure is washed out or is otherwise disabled the land owner or person in possession or control of the land shall replace the permanent erosion and sediment control measure within 15 working days or 30 calendar days, whichever period is shorter, unless a longer period of time is allowed in writing by the Public Works Director.</p>	<p>Sec. 9.4.45. Maintenance</p> <p>C. Whenever a permanent erosion and sediment control measure is washed out or is otherwise disabled the land owner or person in possession or control of the land shall <u>repair or</u> replace the permanent erosion and sediment control measure. within 15 working days or 30 calendar days, whichever period is shorter, unless a longer period of time is allowed in writing by the Public Works Director.</p>	<p>C. Permanent erosion control measure is referenced in 15A NCAC 04B .0113. No reference of time-frame in Model Ordinance or 15A NCAC 04B .0113 and is not consistent with our enforcement time-frame</p>																																
<p>Sec. 9.4.6. Land Disturbing Activity Permit & Control Plans Required</p> <p>D. The following table summarizes the plan approval process required:</p> <table border="1" data-bbox="242 1090 1308 1352"> <thead> <tr> <th></th> <th colspan="3">Size of Site</th> </tr> <tr> <th>Plan required to be prepared and filed with:</th> <th>Less than 12,000 sq ft</th> <th>Between 12,000 sq ft and 1 acre</th> <th>Greater than 1 acre</th> </tr> </thead> <tbody> <tr> <td>City of Raleigh</td> <td>No</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>Plan approval required prior to commencement of land disturbance</td> <td>No</td> <td>Yes</td> <td>Yes</td> </tr> </tbody> </table>		Size of Site			Plan required to be prepared and filed with:	Less than 12,000 sq ft	Between 12,000 sq ft and 1 acre	Greater than 1 acre	City of Raleigh	No	Yes	Yes	Plan approval required prior to commencement of land disturbance	No	Yes	Yes	<p>Sec. 9.4.56. Land Disturbing Activity Permit & Control Plans Required</p> <p>D. The following table summarizes the plan approval process required:</p> <table border="1" data-bbox="1395 1090 2551 1352"> <thead> <tr> <th></th> <th colspan="3">Size of Site</th> </tr> <tr> <th>Plan required to be prepared and filed with:</th> <th>Less than 12,000 sq ft</th> <th>Between 12,000 sq ft and 1 acre</th> <th>Greater than 1 acre</th> </tr> </thead> <tbody> <tr> <td>City of Raleigh</td> <td>No</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td>Plan approval required prior to commencement of land disturbance</td> <td>No</td> <td>Yes</td> <td>Yes</td> </tr> </tbody> </table>		Size of Site			Plan required to be prepared and filed with:	Less than 12,000 sq ft	Between 12,000 sq ft and 1 acre	Greater than 1 acre	City of Raleigh	No	Yes	Yes	Plan approval required prior to commencement of land disturbance	No	Yes	Yes	<p>Delete this table because the City's threshold for land disturbing activity that requires a permit is 12,000 sq ft or greater and does not need to reference an acre threshold</p>
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<p>Sec. 9.4.7. Additional Measures</p> <p>A. Whenever the City determines that off-site sedimentation may occur or is occurring as a result of a previous or on-going land-disturbing activity, despite application and maintenance of protective practices, the person undertaking the land-disturbing activity or the person responsible for maintenance will be required to and shall provide further adequate erosion control measures.</p> <p>B. The Public Works Director shall serve one or more of the following: any person undertaking a land-disturbing activity or the person responsible for maintenance or any of their appointed agents, written notice of violation with this section, specifying the noncompliance.</p> <p>C. Service shall be done in any of the following ways: Registered mail, certified mail return receipt requested, personal service or any other means authorized under N.C. Gen. Stat. §1A-1, Rule 4.</p> <p>D. The notice shall set forth the measures needed to come into compliance and shall state the</p>	<p>Sec. 9.4.67. Additional Measures</p> <p><u>A.</u> Whenever the City determines that off-site sedimentation may occur or is occurring as a result of a previous or on-going land-disturbing activity, despite application and maintenance of protective practices, the person undertaking the land-disturbing activity or the person responsible for maintenance will be required to and shall provide further adequate erosion control measures.</p> <p><u>B.</u> <u>A field revision may be required to install additional measures, and if approved by the City, must be installed within the time period stated for compliance.</u></p> <p><u>A-C.</u> <u>The failure to comply with a notice or approved alternate equivalent measure(s) within the time specified shall be a further violation of this UDO.</u></p> <p>B. The Public Works Director shall serve one or more of the following: any person undertaking a land-disturbing activity or the person responsible for maintenance or any of their appointed agents, written notice of violation with this section, specifying the noncompliance.</p>	<p>B. Add to cover field revision but deleted old B-E because redundant with Sec 9.4.9 and 9.4.11</p>																																

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<p>time within which such compliance must be completed and warn that failure to correct the violation within the time period will result in the additional civil and criminal penalties for a continuing violation. Alternative equivalent measures may be submitted and, if approved by the City, must be completed within the time period stated for compliance.</p> <p>E. In determining the measures required and the time allowed for compliance, the Public Works Director shall take into consideration the economic feasibility, technology, quantity of work required and extent of damage; it shall then set reasonable and attainable time limits for compliance.</p> <p>F. The failure to comply with the notice or approved alternate equivalent measures within the time specified shall be a further violation of this UDO.</p>	<p>C.—Service shall be done in any of the following ways: Registered mail, certified mail return receipt requested, personal service or any other means authorized under N.C. Gen. Stat. §1A-1, Rule 4.</p> <p>D.—The notice shall set forth the measures needed to come into compliance and shall state the time within which such compliance must be completed and warn that failure to correct the violation within the time period will result in the additional civil and criminal penalties for a continuing violation. Alternative equivalent measures may be submitted and, if approved by the City, must be completed within the time period stated for compliance.</p> <p>E.—In determining the measures required and the time allowed for compliance, the Public Works Director shall take into consideration the economic feasibility, technology, quantity of work required and extent of damage; it shall then set reasonable and attainable time limits for compliance.</p> <p>F.—The failure to comply with the notice or approved alternate equivalent measures within the time specified shall be a further violation of this UDO.</p>	
<p>Transfer of Plans New section not addressed in the current UDO</p>	<p>Sec. 9.4.7. Transfer of Plans</p> <p><u>A. The City may transfer an erosion and sedimentation control plan approved pursuant to this section without the consent of the plan holder to a successor-owner of the property on which the permitted activity is occurring or will occur, if all of the following conditions are met:</u></p> <ol style="list-style-type: none"> <u>1. The successor-owner of the property submits to the City a written request for the transfer of the plan and an authorized statement of financial responsibility and ownership, and</u> <u>2. The plan holder is;</u> <ol style="list-style-type: none"> <u>a. A natural person who is deceased; or</u> <u>b. A partnership, limited liability corporation, corporation or any other business association that has been dissolved; or</u> <u>c. A person who has been lawfully and finally divested of title to the property on which the permitted activity is occurring or will occur; or</u> <u>d. A person who has sold the property on which the permitted activity is occurring or will occur; and</u> <ol style="list-style-type: none"> <u>i. The successor-owner holds title to the property on which the permitted activity is occurring or will occur; or</u> <u>ii. The successor-owner is the sole claimant of the right to engage in the permitted activity; or</u> <u>iii. There will be no substantial change in the permitted activity.</u> <u>3. The plan holder shall comply with all terms and conditions of the plan once the plan has been transferred; and</u> <u>4. The successor-owner shall comply with all terms and conditions of the plan once the plan has been transferred</u> 	<p>This section added per GS 113A-61 (b3)</p>
<p>Sec. 9.4.8. Appeals</p>	<p>Sec. 9.4.88. Plan Appeals</p>	<p>Consistent with Model Ordinance Section 17 and don't want to confuse with civil penalty appeals</p>
<p>Sec. 9.4.9. Compliance with Plan Requirements Hand delivery is not addressed in the current UDO</p>	<p>Sec. 9.4.99. Compliance with Plan Requirements</p> <p>D. <u>If the person engaged in the land-disturbing activity has not received a previous notice of violation under this Article, the City shall deliver the notice of violation in person and shall offer assistance in developing</u></p>	<p>Hand delivery requirement per GS</p>

