

Administrative Manual for Implementation of the Post-Construction Storm Water Ordinance



Developed for:
Mecklenburg County and the Towns of Cornelius, Davidson, Huntersville, Matthews, Mint Hill and Pineville

Developed by:
Mecklenburg County Storm Water Services
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Section 1.0 Introduction

1.1 Purpose of Administrative Manual

The purpose of this Administrative Manual is to provide guidance and information to staff of the County and Towns as well as the general public for the effective and efficient implementation and administration of the Post-Construction Storm Water Ordinances (Ordinance(s)) for Mecklenburg County and the Towns of Cornelius, Davidson, Huntersville, Matthews, Mint Hill and Pineville. The Administrative Manual includes application requirements and forms, submission schedules, fee schedules, maintenance agreements, criteria for mitigation approval, criteria for recordation of documents, inspection report forms, requirements for submittal of bonds and where to obtain copies of the Post-Construction Storm Water Ordinances and Charlotte-Mecklenburg SCM Design Manual. The manual was developed by the Storm Water Administrator for Mecklenburg County and the Towns. A copy of the Administrative Manual is available at the following website along with all forms, a process guide, copies of the ordinances, Charlotte-Mecklenburg SCMDesign Manual (see Section 3) and other information to assist with Ordinance compliance: <http://stormwater.charmeck.org>. A table illustrating the process for the administration of the Post-Construction Storm Water Ordinances is provided in Appendix 1-1. All forms (including notification letters, BMP maintenance forms, bond forms, checklists, notices of violation, etc.), approved ordinances, Administrative Manual, ordinance maps and summary tables, ordinance interpretations, and historic ordinance development information are all available in the following shared folder for use by staff: G:Water Quality\WQ_Xfer\WQ\Post-Construction Ordinance.

1.2 Impacts of Storm Water on Water Quality

Storm water runoff from urban and developing areas is a major source of water pollution and water quality degradation in Mecklenburg County. Oil, antifreeze and other automotive products deposited in parking lots, metals associated with tire and brake pad wear deposited along roadways, pesticides and fertilizers applied to lawns as well as a variety of other chemicals are picked up in storm water runoff and carried to surface waters. The cumulative impact of these pollutants in an urban area is significant. In addition, urbanization results in an increase in the volume and velocity of storm water runoff entering surface waters. In Mecklenburg County, even with our relatively impermeable clay soils, an inch of rainfall on an acre of forest does not generate any storm water runoff. Instead, the rainwater is absorbed into the soil and taken up by plants or provides recharge for groundwater. If the trees are removed and replaced with an acre of impervious asphalt, a total of 27,000 gallons of storm water runoff is generated by an inch of rainfall. In addition, this runoff typically enters surface waters through the piped storm sewer system resulting in increased velocity. This increased volume and velocity of storm water runoff entering streams causes banks to erode and sediment to be discharged to surface waters, causing significant water quality degradation. The combined effect of increased pollutants due to urbanization, as well as increased stream channel erosion due to volume and velocity increases results in significant degradation of surface water resources. The increased volume and velocity of storm water runoff can also cause significant downstream flooding problems. The Post-Construction Storm Water Ordinance is designed to control storm water pollutants as well as increased storm water volume and velocity from new development and redevelopment so that

water quality is protected, and downstream flooding is reduced. This Administrative Manual describes how the Ordinance shall be administered for Mecklenburg County and the Towns of Cornelius, Davidson, Huntersville, Matthews, Mint Hill and Pineville.

1.3 Storm Water Administrator

The person responsible for administering and enforcing the Ordinance is called the Storm Water Administrator. The Mecklenburg County Water Quality Program Manager with Charlotte-Mecklenburg Storm Water Services or their designee has been designated by the County and the Towns as their Storm Water Administrator, except for the Town of Cornelius which has designated its Planning Director. The powers and duties of the Storm Water Administrator as specified in the Post-Construction Storm Water Ordinance are as follows:

1. To review and approve or disapprove applications submitted pursuant to the Ordinance.
2. To make determinations and render interpretations of the Ordinance.
3. To establish application requirements and schedules for submittal and review of applications and appeals.
4. To enforce the Ordinance in accordance with its enforcement provisions.
5. To maintain records, maps, and official materials as relate to the adoption, amendment, enforcement, or administration of the Ordinance.
6. To provide expertise and technical assistance upon request to Mecklenburg County, the Towns and the Charlotte-Mecklenburg Storm Water Advisory Committee (SWAC).
7. To designate appropriate other person(s) who shall carry out the powers and duties of the Storm Water Administrator.
8. To provide information and recommendations relative to variances and information as requested by SWAC in response to appeals.
9. To take any other action necessary to administer the provisions of the Ordinance.
10. To develop and implement the Administrative and BMP Design Manuals prepared for the Ordinance.

The Storm Water Administrator has the authority to render interpretations of the Post-Construction Storm Water Ordinance. Any person may request an interpretation by submitting a written request to the Storm Water Administrator who shall respond in writing within 30 days. The Storm Water Administrator shall keep on file a record of all written interpretations of the Ordinance in the following digital file: G:\WQ_Xfer\WQ\Post-Construction Ordinance\Ordinance Interpretations. The contact information for the Storm Water Administrators for Mecklenburg County and the Towns of Davidson, Huntersville, Matthews, Mint Hill, and Pineville is as follows:

- Position: Corey Priddy, Mecklenburg County Permitting and Compliance Supervisor
- Mailing and Physical Address: 2145 Suttle Avenue, Charlotte, N.C. 28208-5237
- Email Address: corey.priddy@mecklenburgcountync.gov
- Phone Number: 980-314-3221
- Website: <http://stormwater.charmeck.org>

The contact information for the Storm Water Administrators for the Town of Cornelius is as follows:

- Position: Planning Director

- Physical Address: 21445 Catawba Ave, Cornelius, N.C. 28031-8527
- Mailing Address: P. O. Box 399, Cornelius, N.C. 28031
- Phone: 704-892-6031
- Website: <https://www.cornelius.org/>

This Administrative Manual assigns the responsibility for the completion of most duties to the Storm Water Administrator who has the discretion to delegate these duties to other staff as deemed necessary and appropriate. This delegation may not always be specified in the Manual in which case the Storm Water Administrator will need to be consulted for guidance in moving forward.

1.4 Process for Amending the Administrative Manual

The Administrative Manual may require updates from time to time. The Storm Water Administrator is responsible for all amendments to this manual and for providing notice of such amendments to interested parties on the following website: <http://stormwater.charmeck.org>. The most current version of this document is to be used for all new submittals.

It is the sole responsibility of the user to make sure the most current version of this manual is incorporated and followed in the design of a project being submitted for approval. Any new project that has not been accepted for review prior to the most current revision date of this document is to follow the new requirements of this manual.

Section 2.0 Post-Construction Storm Water Ordinance

2.1 Purpose of Ordinance

The purpose of the Post-Construction Storm Water Ordinance is to protect, maintain and enhance the public health, safety, environment and general welfare by establishing minimum requirements and procedures to control the adverse effects of increased post-construction storm water runoff and non-point source pollution associated with new development and redevelopment. It has been determined that proper management of construction-related and post-construction storm water runoff will minimize damage to public and private property and infrastructure, safeguard the public health, safety, and general welfare, and protect water and aquatic resources.

2.2 Ordinance Development

In response to Clean Water Act provisions, the North Carolina Department of Environmental Quality (NCDEQ) issued a National Pollutant Discharge Elimination System (NPDES) permit to all designated Phase II storm water jurisdictions in Mecklenburg County, including Mecklenburg County and the Towns of Cornelius, Davidson, Huntersville, Matthews, Mint Hill, and Pineville (co-permittees). The permit went into effect on July 1, 2005. The requirements of the permit include the implementation of six (6) minimum measures to control pollutants in storm water runoff to the maximum extent practicable. One of these six (6) measures involves the control of post-construction storm water runoff, which requires the development and implementation of a Post-Construction Storm Water Ordinance for all the Phase II jurisdictions within two (2) years of the issuance of the permit (by July 1, 2007).

The co-permittees decided to develop the Post-Construction Storm Water Ordinance using a stakeholders' process that could then be implemented by each Phase II jurisdiction to meet the requirements of the permit. The stakeholders were charged with reaching consensus on ordinance language that meets the following four (4) goals:

1. Achieve compliance with the Phase I and Phase II NPDES Storm Water Permit requirements for post-construction pollution control, as applied to the respective jurisdictions.
2. Satisfactorily address the storm water pollution control criteria specified by the N.C. Wildlife Resources Commission (NCWRC) and the U.S. Fish and Wildlife Service (USFWS) for the Yadkin River Watershed.
3. Satisfactorily address the causes of impairment identified in the N.C. 2002 Integrated 305(b) and 303(d) Report for surface waters in Mecklenburg County in assessment categories 4a, 4, 5 and 6 when the potential sources of water quality impairment are identified as "urban runoff/storm sewers."
4. Satisfactorily address detention measures for the control of storm water volumes and peaks associated with new construction.

The stakeholders' group began meeting on April 22, 2004 and after 32 meetings consensus was reached on September 22, 2005. Water quality modeling performed by the consulting firm TetraTech was used to help reach consensus. Modeling performed of the consensus ordinance

language verified that the four (4) goals specified above had been met. The consensus language for the Ordinance was presented to staff of the County and Towns and subsequently to elected officials who approved the Ordinance language after slight modifications were made to meet the individual needs of the jurisdictions. The Ordinances were then submitted for review to NCDEQ to ensure compliance with NPDES permit requirements. Approval of the Ordinances was received from NCDEQ in May and June 2007 and the Ordinances went into effect on June 30, 2007. A copy of the Ordinances for all the Phase II jurisdictions is contained in Appendix 2-1. Copies are also available at the following website: <http://stormwater.charmeck.org>.

2.3 Applicability

The Post-Construction Storm Water Ordinances for the Towns and County have both exceptions and exemptions that exclude specific developments and redevelopments from Ordinance requirements. Both exceptions and exemptions are listed in the Applicability Sections of the Ordinances. The standard applicability language granting exceptions to the Ordinance as drafted by the stakeholders' group is as follows:

The Post-Construction Storm Water Ordinance shall apply to all developments and redevelopments within the corporate limits or in the extraterritorial jurisdictions of the Towns and County, unless one of the following exceptions applies to the development or redevelopment as of the effective date of the Ordinance (June 30, 2007):

1. For residential development, preliminary subdivision plan application or in the case of minor subdivisions, construction plan for required improvements, submitted and accepted for review.
2. For nonresidential development, preliminary subdivision plan application submitted and accepted for review, provided that subdivision-wide water quality and quantity features required at the time of submittal are contained within the submittal and provided the plan is subsequently approved and all necessary easements are properly established.
3. Zoning use application submitted and accepted for review for uses that do not require a building permit.
4. Certificate of Building Code Compliance issued by the proper governmental authority.
5. Valid building permit issued pursuant to G.S. § 153A-344 or G.S. § 160A-385(b)(i), so long as the permit remains valid, unexpired, and unrevoked.
6. Common law vested right established (e.g., the substantial expenditure of resources (time, labor, money) based on a good faith reliance upon having received a valid governmental approval to proceed with a project).
7. A conditional zoning district (including those districts which previously were described variously as conditional district, conditional use district, parallel conditional district and parallel conditional use district) approved prior to the effective date of the Ordinance, provided formal plan submission has been made and accepted for review either prior to 5 years from the effective date of the Ordinance in the case of conditional zoning districts approved on or after the date that the S.W.I.M. stream buffer went into effect in the jurisdiction, or prior to 2 years from the effective date of the Ordinance in the case of conditional zoning districts approved prior to the date that the S.W.I.M. stream buffer went into effect, and provided such plans encompass either a minimum of 22.5% of the area of the project, or any phase of a project so long as such phase is part of a project that includes project-wide water quality requirements to achieve 85% TSS removal from developed areas. If no such formal plan submission occurs within the above-described 5 or 2 year time frames,

the requirements of the Ordinance shall be applied to the project, except for total phosphorus removal, open space and buffer requirements not in effect at the time of the approval of the conditional zoning district, all of which do not apply. Any changes to a conditional zoning district necessary to comply with the requirements of the Ordinance shall be made through administrative amendment and not through a rezoning.