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	<p><u>corrective measures as authorized under N.C. Gen. Stat. § 113A-61.1(c). Assistance may be provided by referral to a technical assistance program in the City, referral to a cooperative extension program, or by the provision of written materials such as City guidance documents. If the City is unable to deliver the notice of violation in person within 15 days following discovery of the violation, the notice of violation may be served in the manner prescribed for service of process by N.C. Gen. Stat. § 1A-1, Rule 4, and shall include information on how to obtain assistance in developing corrective measures as authorized under N.C. Gen. Stat. § 113A-61.1(c).</u></p>	113A-61.1
<p>Sec. 9.4.11. Enforcement A. Civil Penalties</p> <ol style="list-style-type: none"> 1. Any person who violates any of the provisions of this Article, any regulation, rule or order duly adopted pursuant to this Article; or who undertakes or continues a land-disturbing activity for which a soil erosion and sedimentation control plan is required except in accordance with the terms, conditions and provisions of an approved plan shall be subject to the specific civil penalties set forth in Sec. 9.4.11.F. 2. The initial civil penalty shall be assessed from the date of the violation. 3. No penalty shall be assessed until the person alleged to be in violation or their appointed agent is served by registered mail, certified mail-return receipt requested, personal service notice of violation or any other means authorized under N.C Gen. Stat. §1A-1, Rule 4. 4. The notice shall specify a time by which the person must comply with this Article or any regulation, rule or order, duly adopted pursuant to this Article and inform the person of the actions that need to be taken to comply and shall direct the violator to either pay the assessment or contest the assessment within 30 days by filing a petition for a contest case under N.C. Gen. Stat. Chapter 150B, Article 3. 5. In setting the time for compliance, the City shall take into consideration the quantity and complexity of the work, the consequences of delay, the effectiveness of action taken by the violator and the staff investigative costs, but in no event shall the specified time limits be more than 10 consecutive calendar days for compliance, except a shorter time period may be required by the City inspector for an imminent threat to either severely degrade a watercourse or cause severe off-site sedimentation. 6. The notice shall state that failure to correct the violation within the specified time period will result in the additional civil and criminal penalties for a continuing violation. If, after the allotted time period has expired, corrective action has not been completed, the additional civil penalties shall be assessed from the date of the initial violation. Each day of continuing violation thereafter shall constitute a separate violation. 7. The Revenue Collector of the City shall make written demand for payment upon the person in violation and shall set forth the amount of the penalty and the reason for assessing the penalty; the Revenue Collector, for continuous violations, shall send within each 10 day period additional notices to the person in violation. 8. Notice of the assessment shall be by registered or certified mail or any other means authorized under N.C. Gen. Stat. §1A-1, Rule 4. If the payment is not received within 30 days after demand for payment is made, the matter shall be referred to the City Attorney for institution of a civil action in the name of the City, in the appropriate division of the general court of justice in Wake County for recovery of the penalty. Such civil actions must be filed within 3 years of the date the assessment was due. 9. Civil penalties collected pursuant to this provision shall be used or disbursed as directed by law. 	<p>Sec. 9.4.11. Enforcement B. Civil Penalties</p> <ol style="list-style-type: none"> 1. Any person who violates any of the provisions of this Article, any regulation, rule or order duly adopted pursuant to this Article; or who undertakes or continues a land-disturbing activity for which a soil erosion and sedimentation control plan is required except in accordance with the terms, conditions and provisions of an approved plan shall be subject to the specific civil penalties set forth in Sec. 9.4.11.F. 2. <u>The initial civil penalty shall be assessed from the date of the violation.</u> 3. <u>The maximum civil penalty for a violation is five thousand dollars (\$5,000). -In determining the amount of the penalty, the City shall consider the following:</u> <ol style="list-style-type: none"> <u>a. Degree and extent of harm caused by the violation;</u> <u>b. The cost of rectifying the damage;</u> <u>c. The amount of money the violator saved by noncompliance;</u> <u>d. Whether the violation was committed willfully; and</u> <u>e. The prior record of the violation in complying or failing to comply with this Article or UDO.</u> <u>Each day of continuing violation shall constitute a separate violation.</u> 4. <u>No penalty shall be assessed until the person alleged to be in violation or their appointed agent is served by registered mail, certified mail-return receipt requested, personal service notice of violation or any other means authorized under N.C Gen. Stat. §1A-1, Rule 4.</u> 2-5. <u>The notice shall state that failure to correct the violation within the specified time period will result in the additional civil and criminal penalties for a continuing violation. If, after the allotted time period has expired, corrective action has not been completed, the additional civil penalties shall be assessed from the date of the initial violation. Each day of continuing violation thereafter shall constitute a separate violation.</u> 3. 6. <u>The notice shall specify a time by which the person must comply with this Article or any regulation, rule or order, duly adopted pursuant to this Article and inform the person of the actions that need to be taken to comply and shall direct the violator to either pay the assessment or contest the assessment by requesting an Administrative Review by the Stormwater Management Director or his/her designee. The request for Administrative Review must be filed in writing within thirty within (30) days of receipt of the civil penalty notification. by filing a petition for a contest case under N.C. Gen. Stat. Chapter 150B, Article 3.</u> 7. <u>An appeal of the Administrative Review shall be made to the City of Raleigh Board of Adjustments in accordance with UDO Section 10.2.11.</u> 8. <u>An appeal of the Board of Adjustment’s final decision shall be made to the Superior Court of Wake County. Such appeals must be made within 30 days of the final decision of the Board of Adjustment.</u> 9. <u>A request for remission of a civil penalty imposed under this Article may be filed with the Sedimentation Control Commission within 60 days of receipt of the notice of assessment. A remission request must be accompanied by a waiver of the right to a contested case hearing pursuant to Chapter 150B of the General Statutes and a stipulation of the facts on which the assessment was based.</u> 	<p>3. This covers the factors per G.S. 113A-64(3) and model ordinance Section 19(2), but is less than 15A NCAC 04C .0106</p> <p>6. Covers Administrative Review</p> <p>7. Covers Board of Adjustment</p> <p>9. Covers remission request option per GS 113-64.2.</p>

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	<p><u>10. The civil penalty shall be assessed from the date of the violation. When the person has not been assessed any civil penalty under N.C. Gen. Stat. § 113A-64(a), which includes this Article, for any previous violation and that person abated continuing environmental damage resulting from the violation within 180 days from the date of the notice of violation, the maximum cumulative total civil penalty assessed for all violations associated with the land-disturbing activity for which the erosion and sedimentation control plan is required is twenty-five thousand dollars (\$25,000).</u></p> <p>4. In setting the time for compliance, the City shall take into consideration the quantity and complexity of the work, the consequences of delay, the effectiveness of action taken by the violator and the staff investigative costs, but in no event shall the specified time limits be more than 10 consecutive calendar days for compliance, except a shorter time period may be required by the City inspector for an imminent threat to either severely degrade a watercourse or cause severe off-site sedimentation.</p> <p>5-11. The notice shall state that failure to correct the violation within the specified time period will result in the additional civil and criminal penalties for a continuing violation. If, after the allotted time period has expired, corrective action has not been completed, the additional civil penalties shall be assessed from the date of the initial violation. Each day of continuing violation thereafter shall constitute a separate violation.</p> <p>6-12. The Revenue Collector of the City shall make written demand for payment upon the person in violation and shall set forth the amount of the penalty and the reason for assessing the penalty; the Revenue Collector City, for continuous violations, shall send within each 10 day period additional notices to the person in violation.</p> <p>7-13. Notice of the assessment demand for payment shall be served by registered or certified mail or any other any means authorized under N.C. Gen. Stat. §1A-1, Rule 4. If the payment is not received within 30 days after demand for payment is made, the matter shall be referred to the City Attorney for institution of a civil action in the name of the City, in the appropriate division of the general court of justice in Wake County for recovery of the penalty. Such civil actions must be filed within 3 years of the date the assessment was due.</p> <p>8-14. Civil penalties collected pursuant to this provision shall be used or disbursed as directed by law.</p>	<p>10. Captures \$25,000 cap per GS 113A-64(a)(1)</p>
<p>Sec. 9.4.11. Enforcement Not addressed in the current UDO</p>	<p>F. Initial Civil Penalties <u>Initial civil penalties shall be assessed as a one-time penalty due to the violation. The City shall determine the amount of the initial penalty using the factors defined in Section 9.4.11(A)(3) and based on the ranges for specific violation types as defined in Section 9.4.11(F).</u></p>	
<p>Sec. 9.4.11. Enforcement F. Specific Civil Penalties Civil penalties for specific violations of this Article shall be assessed as follows:</p> <ol style="list-style-type: none"> Grading without a permit. \$5,000 per day for failure to secure a valid required grading permit prior to conducting a land-disturbing activity. Grading beyond the limits of a grading plan. \$1,000 per day per 1/10 of a graded acre beyond the limits of an existing grading permit without the approval of an amended grading permit, but not to exceed \$7,000 per day. Failure to protect. \$5,000 per day for failure to take all reasonable measures to protect public property or private property, from damage caused by the failure to retain sediment on-site for the design storm. 	<p>G. Specific Accruing Civil Penalties <u>Accruing C</u>civil penalties for specific violations of this Article shall be assessed as follows:</p> <ol style="list-style-type: none"> Grading without a permit. \$500 - \$5,000 per day for failure to secure a valid required grading permit prior to conducting a land-disturbing activity. Grading beyond the limits of a grading plan. \$100 - \$1,000 per day per 1/10 of a graded acre beyond the limits of an existing grading permit without the approval of an amended grading permit, but not to exceed \$57,000 per day. Failure to protect. \$500 - \$5,000 per day for failure to take all reasonable measures to protect public property or private property, from damage caused by the failure to retain sediment on-site for the design storm. 	<p>Cannot have specific penalties per GS 113A-64(a)(3) but rather has to be based on the factors in new Civil Penalties B.3 above hence establishing the range</p>