The exceptions to the Post-Construction Storm Water Ordinance listed above vary slightly between jurisdictions. All seven (7) of the above exceptions apply to the County and the Towns of Pineville, Matthews and Mint Hill. The exceptions to applicability for the other three (3) Towns are indicated below:

Town of Cornelius

Numbers 3 through 6 above were included as exceptions. Instead of numbers 1 and 2 above, the following language was used to indicate an exception to applicability: "Major site plans, major subdivisions and conditional use plans submitted and accepted for review."

Town of Davidson

Numbers 3 through 7 were included as exceptions. Instead of numbers 1 and 2 above, the following language was used to indicate an exception to applicability: "Master Plan approved."

Town of Huntersville

The exceptions to applicability in the Town of Huntersville are considerably different from the other Towns and are as follows:

1. Having been issued a Certificate of Building Code Compliance,
2. Having a valid building permit,
3. Are included on a valid preliminary subdivision plan and/or valid sketch plan, or
4. Are included in a complete conditional rezoning application and subdivision sketch plan submitted by May 1, 2007.

In many jurisdictions, plans for commercial developments are submitted, reviewed and approved without subdivision participation; therefore, a preliminary subdivision plan is never submitted as required by numbers 1 and 2 under the "Applicability" requirements listed on the previous page. If plans for commercial developments are submitted and accepted for review prior to July 1, 2007 and provided these plans fulfill the requirements listed below, the development shall not be required to comply with post-construction storm water ordinance requirements even though these plans do not qualify as preliminary subdivision plans:

1. Subdivision-wide water quality and quantity features required at the time of submittal are contained within the submittal, and
 2. The plans are subsequently approved, and all necessary easements are properly established.
- This exemption may be revoked by the Storm Water Administrator and full compliance with the post-construction storm water ordinance required if construction is not initiated within three (3) years of plan approval and the project is redesigned.

All the jurisdictions include exception #7 above except the Towns of Huntersville and Cornelius. Exemption #7 refers to conditional zoning districts approved prior to the effective date of the Ordinance. This subject was heavily debated by the stakeholders' panel that developed the draft Ordinance. The developer interests on the panel felt strongly that conditional zoning districts should be totally exempt due to the time and expense that developers invest in getting these districts approved. The environmental interests on the panel felt just as strongly that the number

of conditional zoning districts exempt from the Ordinance should be minimal. Consensus was reached by wording the exemption for conditional zoning districts such that those districts approved after the S.W.I.M. Buffer Ordinance went into effect would be exempt from the Ordinance provided formal plan submission was made and accepted for review prior to five (5) years from the effective date of the Ordinance. For those conditional zoning districts approved prior to the S.W.I.M. Buffer Ordinance going into effect, a shorter exemption period of two (2) years was established. It was determined that conditional zoning districts approved after the S.W.I.M. Buffer Ordinance would be subject to buffer requirements and would thus have some level of protection for water quality, which it was believed warranted a longer exemption period. Those approved before the S.W.I.M. Buffer Ordinance went into effect would have no protection of water quality and thus have a shorter period of exemption. Since the S.W.I.M. Buffer Ordinances were approved on different dates by the jurisdictions, the date from which the five (5) and two (2) year time periods are measured differs for each jurisdiction. In order for a project associated with a conditional zoning district to be exempt from Ordinance requirements, one of the following must be satisfied within the appropriate five (5) or two (2) year time limits:

1. Formal plan submittal has been made and accepted for review that encompasses at least 22.5% (changed in many of the Ordinances to 25%) of the project area, or
2. Formal plan submittal has been made and accepted for review for any phase of the project so long as such phase is part of a project that includes project-wide water quality requirements to achieve 85% total suspended solids removal from developed areas.

If the project does not satisfy one of these conditions in the appropriate time frame, then it shall comply with the Ordinance except for the total phosphorus removal, undisturbed open space and buffer requirements, which will not apply.

Significant changes to plans approved prior to the applicability date could cause the exemption (or “grandfathering”) to be revoked by the Storm Water Administrator and trigger a new applicability review under the Post-Construction ordinance that could result in a previously “grandfathered” site to comply with the post-construction storm water ordinance. The Storm Water Administrator, working with the individual Towns, shall make the final determination of what constitutes a significant change. This may include, but is not limited to, the following:

1. Net increase in built-upon area (BUA);
2. Changes that do not provide equal or greater storm water control than previous approved plans (i.e. changing roadway design from swales to curb and gutter, decreasing the width of a stream buffer, removal of a structural BMP, etc.); or

The following are considered minor changes that may not jeopardize the exempt status of plans approved prior to the applicability date as long as the change does not increase BUA or reduce storm water control: moving roads, moving infrastructure, increasing the size of the lots, reducing built-upon area, or creating more open space.

2.4 Exemptions

The second method by which development and redevelopment is excluded from compliance with the Ordinance is through being “exempt.” The standard exemption language in the Applicability Section of the Ordinance as drafted by the stakeholders’ group is as follows:

1. Residential development that cumulatively disturbs less than one acre and cumulatively creates less than 24% built upon area based on lot size or the lot is less than 20,000 square feet (lot must have been described by metes and bounds in a recorded deed prior to the effective date of the Ordinance and cannot be part of a larger development);
2. Commercial and industrial development that cumulatively disturbs less than one acre and cumulatively creates less than 20,000 square feet of built upon area (built upon area includes gravel and other partially impervious materials);
3. Redevelopment that disturbs less than 20,000 square feet, does not decrease existing storm water controls and renovation and/or construction costs (excluding trade fixtures) do not exceed 100% of the tax value of the property; and
4. Activities exempt from permit requirements of Section 404 of the federal Clean Water Act, as specified in 40 CFR 232 (primarily, ongoing farming and forestry activities).

The exemptions included in the Post-Construction Storm Water Ordinances for the Towns vary slightly between jurisdictions except for the fourth exemption that applies to all the jurisdictions. The four (4) exemptions indicated above apply to the County and the Towns of Davidson and Pineville. The Town of Davidson added an exemption for redevelopment of transit station areas, distressed business districts, brownfields and conditional planning areas approved by the Town Board provided there is no net increase in built upon area and storm water control is greater than or equal to the previous development. The exemptions for the other four (4) Towns are indicated below.

Towns of Cornelius and Mint Hill

The Towns of Cornelius and Mint Hill applied the State minimum instead of the first three (3) exemptions listed above and exempted all development, redevelopment and expansions (including residential and nonresidential) that cumulatively disturb less than one acre and are not part of a larger common plan of development or sale. In addition, the Towns also exempted all redevelopment and expansions that result in no net increase in built-upon area and provide equal or greater storm water control than the previous development.

Town of Huntersville

The Town of Huntersville provides the following exceptions to applicability in its Ordinance:

1. Redevelopment of non-single family homes that disturbs less than 20,000 square feet, does not decrease existing storm water controls, and renovation and/or construction costs do not exceed 100% of the tax value of the property is not subject to the provisions of this regulation.
2. Residential development activity that disturbs less than one acre of land and is not part of a larger common plan of development or sale, including new development, redevelopment or expansions, is not subject to the provisions of this regulation.
3. Non-residential development activity that disturbs less than ½ acre of land and is not part of a larger common plan of development or sale, including new development, redevelopment or expansions, is not subject to the provisions of this regulation.

Town of Matthews

The Post-Construction Storm Water Ordinance for the Town of Matthews includes standard exemption numbers 1, 2 and 4 above. For redevelopment, the Town exempts projects that incorporate the removal of some or all previous buildings and other above-ground structures but

reuses existing impervious area (same footings/foundations) for new buildings, that results in no net increase in built-upon area, that cumulatively disturbs less than 20,000 square feet and is not part of a larger common plan of development or sale. The Town of Matthews also exempts any intensification of development on an existing improved/partially improved site not part of a larger common plan of development or sale, which may convert ground-level impervious surface to more intense uses, such as a paved area being converted to a building, when there is no net increase in built-upon area, and that cumulatively disturbs less than 20,000 square feet, and that provides equal or greater storm water control than the previous development. The Town also exempts any intensification of development on an existing improved/partially improved site which is part of a larger common plan of development or sale, when the overall larger common plan for development or sale has already incorporated and installed sufficient storm water control improvements such that no further storm water control measures are necessary to accommodate the new impervious area being created. Any redevelopment and/or intensification of development that does not meet one or more of the above criteria will be required to comply with ordinance requirements.

2.5 Interpretation of the Term “Larger Common Plan of Development or Sale”

The Towns typically receive, review and approve minor subdivision plats without submitting them to Mecklenburg County for review and approval. Staff raised the question as to whether the subdividing of land (including minor subdivision plats) would be considered a “larger common plan of development or sale” as defined by the post-construction ordinance and if there were any additional notes that should be added to plats prior to approval by the Towns or County. The significance is that if a tract of land is part of a larger common plan of development or sale, then the applicability of the post-construction ordinance must be considered for the entire tract even though the individual lots may fall below the acreage or land disturbance threshold for compliance with ordinance requirements.

The post-construction ordinances for the Phase II jurisdictions in Mecklenburg County define a larger common plan of development or sale as follows: “Any contiguous area where multiple separate and distinct construction or land disturbing activities will occur under one plan. A plan is any announcement or piece of documentation (including but not limited to public notice or hearing, drawing, permit application, zoning request, or site design) or physical demarcation (including but not limited to boundary signs, lot stakes, or surveyor markings) indicating that construction activities may occur on a specific plot.”

On February 26, 2015, Rusty Rozzelle talked to Mike Randall with the N.C. Department of Environmental Quality (NCDEQ) to obtain clarification regarding this definition. The response was that the subdividing of land would not, in and of itself, be considered a larger common plan of development or sale even if 1) the resulting plat showed building envelopes, setbacks, etc.; 2) the Town or DOT required a road be installed (unless DOT / the town owns the property); and/or 3) the owner advertised lots for sale. However, if someone purchased multiple lots and developed them for sale, then the NCDEQ would consider this a larger common plan of development or sale.

In addition to the above, Rusty Rozzelle researched how the Towns define a minor subdivision. Based on this information, the subdividing of land shall be considered a larger common plan of development or sale, when any one of the following applies:

- Multiple lots with a single owner with plans to develop,
- New street installed for access to interior lots, or
- Public sewage or water lines extended, or new drainage easements created through lots.

If none of the above three (3) conditions are met, the properties are not considered a larger common plan of development or sale and each subdivided lot, when developed, will be evaluated individually for applicability of the post-construction ordinance.

However, if any of the three (3) above conditions above are met (including a minor subdivision plat), the properties will be considered a larger common plan of development or sale and, when developed, will need to be evaluated collectively for applicability to the post-construction ordinance. Prior to development plans being approved, an applicability determination will need to be made by the Storm Water Administrator. Mecklenburg County recommends that the Towns include the following language on plats to make property owners aware of this potential requirement: “The post-construction storm water ordinance may apply. Contact the Storm Water Administrator for a determination.”

On November 4, 2022, Rusty Rozzelle contacted Richard Whisnant with the Institute of Government and former general counsel with the NCDEQ. Richard confirmed that the trigger for determining whether the subdividing of land is a larger common plan of development or sale is based on plans for development and not plans for sale. Richard agreed that the phrase should be “larger common plan of development” since the sale of the land has little to do with the determination. The following examples were provided by Richard for clarification:

1. 4 acres of land subdivided into ½ acre lots with a house planned for construction on only one (1) of the lots. The owner plans to sell the other seven (7) lots but has no plans to develop them himself. Eventually all seven (7) of the other lots are sold to seven (7) different builders with no common plan to develop all seven (7) lots together. It is assumed they will be developed, but not as a common plan. In this situation, these eight (8) lots would not be considered a larger common plan of development or sale, and each would be judged individually regarding the applicability of post-construction ordinance requirements.
2. 4 acres of land subdivided into ½ acre lots with one (1) owner who has placed a sign along the road in front of the properties advertising them for sale and development. In this situation, these eight (8) lots would be considered a larger common plan of development or sale, and all eight (8) lots together would be considered for applicability of the post-construction ordinance requirements.