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<p>4. Failure to follow plan. \$3,000 per day for failure to conduct a land-disturbing activity in accordance with the provisions of an approved erosion and sedimentation control plan.</p> <p>5. Failure to install devices. \$5,000 per day for failure, when more than 1 acre is disturbed, \$2,500 per day when 1 acre or less than 1 acre is disturbed, to install erosion and sedimentation control devices sufficient to retain the sediment generated by the land-disturbing activity within the boundaries of the tract(s) and prevent off-site sedimentation.</p> <p>6. Failure to maintain permanent and/or temporary measures. \$2,500 per day for failure to maintain adequate erosion control measures.</p> <p>7. Failure to properly maintain slopes and fills. \$2,500 per day for failure on graded slopes and fills to maintain an angle sufficient to retain vegetative cover or other adequate erosion control measures.</p> <p>8. Failure to protect exposed slopes. \$2,500 per day for failure, within 15 working days or 30 calendar days of completion of any phase of grading, whichever period is shorter, to plant or otherwise provide exposed, graded slopes or fills with ground cover, devices or structures sufficient to restrain erosion.</p> <p>9. Failure to provide adequate cover. \$2,500 per day for failure on a tract when more than 1 acre is disturbed, \$1,200 dollars per day when 1 acre or less than 1 acre is disturbed, to plant or otherwise provide ground cover sufficient to restrain erosion within 15 working days or 60 calendar days, whichever period is shorter, following completion of construction or development.</p> <p>10. Failure to revise plan. \$2,500 per day for failure to file an acceptable, revised erosion and sedimentation control plan within the established deadline after being notified of the need to do so.</p> <p>11. Failure to correct a violation after notice. \$5,000 dollars per day for failure to correct a violation within the time limitations established in a notice of violation.</p> <p>12. Failure to obey a stop-work order. \$5,000 per day for a violation of a stop-work order.</p> <p>13. Any other action or failure to act that constitutes a violation of this Article. \$2,500 per day for any other action or failure to act that constitutes a violation of this Article.</p> <p>14. Failure to keep dirt and mud of public streets. \$1,000 per day for failure to prevent the accumulation of dirt, mud or both on public streets in violation of this Article plus 1 dollar per every 6 linear feet of street if cleaned by the City, its employees or its contractors.</p> <p>15. An additional civil penalty of \$1,000 per day shall be charged to any person assessed a civil penalty for any violation of this Article within the prior 2 years. No initial civil penalty shall exceed \$7,500; this limitation shall be inapplicable to continuous violations.</p>	<p>19. Failure to follow plan. \$300 - \$3,000 per day for failure to conduct a land-disturbing activity in accordance with the provisions of an approved erosion and sedimentation control plan.</p> <p>20. Failure to install devices. \$500 - \$5,000 per day for failure, when more than 1 acre is disturbed, \$250 - \$2,500 per day when 1 acre or less than 1 acre is disturbed, to install erosion and sedimentation control devices sufficient to retain the sediment generated by the land-disturbing activity within the boundaries of the tract(s) and prevent off-site sedimentation.</p> <p>21. Failure to maintain permanent and/or temporary measures. \$250 - \$2,500 per day for failure to maintain adequate erosion and sedimentation control measures.</p> <p>22. Failure to properly maintain slopes and fills. \$250 - \$2,500 per day for failure on graded slopes and fills to maintain an angle sufficient to retain vegetative cover or other adequate erosion control measures.</p> <p>23. Failure to protect exposed slopes. \$250 - \$2,500 per day for failure, within 14 calendar days 15 working days or 30 calendar days of completion of any phase of grading, whichever period is shorter, to plant or otherwise provide exposed, graded slopes or fills with ground cover, devices or structures sufficient to restrain erosion.</p> <p>24. Failure to provide adequate cover. \$250 - \$2,500 per day for failure on a tract when more than 1 acre is disturbed, \$1,200 dollars per day when 1 acre or less than 1 acre is disturbed, to plant or otherwise provide ground cover sufficient to restrain erosion within 14 calendar days 15 working days or 60 calendar days, whichever period is shorter, <u>of temporarily or permanently suspending the land disturbing activity and</u> following completion of construction or development.</p> <p>25. Failure to revise plan. \$250 - \$2,500 per day for failure to file an acceptable, revised erosion and sedimentation control plan within the established deadline after being notified of the need to do so.</p> <p>26. Failure to correct a violation after notice. \$500 - \$5,000 dollars per day for failure to correct a violation within the time limitations established in a notice of violation.</p> <p>27. Failure to obey a stop-work order. \$500 - \$5,000 per day for a violation of a stop-work order.</p> <p>28. Any other action or failure to act that constitutes a violation of this Article. \$250 - \$2,500 per day for any other action or failure to act that constitutes a violation of this Article.</p> <p>29. Failure to keep dirt and mud of public streets. \$100 - \$1,000 per day for failure to prevent the accumulation of dirt, mud or both on public streets in violation of this Article plus 1 dollar per every 6 linear feet of street if cleaned by the City, its employees or its contractors.</p> <p>An additional civil penalty of \$1,000 per day shall be charged to any person assessed a civil penalty for any violation of this Article within the prior 2 years. No initial civil penalty shall exceed \$7,500; this limitation shall be inapplicable to continuous violations.</p>	<p>14 calendar days is consistent with Sec 9.4.4 D and F</p> <p>Cannot have a cap on initial civil penalty per GS113A</p>
<p><u>Sec. 9.4.13 Order of Abatement</u> Not addressed in the current UDO</p>	<p><u>When a violation of this Article occurs, the City may apply to the appropriate division of the General Court of Justice for a mandatory or prohibitory injunction and order of abatement. The order of abatement may direct that any action be taken that is necessary to bring the property into compliance with this Article. Whenever a party fails or refuses to comply with an order of abatement within the time allowed by the court, the party may be cited for contempt, and the City may execute the order of abatement. The City shall have a lien on the property for the cost of executing the order of abatement in the nature of a mechanic's and materialman's lien. The party may secure cancellation of the order of abatement by paying all costs of the proceedings and posting a bond for compliance with the order. The bond shall be given with sureties approved by the clerk of superior court in an amount approved by the judge before whom the matter was heard and shall be conditioned on the party's full compliance with the terms of the order of abatement within a time fixed by the judge. Cancellation of an order of abatement shall not suspend or cancel an injunction issued in conjunction with any order of abatement.</u></p>	