On June 8, 2023, Rusty Rozzelle of CMSWS was asked to make an applicability determination for a 0.7 acre lot in Huntersville that was to be subdivided into 5 lots, developed, and sold. According to Huntersville’s Water Quality Ordinance, lots less than one (1) acre are exempt if they are not part of a larger common plan of development or sale. The definition of this phrase is not included in Huntersville’s Ordinance, but 15A NCAC 02H .1002 defines it as follows: “Common plan of development” means a site where multiple separate and distinct development

activities may be taking place at different times on different schedules but governed by a single development plan regardless of ownership of the parcels. Information that may be used to determine a "common plan of development" include plats, blueprints, marketing plans, contracts, building permits, public notices or hearings, zoning requests, and infrastructure development plans.” For additional clarification on the meaning of the phrase, Rusty Rozzelle referred to the State model ordinance that had a reference beside its definition, which is the same as stated above, to the “EPA Storm Water Phase II Compliance Assistance Guide.” This guide provides the following definition in Section 5.1.3 that is a little more detailed: “Larger common plan of development or sale is a contiguous area where multiple separate and distinct construction activities are occurring under one plan (e.g., the operator is building on three half-acre lots in a 6-acre development). The “plan” in a common plan of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that construction activities may occur on a specific plot.” In addition, Section 5.1.2 of the guide specifies that the following types of construction are subject to the rules: Construction activities disturbing less than 1 acre if they are part of a larger common plan of development or sale with a planned disturbance of equal to or greater than 1 acre and less than 5 acres. This clarifies that a larger common plan of development is not inclusive to the less than 1 acre tract but results from the combination of this tract with a planned disturbance of equal to or greater than 1 acre. Therefore, based on this guidance, a standalone lot of less than 1 acre or multiple lots that result in the disturbance of less than 1 acre are not subject to the ordinance if they are not combined with a planned disturbance of equal to or greater than 1 acre. On June 8, 2023, Rusty Rozzelle contacted Jack Simoneau, Planning Director with the Town of Huntersville, who agreed with this interpretation. The determination was made that Huntersville’s ordinance did not apply to the 0.7 acre lot in question that was to be subdivided into 5 lots, developed, and sold.

Based on the above information, effective December 29, 2022 the following process will be implemented by County staff to ensure that minor subdivisions are complying with post-construction ordinance requirements:

1. Staff will ask the responsible party if the plat indicates a larger common plan of development as defined by the ordinance and described in the Administrative Manual.
2. If the response is yes,
 - a. Staff will require that a note be placed on the plat stating the following: “Compliance with applicable Post-Construction Ordinance requirements is required.”
 - b. Staff will apply holds to all lots pending plan submittal and approval.
3. For all other responses,
 - a. Staff will require that a note be placed on the plat stating, “Prior to the release of permits, confirmation is required that lots are not part of a larger common plan of development to verify that the requirements of the post-construction and detention ordinances do not apply.”
 - b. Staff will apply holds to all lots pending receipt of confirmation.
 - c. Staff will include a note in the hold stating, “Holds will be released when confirmation is received that lots are not part of a larger common plan of

development to verify that the requirements of the post-construction and detention ordinances do not apply.”

- d. When staff receives a request to release a permit hold, they will confirm the current owner of the lot. Using POLARIS they will confirm that the owner of the lot in question does not own other lots on the plat. If they don’t, the hold will be released. If they do, compliance with the post-construction and/or detention ordinances will be required, and a new recorded plat will be required indicating, “Compliance with applicable Post-Construction Ordinance requirements is required.”

2.6 Standards

The Standards Section (Section 3) of the Post-Construction Storm Water Ordinance describes the specific criteria that all applicable development and redevelopment must meet in order to control storm water quality, volume and velocity. The following criteria are required by all jurisdictions:

1. Installation of structural best management practices (BMPs) when a built-upon area threshold is exceeded.
2. Maintaining buffers (no-build zones) adjacent to perennial and intermittent streams.
3. Installation of detention measures when a built-upon area threshold is exceeded.

In addition, new developments in all the jurisdictions except the Towns of Cornelius and Huntersville are required by the Post-Construction Storm Water Ordinance to set aside undisturbed open space as a form of non-structural BMP. This open space requirement does not apply to redevelopment. The Town of Huntersville has open space requirements outside of the Post-Construction Storm Water Ordinance.

In the Towns of Mint Hill, Matthews and Davidson, the application of the criteria in the Post-Construction Storm Water Ordinance varies between designated watershed districts as described in the jurisdiction’s Post-Construction Ordinance Map. These maps are contained in Appendix 2-2. The manner in which the criteria are applied also varies significantly between the jurisdictions. Appendix 2-3 includes tables that summarize the application of these criteria by jurisdiction. Provided below is a discussion of how each of the criteria function to control storm water quality, volume and velocity. Also included below is a summary of the criteria in the different jurisdictions as described in their Post-Construction Storm Water Ordinance.

2.6.1 Structural Best Management Practices (BMPs)

A structural BMP collects storm water runoff from developed areas and provides water quality and quantity treatment to achieve water quality protection goals. Structural BMPs are designed and constructed in accordance with specifications contained in the Charlotte-Mecklenburg Stormwater Control Measure (SCM) Design Manual at the following link:

<https://www.charlottenc.gov/Services/Stormwater/Stormwater-Regulations/SCM-Design-Manual>. By meeting these specifications, the BMP is presumed to meet the minimum water quality performance standards of the Post-Construction Storm Water Ordinance and the Phase II laws. Failure to construct BMPs in accordance with these specifications may subject the owner to civil penalties.

The Post-Construction Storm Water Ordinance requires that BMPs be designed to achieve 85% average annual removal of total suspended solids (TSS). For some watershed districts, BMPs must be designed to achieve 70% average annual removal of total phosphorus (TP) in addition to 85% removal of TSS. These removal efficiencies must be achieved for runoff generated from the first inch of rainfall, except for in the Goose Creek Watershed District in the Town of Mint Hill where BMPs are required to treat the difference in the storm water runoff from the predevelopment and post-development conditions for the 1-year, 24-hour storm. Post-Construction Storm Water Ordinances require the installation of BMPs when specific built-upon area (BUA) thresholds are exceeded depending on the jurisdiction and watershed district where the development is located as described in Table 2-1 below. Projects that exceed the BUA thresholds requiring the installation of BMPs are considered High Density and those that do not are considered Low Density. The only exception in Mecklenburg County is in the Goose Creek watershed where BMPs are required for all new development that meets the minimum applicability requirements of Mint Hill's Post-Construction Storm Water Ordinance regardless of its BUA. For redevelopments that exceed the BUA threshold, if storm water from the existing development can be split off from the redeveloped area, BMPs can be installed to treat the runoff from the area of redevelopment only and not the entire site. However, if the runoff cannot be split, then the runoff from the entire site must be treated. Section 2.6.2 below provides information regarding the delineation of BUA. Chapter 2 Ordinances in Sections 2.4.3 and 2.4.4 of the SCM Design Manual at the above link describe how the BUA thresholds are calculated.

The basic mechanisms of pollutant removal by structural BMPs are the gravitational settling of pollutants, infiltration of soluble nutrients through the soil profile, and to a lesser extent, biological and chemical stabilization of nutrients. The establishment of a temporary or permanent pool of water results in quiescent conditions, which can settle out particulate pollutants between storms. Infiltration relies heavily on filtration through the soil profile as pollutants are removed through aerobic decomposition and chemical precipitation. Removal of soluble pollutants is accomplished primarily through the mechanisms of chemical and biological stabilization of nutrients. Approved structural BMPs are listed in Appendix 3-1. The BMP treatment thresholds, treatment types and treatment volumes required by the Post-Construction Storm Water Ordinances for the different jurisdictions are described in Table 2-1 below.

Table 2-1: Summary of Structural BMP Requirements by Jurisdiction.

Jurisdiction	Watershed Districts	Treatment (High Density) Threshold (BUA)	Treatment Type			Water Quality Volume	
			85% TSS	70% TP	LID	Runoff from 1 st inch of rainfall	Runoff from pre minus post development for 1-yr, 24-hr storm
Cornelius	N/A	>24%	X		Optional	X	
Davidson	Catawba	>12%	X	X	Optional	X	
	Yadkin	>10%	X	X	Optional	X	
Huntersville	N/A	>12%	X		Required	X (3)	
Matthews	Catawba	>24%	X		Optional	X	
	Yadkin	>10%	X	X	Optional	X	
	Goose Creek	(1)	(1)	(1)	(1)	(1)	(1)
Mint Hill	Catawba	≥24%	X		Optional	X	
	Clear Creek	≥12%	X		Optional	X	

Jurisdiction	Watershed Districts	Treatment (High Density) Threshold (BUA)	Treatment Type			Water Quality Volume	
			85% TSS	70% TP	LID	Runoff from 1 st inch of rainfall	Runoff from pre minus post development for 1-yr, 24-hr storm
	Goose Creek	None (2)	X		Infiltration if feasible		X
Pineville	N/A	>24%	X		Optional	X	
Mecklenburg Co.	N/A	>24%	X		Optional	X	

(1) Subject to the requirements contained in the N.C. Administrative Code 15A NCAC 2B.0600 – 0.609 as administered by the North Carolina Department of Environmental Quality.

(2) Treatment required for all BUA.

(3) If LID and Conventional BMPs are used, LID is required for 50% of runoff from 1st inch of rainfall.

Structural BMPs that treat run-off from single-family residential lots should be installed in common open space areas. Installation of BMPs on single-family residential lots should not occur unless the applicant can demonstrate a hardship and receive approval from the Storm Water Administrator. The hardship requirement is met when it is demonstrated that no reasonable use can be made of the property through the strict application of the ordinance. In addition, the hardship must result from conditions that are peculiar to the property, such as location, size, or topography. Hardships resulting from personal circumstances, as well as hardships resulting from conditions that are common to the neighborhood, or the general public will not be considered. The hardship must not have resulted from actions taken by the applicant or the property owner. These hardship criteria may vary as determined by the Storm Water Administrator on a case-by-case basis.

2.6.2 Built-Upon Area Delineation

The following information is for use in determining BUA for compliance with water supply watershed and post-construction ordinance requirements in Charlotte-Mecklenburg. This information is not all inclusive. Specific determinations may need to be made by the Storm Water Administrator.

Not Considered Built-Upon Area:

- grass
- sand
- soil
- pine straw
- mulch
- wooden slatted decks
- water area of swimming pool
- surface water
- trees, bushes, plants, etc.
- A surface of number 57 stone, as designated by the American Society for Testing and Materials, laid at least four inches thick over a geotextile fabric.
- Artificial turf, manufactured to allow water to drain through the backing of the turf, and installed according to the manufacturer's specifications over a pervious surface.

Considered Built-Upon Area:

- asphalt or concrete

- brick
- terrazzo
- roofing
- ceramic tile
- buildings
- recreation facilities (e.g., tennis courts)
- gravel (unless as outlined above)
- metal
- plastic
- rubber

Partially Impervious Surfaces:

- Partially impervious surfaces are **NOT** considered BUA if they **DO NOT** have a primary function of carrying vehicle and/or foot traffic but are instead intended for controlling erosion, landscape beautification, etc. This typically includes riprap, landscape stones, river stones, etc.
- Permeable pavement system such as pervious asphalt or pervious pavers can be used to partially reduce BUA if installed and maintained in accordance with Section 4.5 of the Charlotte-Mecklenburg SCM Design Manual. Approval for this BUA credit must be obtained from the Stormwater Review Engineer during plan review for the City of Charlotte or from Rusty Rozzelle for areas in Mecklenburg County not reviewed by the City of Charlotte. In the City of Charlotte, permeable pavement systems are allowed to be privately maintained following approval, but in the Towns of Davidson, Cornelius, Huntersville, Matthews, Mint Hill, and Pineville, as well as unincorporate areas of Mecklenburg County, they must be maintained commercially or by a Homeowners Association (HOA).