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<p>Sec. 11.4.1 Permit Requirements Not addressed in the current UDO</p> <p>A. Building Permit The permit required shall conform to the provisions of the North Carolina Administration and Enforcement Requirement Code.</p> <p>B. Plumbing Permit The permit required shall conform to the provisions of the North Carolina Administration and Enforcement Requirement Code and requirements of the City of Raleigh Public Utilities Handbook.</p> <p>C. Mechanical Permit The permit required shall conform to the provisions of the North Carolina Administration and Enforcement Requirement Code.</p> <p>D. Electrical Permit The permit required shall conform to the provisions of the North Carolina Administration and Enforcement Requirement Code.</p> <p>E. Fire Protection Permit The permit required shall conform to the provisions of the North Carolina Administration and Enforcement Requirement Code.</p> <p>F. Flood Permit 1. No person within floodprone areas shall change the existing condition of any land or part thereof, or place, erect, construct, enlarge, reconstruct, move or alter any building or structure or driveway, manufactured home pad, or dike, levee, or fence wall or automobile parking area, or outdoor play equipment, or pole (lighting, etc.) or storage facility (above or below ground), or part thereof without a flood permit. Excavating, filling, drilling, dredging, grading, quarrying, paving, or improving the land is a change in the existing condition of land. 2. No permit will be issued until the applicant certifies that all necessary permits required by Federal or state law have been received; provided nothing herein shall be deemed to require a permit for agricultural land production of plants and fibers, forestland production and harvesting, and activities undertaken by the State, railroads, and utility companies allowed in N.C.G.S. 143-215.54. 3. Three sets of detailed plans and specifications shall accompany each application for a flood permit or building permit when the fill, building or structure is located within floodprone areas, or when the estimated reasonable cost of the building or structure is in excess of \$20,000.00, or for any other building or structure when plans and specifications are deemed necessary by the Department of Inspections in order for it to determine whether the proposed work complies with the City Code and the laws of the State. 4. Plans shall be drawn to scale with sufficient clarity to indicate the nature and extent of the work proposed; and the plans and specifications together shall contain information sufficient to indicate that the work proposed will conform to the provisions of this chapter, the appropriate regulatory and</p>	<p>A. Building Permit The permit required shall conform to the provisions of the North Carolina Administration and Enforcement Requirement Code.</p> <p>B. Plumbing Permit The permit required shall conform to the provisions of the North Carolina Administration and Enforcement Requirement Code and requirements of the City of Raleigh Public Utilities Handbook.</p> <p>C. Mechanical Permit The permit required shall conform to the provisions of the North Carolina Administration and Enforcement Requirement Code.</p> <p>D. Electrical Permit The permit required shall conform to the provisions of the North Carolina Administration and Enforcement Requirement Code.</p> <p>E. Fire Protection Permit The permit required shall conform to the provisions of the North Carolina Administration and Enforcement Requirement Code.</p> <p>F. Flood Permit 1. No person within floodprone areas shall change the existing condition of any land or part thereof, or place, erect, construct, enlarge, reconstruct, move or alter any building or structure or driveway, manufactured home pad, or dike, levee, or fence wall or automobile parking area, or outdoor play equipment, or pole (lighting, etc.) or storage facility (above or below ground), or part thereof without a flood permit. Excavating, filling, drilling, dredging, grading, quarrying, paving, or improving the land is a change in the existing condition of land. 2. No permit will be issued until the applicant certifies that all necessary permits required by Federal or state law have been received; provided nothing herein shall be deemed to require a permit for agricultural land production of plants and fibers, forestland production and harvesting, and activities undertaken by the State, railroads, and utility companies allowed in N.C.G.S. 143-215.54. 3. Three sets of detailed plans and specifications shall accompany each application for a flood permit or building permit when the fill, building or structure is located within floodprone areas, or when the estimated reasonable cost of the building or structure is in excess of \$20,000.00, or for any other building or structure when plans and specifications are deemed necessary by the Department of Inspections in order for it to determine whether the proposed work complies with the City Code and the laws of the State. 4. Plans shall be drawn to scale with sufficient clarity to indicate the nature and extent of the work proposed; and the plans and specifications together shall contain information sufficient to indicate that the work proposed will conform to the provisions of this chapter, the appropriate regulatory and technical codes, the City Code, and the laws of the State.</p> <p>G. Stub Permit</p>	<p>Expiration of land disturbing permit was inadvertently omitted when transitioning from old code to UDO.</p> <p>15A NCAC 04B .0129 states an erosion control plan shall expire three years following the date of approval</p> <p>GS 160A-418 GS 160A-417</p>
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Proposed Text Changes for Article 9.4 (Erosion and Sedimentation Control) of the UDO

<p>technical codes, the City Code, and the laws of the State.</p> <p>G. Stub Permit The permit shall conform to the provisions of the City of Raleigh Public Utilities Handbook.</p> <p>H. Zoning Permit A zoning permit is required for all plot plans and site plans.</p> <p>I. Permit Expiration Any permit issued pursuant to <i>Sec. 11.4.1.</i>, unless otherwise provided, shall expire 6 months after the day of issuance if the work authorized by the permit has not commenced. If after commencement, the work is discontinued for a period of 12 months, the permit shall, therefore, immediately expire. A permit shall not expire or be revoked because of the running of time while a vested right under <i>Sec. 10.2.19.</i> is outstanding. The duration of a land-disturbing activity permit shall be exempt from this section.</p>	<p>The permit shall conform to the provisions of the City of Raleigh Public Utilities Handbook.</p> <p>H. Zoning Permit A zoning permit is required for all plot plans and site plans.</p> <p><u>I. Land Disturbing Permit</u> <u>A land disturbing permit is required for any land disturbing activity that is 12,000 sq ft or greater.</u></p> <p><u>J. Permit Expiration</u> Any permit issued pursuant to <i>Sec. 11.4.1.</i>, unless otherwise provided, shall expire 6 months after the day of issuance if the work authorized by the permit has not commenced. If after commencement, the work is discontinued for a period of 12 months, the permit shall, therefore, immediately expire. A permit shall not expire or be revoked because of the running of time while a vested right under <i>Sec. 10.2.19.</i> is outstanding. The duration of a land-disturbing activity permit shall be exempt from this section.</p>	
	<p><u>Person</u> <u>Any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, interstate body, or other legal entity.</u></p>	<p>Define “person” as it relates to the hand delivery requirement and transfer of permits.</p>

Proposed Changes to the Guidelines for Land Disturbing Activities Manual

Current GLDA Section	Proposed GLDA text	Justification for modification
Section 2.1.2 Watercourse Buffer Permits	<p><u>In the event a buffer location is contested, a buffer letter from DWR will be required to be submitted prior to the City issuing a permit for the proposed project. No grading or building activity is allowed within the contested buffer area unless specifically stated in the DWR letter that this area is “Not Subject” to the Neuse River riparian buffer rules.</u></p>	<p>The only option for obtaining a building permit with the City was if the buffer was being impacted and requiring approval from DWR.</p> <p>However, another option is that the feature identified on the USGS map and/or soil survey is “Not Subject” to the buffer rules.</p>
Section 2.1.4.2 Stand Alone Permits	<p>SWT permits designated as “Stand Alone” are issued for construction of multiple unit buildings such as townhomes, apartments, etc. and can be issued for individual commercial buildings. As each building/unit is completed, the area around the building must be stabilized/landscaped before the CO is approved for that building. The final inspection and approval of the “Stand Alone” to release the CO for the <u>last</u> unit or building cannot occur until the <u>entire</u> site is in compliance and temporary measures have been removed. This includes <u>permanent stabilization (see Section 5.9 for permanent stabilization/ground cover requirements) establishing ground cover</u> and City written acceptance of any required flood certifications and/or permanent stormwater <u>BMP-SCM</u> as-built’s and engineer’s certifications.</p>	<p>Stabilization is important part of closing out a project and issuing a Certificate of Occupancy so wanted to put more emphasis on this.</p>
Section 2.3.1 NPDES Stormwater Permits	<p>NPDES Construction Stormwater Permits</p> <p>All development projects in North Carolina that disturb an acre or more<u>greater</u> of land require a local or state approved Erosion and Sedimentation Control (E&SC) plan and a NPDES <u>NCG010000</u> permit. <u>Plan submittals require that outlet structures withdraw from the surface for areas draining an acre or greater and a separate plan sheet to address NPDES groundcover requirements.</u> If the City approved plan includes these additional conditions of the <u>DWQ-NPDES</u> permit, the project will be deemed covered by the <u>DWQ-NPDES</u> Stormwater General Permit NCG010000 for construction-related activities. Plan submittals require a separate sheet to address NPDES requirements.The NPDES general permit will be provided to the customer at the pre-construction meeting and can also be downloaded from the <u>-DEMLR/DWQ</u> web site.</p> <p><u>During construction a rain gauge, in good working order, must be on-site. A written record of daily rainfall amounts shall be retained and all records shall be made available to DEMLR.</u></p> <p><u>All erosion and sedimentation control measures must be inspected by or under the direction of the permittee at least once every seven calendar days or within 24 hours after a storm event of greater than 0.50 inch of rain per 24 hour period. Inspection and monitoring records for activities covered under the NCG010000 Permit can to be documented using the DEMLR Combined Self-Monitoring Form. These inspection reports are not required to be submitted to DEMLR, but the last 30 days of reports must be maintained on site and provided to DEMLR upon request. The NCG01000 Permit is administered and enforced by DEMLR. However, per City UDO, all reports generated under the NPDES stormwater permit must be submitted to the City.</u></p>	<p>Added surface withdrawal requirements (per Section II.B.4 of the NCG010000 permit).</p> <p>Added separate NPDES plan sheet with groundcover requirements (per Section II.B.2 of the NCG010000 permit).</p> <p>Added per Section II.B.3(a)&(b) of the NCG010000 permit</p> <p>Added per Section II.B.3(c) of the NCG010000 permit</p>
New Section	<p>2.3.3.2 Single Family Lot Impervious Coverage</p> <p>In November 2016, the City of Raleigh began implementing impervious thresholds for single family lots that were previously exempt from Stormwater requirements.</p> <p>The impervious thresholds are based on the Zoning District and are as follows:</p>	<p>Added due to adoption of TC-2-2016 in November 2016.</p>