2.6.3 Buffers

Buffers are natural, vegetated areas (preferably forested) adjacent to lakes and creeks through which storm water runoff flows in a diffuse manner to prevent channelization. Buffers serve to filter pollutants and absorb runoff, thereby reducing storm water volume, velocity, and pollutant loads. Buffers are effective at removing a variety of pollutants, including sediment, phosphorus, nitrate, and some metals. This occurs when pollutants become trapped as surface flow passes through the buffer and slows down, causing sediment to settle out, phosphorus and metals to be taken up by the root structure of buffer plants, and nitrate to be converted to nitrogen gas by microbes found in the underlying soil media. The slowing down of runoff also allows water to infiltrate through the soil and become groundwater recharge. In order for buffers to effectively filter pollutants, storm water must sheet flow across the buffer and the buffer must be of sufficient width. A well-established buffer is generally self-perpetuating and requires little maintenance. Native trees and shrubs are recommended for their hardiness, effective canopy and root structure. Buffer canopies intercept rainfall, thereby minimizing soil disturbance. Buffers also improve water quality by providing shade, which lowers water temperatures. Cool water carries more dissolved oxygen than warmer water and is essential to the survival of fish and other aquatic wildlife that are sensitive to changes in temperature. Organic material, including woody debris, that is washed into surface waters from buffers provides a source of food and habitat that supports aquatic organisms.

In Mecklenburg County, the Surface Water Improvement and Management (S.W.I.M.) buffer rules were adopted by the City of Charlotte, Towns and Mecklenburg County between 1999 and 2000. S.W.I.M. buffers vary in width from 35 feet to the entire floodplain depending on the jurisdiction and the size of the upstream drainage area, with the larger drainage areas having wider buffers. S.W.I.M. buffers also have two (2) to three (3) zones, including the streamside, managed use and upland zones. The amount of disturbance allowed within the buffer depends on the zone. The buffer requirements of the Post-Construction Storm Water Ordinance extend the S.W.I.M. buffers upstream to include intermittent streams and in the case of the Towns of Davidson, Matthews and Mint Hill (Goose Creek District) the buffers are made considerable wider. In addition to varying buffer widths, the jurisdictions differ in how buffers are delineated. In the Towns of Cornelius, Huntersville, Mint Hill (except Goose Creek), Pineville and Mecklenburg County, the buffers are delineated using GIS as indicated by Mecklenburg County's internet site called POLARIS. In the Towns of Davidson and Matthews, the buffers are delineated on the ground using the U.S. Army Corps of Engineers and N.C. Division of Water Quality methodology and must be shown in the Concept Plan Application. The "Stream Reach Evaluation Form" must be completed, signed by a certified professional as defined in Section 14 below, and attached to the Concept Plan Application along with a map showing the locations of streams and buffers. A third difference exists in the Town of Mint Hill where buffers in the Goose Creek District will be delineated using either the most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture (USDA) or the most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geologic Survey (USGS). Buffers adjacent to surface waters in the Goose Creek District that do not appear on either of the aforementioned maps are not subject to the Ordinance. There are also provisions for excluding certain types of development from the buffer requirements in the Goose Creek District when specific provisions are met, including road, railroad, bridge, airport facility, and utility crossings as well as storm water management facilities, and parallel utilities. These provisions are included in the table describing the uses and their designations applicable to the Goose Creek buffers contained in Section 305(C)(9) on page 38 of Mint Hill's Post-Construction Ordinance (see Appendix 2-5). This table was recently changed in State law and was subsequently changed in Mint Hill's ordinance in October 2022. For all jurisdictions, buffer requirements do not apply to ephemeral streams or piped stream sections. Also, the issuance of a 401 or 404 permit does not allow an impact to the buffer unless it is already an allowed use within the buffer, such as a road crossing. The buffer requirements and delineation techniques for each jurisdiction and watershed district are summarized in Table 2-2 below.

Table 2-2: Summary of Buffer Requirements by Jurisdiction.

Buffer Requirements	Jurisdictions & Watershed Districts (where applicable)											
	Cornelius	Davidson		Huntersville	Matthews			Mint Hill			Pineville	Mecklenburg
		Catawba	Yadkin		Catawba	Yadkin	Goose	Catawba	Clear	Goose		
Buffer Width												
Existing SWIM + 30-ft. no-build zone on <50 acres	X	X		X	X			X	X		X	X
50-ft on <50 acres & 100-ft on ≥50 acres for all intermittent & perennial streams			X (1)			X (2)						
100-ft on intermittent/perennial & 200-ft. on intermittent/perennial streams with a floodplain							X (3)			X (3)		
Buffer Delineation Method												
GIS	X			X				X	X		X	X
On-Site Delineation		X	X		X	X						
USGS & USDA Maps							X			X		

(1) Includes 3 zones.

(2) Plus entire floodplain undisturbed.

(3) Undisturbed.

Errors may occur in the delineation of buffers using USGS and USDA maps as well as S.W.I.M. buffers delineated using GIS as indicated on POLARIS. In particular, S.W.I.M. buffers are delineated beginning at 20-acre drainages. In some cases, ephemeral and not intermittent streams occur at 20-acre drainages and as stated above the ordinances do not intend to buffer ephemeral streams; therefore, a stream buffer would be indicated in POLARIS that is not required by the ordinance. The same situation could occur when streams are delineated using USGS and USDA maps. In such situations, the property owner or other concerned party may wish to have the buffer requirement deleted from the stream section. The process for requesting a stream exemption from buffer requirements is as follows:

1. The property owner or other concerned party shall submit a “Request for Stream Exemption” in the form of a letter to the Storm Water Administrator.
2. A completed “Stream Reach Evaluation Form” shall be enclosed with this letter (see Appendix 2-4 (Form #PCO39)). The form must be completed and signed by a “certified professional.” As defined in Section 14 below, a certified professional includes a person who is a licensed Professional Wetland Scientist or a person who has successfully passed the written and field tests for training in Intermittent and Perennial Stream Identification For Riparian Buffer Rules sponsored by NCDEQ. The Stream Reach Evaluation Form in Appendix 2-4 (Form #PCO39) is based on the stream delineation techniques specified in the NCDEQ guidance document covered during this training.
3. A map shall also be enclosed with the letter and Form #PCO39 showing the location of the stream reach being requested for exemption.
4. Upon receipt of this letter with enclosures, the Storm Water Administrator shall assign staff to evaluate the stream reach and complete Form #PCO39 described in #2 above. These staff shall have completed the training described in #2 above and be considered certified professionals.