Proposed Changes to the Guidelines for Land Disturbing Activities Manual

	<p>R-1.....20% R-2.....25% R-4.....38% R-6.....51% R-10 and all other base zoning districts.....65%</p> <p>Any subject lot with an existing detached single family home or duplex (as of November 27, 2016) is entitled to an additional 400 square feet (sf.) above the existing impervious square footage or maximum impervious limitation (whichever is greater) provided that the home still exists when the 400 sf. of additional impervious area is added to the lot. Any lot that is entitled to this allowance may add up to that 400 sf. of impervious area without needing to perform a flood study or install a stormwater device. However, a stormwater tracking permit will be issued and an as-built impervious survey may be required prior to final inspection.</p> <p>There are two options that may be used by a property owner wishing to exceed the maximum impervious limitations of a lot:</p> <p>Stormwater Analysis: Applicants provide a stormwater analysis showing that there will not be an adverse impact on downstream properties. More specifically, the study indicates that there will be no more than a 0.04 foot (ft.) rise in flood levels for the 2, 10, 25, 50, and 100-year storm events. There is a cost of \$1,175 and a 30-day review associated with this study. A stormwater tracking permit will also be issued and an as-built impervious survey is required prior to final inspection.</p> <p>Volume Control Device: Applicants may install a stormwater device to capture the difference in volume between the proposed post-development and the maximum impervious limit (or existing condition, whichever is greater) for the 90th percentile storm (1.4 inches of rainfall in a 24-hour period). A planning tool for homeowners or developers is available. An operations and maintenance (O&M) manual and deeded easement are required as is a stormwater facility replacement fund payment (equal to 24% of the estimated cost of construction). A stormwater tracking permit will be issued and an as-built impervious survey is required prior to final inspection.</p>	
<p>Old Section 2.3.1 Self-Inspections</p>	<p>2.3.4 <u>Phased Inspections</u> All sites that disturb an acre or greater of land must self-inspect their project after each phase is completed per G.S. 113A-54.1. Phases to be inspected include:</p> <ul style="list-style-type: none"> • Installation of perimeter erosion and sediment control measures; • Clearing and grubbing of existing ground cover; • Completion of any phase of grading of slopes or fills; • Installation of storm drainage facilities; • Completion of construction or development; and/or • Establishment of permanent ground cover sufficient to restrain erosion. 	<p>This is now required to be implemented by the City per GS113A-57(2)</p>

Proposed Changes to the Guidelines for Land Disturbing Activities Manual

	<p>The inspections are to be documented using the NC Division of Energy, Mineral and Land Resources (DEMLR) Combined Self-Monitoring Form. Documentation of these inspections must be submitted to the City and must be made available to the City inspector(s) at the site of the land-disturbing activity.</p> <p><u>When the area of land disturbance is one (1) acre or greater, the landowner, the financially responsible party, or the landowner's or financially responsible party's agent shall perform an inspection after each phase of an erosion and sedimentation control plan has been completed and after establishment of temporary ground cover in accordance with N.C. Gen. Stat. § 113A-57(2) and Title 15A North Carolina Administrative Code, Subarticle 4B, section .0131.</u></p> <p><u>Documentation of inspections shall submitted to the City and shall be maintained and made available to the City inspector(s) at the site of the land-disturbing activity. The record shall set out any significant deviation from the approved erosion control plan, identify any measures that may be required to correct the deviation, and document the completion of those measures. The record shall be maintained until permanent groundcover has been established and a Certificate of Completion has been issued by the City.</u></p> <p><u>The inspections required by this subsection shall be in addition to any other inspections required by this Article.</u></p>	<p>This language has been reviewed by the City Attorney's Office and has been incorporated into the UDO.</p>
<p>Section 3.6 Construction Sequence</p>		<p>Deleted the example construction sequence because design engineers were using verbatim and weren't making their sequences site specific.</p>
<p>Section 3.7.2 Certifications & As-builts</p>	<p>Certification by an appropriate design professional of each stormwater <u>SCMBMP</u>, as-built plans, and City staff acceptance of <u>SCMBMP(s)</u> are required prior to final approval of a SWT permit, which is tied to the CO on a building. The as-built plans and certification (Form 511) must be signed and sealed by an appropriate design professional and all applicable checklist items must be included. The as-built plans must show field location, size, depth and planted vegetation of all stormwater structures and devices as installed. The plans must identify, in tabular form, the acreage of impervious area, pervious or managed open space, and permanently protected open space. <u>Form 503, completed by the City inspector, must be included in the as-built submittal. This form requires that the area draining to the SCM is stabilized, the SCM is stabilized, and the SCM has been installed/converted and is functioning.</u></p>	<p>Added new as-built submittal requirement</p>

Proposed Changes to the Guidelines for Land Disturbing Activities Manual

<p>old Section 3.9.1 Design Standards</p>	<p>3.9.1 Common Design Standards and Supporting Documentation</p> <p>The items listed below are frequently overlooked and should be included with supporting documentation for any erosion control plan.</p> <ul style="list-style-type: none"> • Financial Responsibility Ownership Form • Stormwater quantity, quality and erosion control calculations • Existing and proposed grades • Project, property, disturbed area and floodplain boundaries • Offsite conditions • Standard details • Size and length-to-width ratio for sediment basins • Construction sequence on erosion control plans • Lack of City of Raleigh standard detail drawings (can be downloaded from the City web site) <p>Please refer to the appropriate chapters of the North Carolina Erosion and Sediment Control Planning and Design Manual as identified beside each subject: for design standards and supporting information.</p> <table border="1" data-bbox="1010 883 1752 1064"> <thead> <tr> <th>Subject</th> <th>Chapter*</th> </tr> </thead> <tbody> <tr> <td>Ditch analysis</td> <td>6.20</td> </tr> <tr> <td>Required stabilization</td> <td>8.05</td> </tr> <tr> <td>Silt fence slope requirements</td> <td>6.62</td> </tr> <tr> <td>Slope drains</td> <td>6.32</td> </tr> </tbody> </table> <p><i>*North Carolina Erosion and Sediment Control Planning and Design Manual</i></p> <p>Additional items listed below are required, but are frequently overlooked or submitted in an incomplete or insufficient state:</p> <ul style="list-style-type: none"> • Financial Responsibility Ownership Form • Stormwater quantity, quality and erosion control calculations • Existing and proposed grades • Project, property, disturbed area and floodplain boundaries • Offsite conditions • Standard details • Size and length to width ratio for sediment basins • Construction sequence on erosion control plans • Lack of City of Raleigh standard detail drawings (can be downloaded from the City web site) 	Subject	Chapter*	Ditch analysis	6.20	Required stabilization	8.05	Silt fence slope requirements	6.62	Slope drains	6.32	<p>Added information that was previously in the Section 3.9.2 and added them to the Section 3.9.1 Common Design Standards and Supporting Documentation Section.</p> <p>Removed specific chapter references and kept it more general to refer to NC Erosion and Sediment Control Planning and Design Manual</p>
Subject	Chapter*											
Ditch analysis	6.20											
Required stabilization	8.05											
Silt fence slope requirements	6.62											
Slope drains	6.32											
<p>3.9.2 Supporting Documentation</p>	<p>Deleted</p>	<p>Added information to Section 3.9.1</p>										

Proposed Changes to the Guidelines for Land Disturbing Activities Manual

<p>4.2.1 Surety for Grading Permit</p>	<p>Prior to the issuance of a grading permit ($\geq 12,000$ sq. ft. of land disturbance), a surety is required for the total disturbed acreage as identified in the submitted plans. The surety will ensure that stabilization is achieved throughout the disturbed areas in the event the Financially Responsible Party/Owner is unable to complete such task. The surety will be assessed using the following criteria:</p> <ul style="list-style-type: none"> • \$12,000/acre of land disturbance rounded to the nearest 1/10 acre. • For example: Land disturbance = 1.12 acres: Surety = \$12,000 <p>The surety shall be released once the site is stabilized with, when utilizing grass, a sufficient amount of groundcover to prevent eroding or permanent mowable vegetation with 100% coverage and 80% growth with no large bare patches or evidence of erosion.</p>	<p>When we established \$1000 for surety we had not done thorough research. We have looked at other local programs throughout the state and have numbers that would support \$2000/acre for stabilization surety.</p>										
<p>Section 4.3.2 Single Family Residential Construction</p>	<p>Silt fence and a stabilized construction entrance are required for all single family construction projects, even if the disturbed area is less than the 12,000 sq. ft. threshold for obtaining a grading permit. The required construction entrance should be at least twelve (102) feet wide or the width of the proposed driveway and twenty five (205) feet long. Silt fence is always required on the low side(s) of the lot and along the front of the lot (regardless of landscape position) to restrict access to the construction entrance. In addition, silt fence should be installed along all watercourse buffers to prevent off-site sedimentation. At a minimum, the installation of erosion and sediment control measures must be equal to or exceeding standards shown on the City standard details, which are available on the City web site.</p>	<p>City standard detail for 12'x20' Residential Construction Entrance was adopted 9/1/2013</p> <p>Silt fence placement at the front of lot to restrict access to construction entrance has always been required in</p>										
<p>Section 5.9 Groundcover</p>	<p>Ground cover is the best erosion control measure available and groundcover requirements are taken very seriously. It is important to understand the ground cover requirements that apply to your site. These should be clearly presented in the construction sequence on the approved plans.</p> <p>Where grass is utilized as permanent ground cover, it must be at a mowable height with 100% coverage and 80% growth throughout the site, with no large bare patches or evidence of erosion for the Final Inspection to be approved. that generally provides at least 80% coverage throughout the site, with no large bare patches or evidence of erosion. <u>Permanent groundcover requirements can hold up a CO so if</u> the project is scheduled for completion during a poor growing season or on a short time frame, it is best to plan on utilizing sod. <u>Please see the table below the minimum standards for slope stabilization.</u></p> <table border="1" data-bbox="764 1366 1743 1554"> <thead> <tr> <th><u>Minimum Requirement</u></th> <th><u>Slope</u></th> </tr> </thead> <tbody> <tr> <td><u>Stabilized with grass</u></td> <td><u>3:1 and Flatter</u></td> </tr> <tr> <td><u>Stabilized with shrubs or vines</u></td> <td><u>3:1 to 2:1</u></td> </tr> <tr> <td><u>Stabilized with rip-rap</u></td> <td><u>2:1 to 1.5:1</u></td> </tr> <tr> <td><u>Stabilized with retaining wall</u></td> <td><u>Steeper than 1.5:1</u></td> </tr> </tbody> </table>	<u>Minimum Requirement</u>	<u>Slope</u>	<u>Stabilized with grass</u>	<u>3:1 and Flatter</u>	<u>Stabilized with shrubs or vines</u>	<u>3:1 to 2:1</u>	<u>Stabilized with rip-rap</u>	<u>2:1 to 1.5:1</u>	<u>Stabilized with retaining wall</u>	<u>Steeper than 1.5:1</u>	<p>This is what we have been implementing it just was written this clearly before.</p>
<u>Minimum Requirement</u>	<u>Slope</u>											
<u>Stabilized with grass</u>	<u>3:1 and Flatter</u>											
<u>Stabilized with shrubs or vines</u>	<u>3:1 to 2:1</u>											
<u>Stabilized with rip-rap</u>	<u>2:1 to 1.5:1</u>											
<u>Stabilized with retaining wall</u>	<u>Steeper than 1.5:1</u>											
<p>6.5.4 Stormwater Tracking Permits</p>	<p>For nutrient offset payment and BMP-SCM SWT permits, a certification is required to be submitted (see Section 3.7.2 for certification and as-built submittal requirements) and written acceptance provided by the City for each stormwater SCMBMP prior to scheduling the Final Inspection. The certification(s) must be submitted to the stormwater inspector or stormwater plan reviewer a minimum of seven (7) calendar days prior to scheduling the inspection and must be accepted before the inspection will be performed.</p>											

Proposed Changes to the Guidelines for Land Disturbing Activities Manual

	<p>For Stand Alone SWT permits, the area around each building must be stabilized/landscaped before the Final Inspection can be approved and the CO released. The Final Inspection and approval of the Stand Alone permit to release the CO for the <u>last</u> unit or building cannot occur until the <u>entire</u> site is in compliance and temporary measures have been removed. This includes establishing <u>permanent ground cover/groundcover stabilization</u> (see Section 5.9 for <u>permanent</u> groundcover requirements) and City written acceptance of any required flood certifications and/or permanent stormwater <u>BMP-SCM</u> as-built and engineer’s certifications <u>acceptance</u>.</p> <p><u>For single family impervious coverage SWT permits, as-built impervious surveys may be required prior to the Final Inspection approval and CO release (if applicable).</u></p>	<p>Added for new TC-2 requirements</p>
<p>Section 6.9 Penalties</p>	<p><u>The amount of the initial penalty depends on the violation and a set of factors as defined by NCGS 113A-64 is set by the Raleigh City Code. The inspector does not have any leeway in the amount of the penalties. The fines start at \$1,000 and go up to \$5,000 for the initial penalty. Up to An additional \$5,000 per day may accrues from the initial date of violation until the item(s) are corrected. An assessment for the initial penalty is sent when the NOCV is issued. A final assessment with the total penalties is issued once the site is brought back into compliance. A list of common violations and associated penalties can be found in Part 10, Section 10-5014 Section 9.4 of the Raleigh City UDCode and also in Appendix 8.8.</u></p>	<p>Added per NCGS 113A-64, also incorporated into UDO text changes</p>
<p>Section 6.10 Appeals</p>	<p><u>One can contest a civil penalty assessment by requesting an Administrative Review by the Stormwater Mangement Director or his/her designee. The request for Administrative Review must be filed in writing within thirty within (30) days of receipt of the civil penalty notification.</u></p> <p><u>An appeal of the Administrative Review shall be made to the City of Raleigh Board of Adjustments in accordance with UDO Section 10.2.11. An appeal of the Board of Adjustment’s final decision shall be made to the Superior Court of Wake County. Such appeals must be made within 30 days of the final decision of the Board of Adjustment.</u></p> <p><u>A request for remission of a civil penalty imposed under GS 113A-64 may be filed with the Sedimentation Control Commission within 60 days of receipt of the notice of assessment. A remission request must be accompanied by a waiver of the right to a contested case hearing pursuant to Chapter 150B of the General Statutes and a stipulation of the facts on which the assessment was based. Article 3 of Chapter 150B of the General Statutes provides a process for penalties to be appealed within 30 days of issuance. A petition must be filed with the North Carolina Office of Administrative Hearings (OAH). See www.NCOAH.com for further details.</u></p>	<p>Incorporated into UDO text changes</p> <p>Added per GS113A-64</p>
<p>Section 6.12 Service of Enforcement Actions</p>	<p><u>If the person engaged in the land-disturbing activity has not received a previous notice of violation under this Article, the City shall deliver the notice of violation in person and shall offer assistance in developing corrective measures as authorized under NC GS 113A-61.1(c). If the City is unable to deliver the notice of violation in person within 15 days following discovery of the violation, the notice of violation may be served in the manner prescribed for service of process by G.S. 1A-1, and shall include information on how to obtain assistance in developing corrective measures as authorized under NC GS 113A-61.1(c).</u></p>	<p>Hand delivery requirement per NC GS 113A-61.1(c)</p>



TO: Stormwater Management Advisory Commission

FROM: Stormwater Program Manager

DATE: December 7, 2017

SUBJECT: Potential Changes to the Stormwater Quality Cost Share Program and Policy

MESSAGE:

Stormwater Management staff has discussed with the Commission a range of potential changes to the City's Stormwater Quality Cost Share Program for increasing property owners' participation in the program and for increasing the benefits of projects funded by the program to the health and water quality of Raleigh streams. Staff has continued to identify and evaluate options for the Commission's consideration, input, and feedback and ultimately for informing revisions to the Stormwater Quality Cost Share Policy for consideration by the City Council.

At the December 2017 Commission meeting staff will address the following topics:

- 1) Recap previous discussions and input. Staff will review previous topics discussed with Commission and input received. Based on the Commission's input so far, staff has drafted possible revisions to the Policy (attached document) for review and discussion during this meeting.
- 2) Allow SCMs to extend into City street rights-of-way (ROWs). Staff will introduce and discuss the potential for revising the Policy to allow stormwater control measures (SCMs) installed through this Program to be located not only on the petitioner's property (status quo), but also to extend onto adjacent City street ROWs provided such extension are shown to provide water quality benefits not otherwise achievable and to be acceptable to the City in terms of maintaining core City functions.
- 3) Broaden the meaning of "above and beyond requirements". Staff will introduce and discuss the potential for revising the Policy to allow modification or upgrading of regulated SCMs to be eligible for Program funding if, as a result of the modification or upgrade, the SCM would either:
 - Treat the regulated runoff to a greater extent than is required by City code or State rules (e.g., more reduction of pollutant load and/or runoff volume than required); or
 - Route non-regulated runoff to the SCM and treat both the regulated runoff and the non-regulated runoff in the same SCM, without modifying or compromising regulatory requirements.

- 4) Passive drawdown of cisterns for runoff retention benefit. Staff will discuss possibly requiring the design and implementation of cisterns funded by the Program to include passive drawdown of stored water levels for improving the water quality benefit of these rainwater harvesting systems. This discussion will include:
- Guidelines in NC DEQ's Stormwater Design Manual for passive drawdown of regulated cisterns and how these guidelines might be applied to non-regulated cisterns;
 - How this new requirement could change how property owners apply for and implement their rainwater harvesting projects; and
 - Informational materials for communicating this new requirement to prospective petitioners.

Attached file: 11/28/2017 draft revisions to the Stormwater Quality Cost Share Policy

Revisions for SMAC meeting 12/7/2017
RESOLUTION NO. (2015) - 83

**A RESOLUTION TO ESTABLISH THE CITY OF RALEIGH STORMWATER
QUALITY COST SHARE POLICY**

WHEREAS, ~~t~~The City of Raleigh adopted Resolution 2009 – 937 on June 16, 2009 establishing the City of Raleigh ~~Stormw~~Water Quality Cost Share Policy and on February 21, 2012 adopted Resolution 2012 – 534 amending that policy; and

WHEREAS,

- A number of Raleigh's streams and water bodies are considered impaired based on current levels of pollution;
- Raleigh has a mandate to reduce pollutants in stormwater runoff to the maximum extent practicable (MEP) criteria;
- In the watersheds of Perry Creek and Pigeon House Branch, the City has an additional mandate, as part of the establishment of a Total Maximum Daily Load (TMDL), to develop a recovery plan to restore water quality;
- Retrofits are mandated under the City's NPDES and Neuse River Nutrient Sensitive Watershed requirements and are essential to meeting the MEP goal;
- Federal prohibition on in-stream water quality structures is limiting retrofit alternatives;
- Raleigh's citizens have demonstrated a strong interest in taking a more active role in improving water quality; and
- Currently, there are no other City of Raleigh funding mechanisms to assist citizens in improving water quality through the installation of best management practices.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF RALEIGH, NORTH CAROLINA THAT:

Section 1. Resolution 2009 – 937 and Resolution 2012 – 534 be deleted and rewritten as follows to be known as the “City of Raleigh Stormwater Quality Cost Share Policy.”

Section 2. The policy of the City of Raleigh with respect to installation of best management practices subject to the conditions in this policy to improve water quality:

Upon receipt of a petition by the owner(s) of property which is already subdivided and developed for private or public purposes or new development where a best management practice improves water quality in excess of current regulatory requirements, ~~the City Council on the advice of the City Manager, a recommendation from the Stormwater Management Advisory Commission and,~~ to the extent that funds are available, and to the extent that such work is reasonable and practical as determined by the City, the City will consider the water quality improvement project. ~~The project will be considered~~ subject to the following:

A. A.—Petitions for requested projects will be processed and approved projects will be authorized based on the amount of the City’s contribution to the cost of the project, as follows:

<u>Aspect</u>	<u>Amount of City Cost Contribution</u>		
	<u>More than \$5,000</u>	<u>\$1,000 to \$5,000</u>	<u>Less than \$1,000</u>
<u>Petition Evaluation</u>	<u>City staff</u>	<u>City staff</u>	<u>City staff</u>
<u>Project Consideration/ Approval</u>	<u>Stormwater Management Advisory Commission/ City Council</u>	<u>City staff</u>	<u>City staff</u>
<u>Authorization Instrument</u>	<u>Executed agreement per this policy</u>	<u>Executed agreement per this policy</u>	<u>Letter of notification from City staff</u>

B. City staff will report to the Stormwater Management Advisory Commission quarterly, and City staff and the Stormwater Management Advisory Commission will report to the City Council annually, regarding projects approved and implemented and funds committed and expended under this policy.

A.C. The City Manager is given administrative authority for assigning staff responsibility for the receipt, review and evaluation of projects under ~~this policy~~ the City Stormwater Quality Cost Share Policy.

B.D. The City will direct all work necessary to complete an authorized project including, but not limited to, design, engineering, materials acquisition and construction or, in the case of approved reimbursement projects, will review and approve all work necessary to complete an authorized project including but not limited to design, engineering, materials acquisition and construction.

C.E. Acceptable cost of implementing an approved water quality improvement project may include costs for design, soil testing, surveying, construction, installation, materials, equipment, inspection, oversight, and/or supplies necessary for implementation, as determined by the City based on information provided by the petitioner. The following additional requirements apply to acceptable cost for specific types of water quality improvements:

1. For projects that employ permeable pavers or permeable pavements, acceptable cost may not include cost of removing or disposing of existing pavers or pavement. Acceptable cost will be established by the City on the following basis:
 Acceptable cost = (Total cost of implementing the project) – (Cost of installing conventional, non-pervious pavement of the same dimensions at the same location).

2. For projects that employ green roofs, acceptable cost may not include cost of removing or disposing of existing roofing materials, installing materials that would be necessary for conventional roofing or roof drainage, or structurally reinforcing existing roofs.
3. The City's contribution to the cost of implementing an approved project for harvesting rainwater (e.g., cisterns) and using the harvested water may not exceed:
 - a) For projects in areas designated as Priority Water Quality Target Areas in Exhibit A of this policy: \$5.00 per gallon of rainwater storage and detention.
 - b) For projects in areas not designated as Priority Water Quality Target Areas: \$4.00 per gallon of rainwater storage and detention.

[Staff note to SMAC: Consideration of placing a per-gallon cap on the City's contribution to the cost of cistern projects should include consideration of requiring passive drawdown of cisterns for runoff retention benefit.]

FD. Except as otherwise provided in this policy, ~~t~~The City's contribution to the cost of implementing approved water quality improvement projects will be a percentage of the total acceptable cost of implementing the water quality improvement, as follows, subject to available City funding and funding priorities:

1. For projects in areas designated as Priority Water Quality Target Areas in Exhibit A of ~~this policy~~ ~~City Stormwater Quality Cost Share Policy~~: 90%.
2. For projects in areas not designated as Priority Water Quality Target Areas: 75%.
3. Except as otherwise provided in this policy, ~~t~~The acceptable cost of implementing an approved water quality improvement project as determined by the City shall be the basis for determining the City's level of funding in conjunction with the appropriate cost sharing formula as stated above. Property owners may select other alternative solutions, but will be responsible for all costs in excess of the acceptable project cost.

GE. Projects will be subject to the following criteria:

1. Any property owner(s)~~landowner~~, including residential, commercial, ~~and~~ public entity, paying a stormwater utility fee is eligible to petition for assistance.
2. Projects receiving cost share funding through this policy shall not be eligible for credits included in the "City of Raleigh Stormwater Utility Credit and Adjustment Manual," but may be eligible for an adjustment

based on reductions in impervious surfaces or the use of semi-impervious surfaces that meet the requirements outlined in the City of Raleigh Stormwater Utility Credit and Adjustment Manual.

3. Projects shall be prioritized based on the following criteria:
 - a) Streams assigned a Total Maximum Daily Load (TMDL).
 - b) Streams included on the State's list of impaired streams (303d list).
 - c) Cost/benefit based on pollutant removal.
 - d) Areas designated as Priority Water Quality Target Areas in Exhibit A of the City Stormwater Quality Cost Share Policy.
4. The Raleigh City Council will consider the funding for this program through the annual budget based on a recommendation from the Stormwater Management Advisory Commission and the City Manager.
- ~~5. The petitioner shall sign an agreement with the City insuring maintenance of the approved water quality improvement for a term of 10 years.~~
56. Water quality improvements in new developments may be eligible provided the project treats runoff that would not have otherwise been treated under current regulatory requirements as determined by the City. These improvements shall not be used for future regulatory requirements unless the City is reimbursed for all costs associated with the project.

Section 3. In addition to the specific conditions and procedures applicable to each of the above sections, the following conditions and procedures shall also be applicable to each project:

- A. Petitions shall be on forms approved by the City.
- B. If the project is to be implemented by the City, within 30 days of the City Council approval of the project, the petitioner shall make a deposit equal to the costs of surveys, design, contract development and other costs as estimated by the City to be incurred prior to construction. This deposit is not refundable if the City has incurred costs for surveys, design, contract development and other costs as estimated by the City. If the petitioner continues with the project, the deposit would be applied to the project's total cost.
- C. Plans for work prepared by engineers other than City staff or engineers retained by the City shall be coordinated with and approved by the City. Prior to preparation, agreement as to details should be reached.
- D. No work shall be performed until the project is approved by the City ~~Council~~. For projects with a City cost contribution of more than \$5,000, the Stormwater Management Advisory Commission will make a recommendation to the City Council on all projects submitted. City staff and the Stormwater Management

Advisory Commission will consider available funding, project priorities and the submittal date of petition requests for City funding assistance.

- E. For projects that receive more than \$30,000 of City funds, the petitioner shall record a land-use restriction on the property’s deed that gives notice of the existence and location of the water quality improvement and that restricts uses of that portion of the property to uses consistent with and not detrimental to the intended performance of the water quality improvement. The land-use restriction shall be binding on heirs, successors, assigns, and grantees of the petitioner and shall run with the land for a term of not less than 10 years, after which time the land-use restriction may terminate. City funds will be expended for the project only after the land-use restriction has been recorded on the property deed with the Wake County Register of Deeds and a copy has been provided to the City.

- F. All authorized work referred to herein may be implemented either by the City, its agents, and/or its contractors, or by the property owner via a reimbursement agreement between the City and the property owner. If the project is to be implemented by the property owner and the cost for construction work is more than \$5,000, the property owner must solicit quotations or bids for construction work from qualified vendors or contractors, ~~unless the construction work is to be conducted by the property owner or otherwise conducted at no cost to the project or to the City.~~

- G. Participation by the City, its agents and contractors in the cost of the work shall be limited to the extent to which City funds are available for such purpose.

- H. A maintenance plan to which the petitioner(s) shall adhere will be included as an exhibit to the agreement or be attached to the letter of notification. The petitioner(s) shall maintain and keep in good repair and condition the water quality improvement facility for the maintenance term provided below and ~~submit~~ shall submit annual inspection reports on forms provided by the City as provided below ~~from a professional engineer~~ or as otherwise defined in the agreement; ~~with the City. A maintenance plan will be included as an exhibit to the agreement that must be adhered to by the petitioner(s).~~

<u>Aspect</u>	<u>Amount of City Cost Contribution</u>		
	<u>More than \$5,000</u>	<u>\$1,000 to \$5,000</u>	<u>Less than \$1,000</u>
<u>Maintenance Term</u>	<u>10 years</u>	<u>5 years</u>	<u>No specific duration required</u>
<u>Maintenance Reports</u>	<u>Submit report annually:</u> <u>a) If City cost contribution is less than \$100,000, by the property owner(s);</u> <u>b) If City cost contribution is</u>	<u>Submit report annually by the property owner(s)</u>	<u>Not required</u>

	<u>\$100,000 or more, by a licensed professional engineer or other qualified licensed professional</u>		
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- I. No action or inaction of the City pursuant to the policy established by this resolution shall impose upon the City of Raleigh, its agents, officers, or employees, any responsibility or liability of any kind, past or future, relating to any person or property. The petitioner(s) shall agree to covenant to and hold the City harmless from any death, personal injury, or property damage resulting from the work. No such action by the City shall be considered as a taking or appropriation of any stream, drain, water quality or quantity facility or ditch as a part of the City's drainage system.
- J. The ~~p~~Petitions shall be considered and acted upon as the workload of the City staff will permit. Such schedules shall be evaluated by the City Council in its complete discretion, on advice from the City Manager; provided, the improvements authorized by this resolution shall generally, and as nearly as practical, be constructed based on the priority as outlined in this policy then in the order in which petitions are submitted and acted upon by the City Council unless good cause exists for a variance.
- K. Nothing herein shall be construed, or applied in such manner as to aid or assist in the subdivision or development of property in the City.
- L. The petitioner(s) shall grant the City appropriate easement(s) across (his)(her)(their) property(ies) for the purpose of performing the necessary, preliminary field work and the actual, later improvements. Access to the work area must be provided and the City will be held harmless for any damages to private property as long as diligent and judicial care is exercised in the pursuit of the work. The petitioner(s) agree that no claims or legal actions against the City or any City employees will be undertaken as a result of this work and that the City will be held blameless.
- M. For projects with City cost contributions of \$1,000 or more, ~~t~~The petitioners and the City shall execute agreements providing for the construction of the project and for the payment of the petitioners' shares of the project cost. If the project is to be implemented by the City, petitioners may pay their share of the project's cost by either of the following payment arrangements:
 - 1. Petitioners may pay their share of the cost by depositing with the City an amount equal to the estimated share and executing an agreement regarding responsibilities of the petitioner and the City. The petitioners' costs shall not exceed the estimated share, and any payment in excess of actual cost shall be refunded to the petitioner.

2. Petitioners may pay their share in installments under the following conditions:
 - a) Applications for installment payment shall be submitted with a non-refundable application fee to cover credit checks, appraisals, and other costs of processing a loan. Investigations similar to those used by banks to evaluate home equity loans shall be undertaken by the City.
 - b) A first or second position lien in an amount no greater than 80 percent of the unencumbered property value will be considered sufficient security for the loan.
 - c) After determination that income, credit history, security, and other normal requirements for the loan have been met, the application for installment payments will be approved by the City.
 - d) The petitioner shall submit a deposit at least equal to 10 percent of the estimated share and an executed agreement to pay the remainder in equal annual payments at 6 percent interest over a time period not to exceed 10 years. The first payment will be due one year after notification of project completion by the City.
 - e) The minimum loan amount shall be \$2,000.
- N. If executed agreements and required deposits are not received from all participants within 4 months following presentation of such agreements by the City, the City will provide second notice that agreements should be executed. If all agreements are not executed and returned to the City within 2 months following the second notice, the project shall be terminated, deposits shall be refunded, and the City Council shall be notified of project termination.
- O. Failure to adhere to the requirements in this policy may result in the repayment of monies spent and costs incurred by the City. The repayment amount will be determined by the City.
- P. If the petitioner is not able or is not willing to fulfill its obligation via the agreement to inspect, maintain, and repair the water quality improvement project for the full term of the agreement, the petitioner may request that the City allow either of the following arrangements:
 1. The petitioner repays project costs incurred by the City. The repayment amount will be determined by the City.
 2. The petitioner transfers to another party responsibility for inspecting, maintaining, and repairing the project for the remainder of the

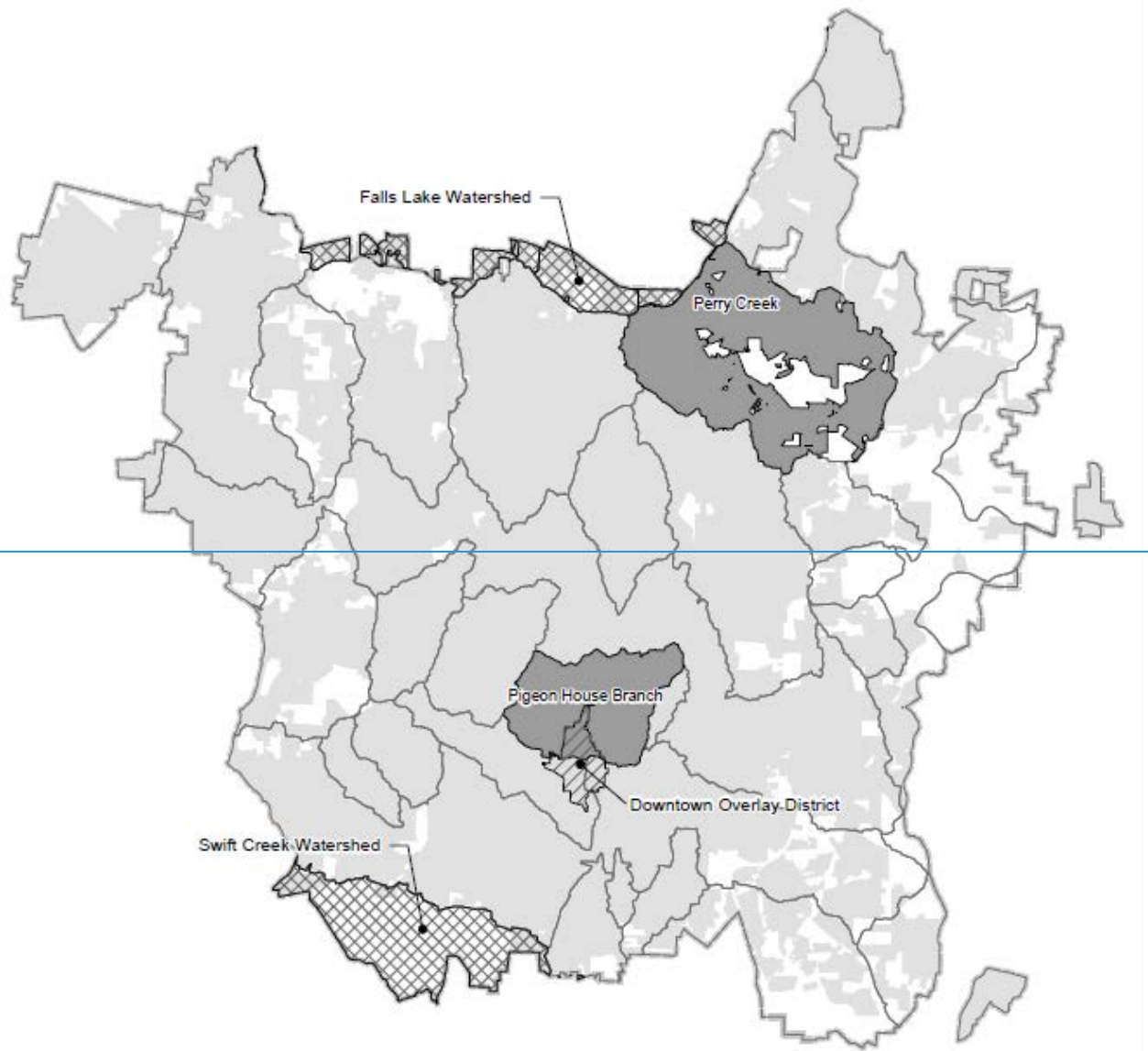
maintenance term. The transferee will sign an agreement with the City assuming this responsibility.

Adopted: April 7, 2015




Effective: April 7, 2015






Exhibit A City of Raleigh Stormwater Quality Cost Share Policy




Priority Stormwater Quality Target Areas

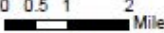
-  Watershed for Falls Lake and Swift Creek
-  Downtown Overlay District
-  Pigeon House Branch and Perry Creek TMDL Stream Basins

	Drainage Basins
	City Limits
	Raleigh ETJ

N



0 0.5 1 2 Miles



March 4, 2015