5. Upon completion of the evaluation, staff shall compare their completed Stream Reach Evaluation Form to the form provided by the applicant and determine if they agree that the stream reach is neither intermittent nor perennial in which case the stream exemption shall be approved. However, if the staff evaluation reveals that the reach in question is intermittent or perennial then the buffer requirement shall apply and the request for exemption shall be denied. Staff shall attach the completed Form #PCO39 as well as the appropriate notification letter to the applicant contained in Appendices 2-5 and 2-6 (Form #PCO40 and 41) in the following folder, G:\Water Quality\WQ_Xfer\WQ\Post-Construction Ordinance\Stream Buffer Interpretations. Staff shall also attach a stream reach aerial photo out of POLARIS as shown in Appendices 2-5 and 2-6. Staff shall forward this information to the Storm Water Administrator for review and approval.
6. Upon approval, the Storm Water Administrator shall sign and mail the notification letter, PCO Form #39 and the POLARIS map.
7. All stream determinations and exemptions are good for five (5) years. This is consistent with NCDEQ. If development plans are submitted within that 5-year period, the determination is good as long as the plans remain valid.
8. If the stream buffer is delineated in POLARIS, the Storm Water Administrator may at their discretion inform GIS via email and the POLARIS coverage will be updated to reflect the revision.
9. If staff's stream determination confirmations disagree with the private professional determinations, staff's determination will be used. If the applicant wants to dispute staff's determinations, the applicant can have NCDEQ perform a determination that will over-rule staff's determination.
10. Appeal of a decision regarding stream reach exemption from buffer requirements is through the Storm Water Advisory Committee (SWAC). Refer to Section 13 below for instructions and appropriate forms.

For those stream buffers delineated by POLARIS, it is possible that the size of the upstream drainage area may be incorrect in which case the size of the buffer would be depicted incorrectly. In such situations, the property owner or other concerned party may wish to have the buffer requirement changed in POLARIS for that stream section. The process for requesting a changed in POLARIS stream buffer delineation is as follows:

1. The property owner or other concerned party shall submit a "Request for Stream Buffer Change in POLARIS" in the form of a letter to the Storm Water Administrator.
2. A topographic map shall be enclosed with this letter identifying the stream reach in question and the corresponding upstream drainage area. Calculations must be provided showing how the size of this area was determined.
3. Upon receipt of this letter with enclosures, the Storm Water Administrator shall forward the information to GIS requesting confirmation of the size of the upstream drainage area for the stream section in question.
4. Upon receipt of notification from GIS, the Storm Water Administrator shall make a determination regarding the requested change in POLARIS stream buffer delineation and issue written notification to the requesting party accordingly.
5. The Storm Water Administrator shall direct GIS to complete appropriate revisions to the POLARIS coverage.

In some circumstances, the Storm Water Administrator may elect to delineate a stream or confirm the size of an upstream drainage basin in POLARIS without receiving a request from a

property owner or other concerned party. This is a legitimate action the results of which shall dictate the required buffer width in POLARIS.

2.6.4 Detention

Detention is the process of collecting and detaining storm water runoff in engineered structures such as dry detention ponds to reduce volume and velocity and protect downstream areas from channel degradation and flooding. In many cases, water quality BMPs also serve to provide some degree of detention. As the amount of impervious area increases in a watershed so does the volume and velocity of storm water run-off. As discussed in Section 1.2 on page 1, replacing an acre of trees with asphalt will result in storm water runoff increasing by 27,000 gallons from an inch of rainfall. In addition, this runoff typically enters surface waters through the piped storm sewer system resulting in increased velocity. This increased volume and velocity of storm water runoff entering streams causes significant downstream channel scour and flooding. The purpose of detention is to hold back this added water and release it over time to prevent negative impacts downstream. Like water quality BMPs, detention measures are designed and constructed in accordance with specifications contained in the Charlotte-Mecklenburg SCM Design Manual. By meeting these specifications, the detention measure is presumed to meet the minimum performance standards of the Post-Construction Storm Water Ordinance and the Phase II laws.

The Post-Construction Storm Water Ordinances require that detention be provided when BUA reaches the High-Density threshold. The detention requirement is the same for all jurisdictions, except the Town of Huntersville. The detention requirements and thresholds are described in Table 2-3 below. For residential development exceeding the built-upon area threshold, the peak control requirements described in Table 2-3 below can be modified by the plan reviewer acting on behalf of the Storm Water Administrator based on the results of a downstream flood analysis provided by the owner or designee using the criteria specified in the Charlotte-Mecklenburg SCM Design Manual or if a downstream analysis is not performed the peak shall be controlled for the 10-yr and 25-yr, 6-hr storms. For commercial development exceeding the built-upon area threshold, peak control shall be installed for the 10-yr, 6-hr storm and additional peak control provided for the appropriate storm frequency (i.e., 25, 50 or 100-yr, 6-hr) as determined by the plan reviewer acting on behalf of the Storm Water Administrator based on a downstream flood analysis provided by the owner or designee using the criteria specified in the Charlotte-Mecklenburg SCM Design Manual or if a downstream analysis is not performed the peak shall be controlled for the 10-yr and 25-yr, 6-hr storms. Controlling the 1-year, 24-hour volume achieves peak control for the 2-year, 6-hour storm. The plan reviewer has the discretion to vary from the downstream flood analysis parameters for peak control. In such situations, this must be documented in the comments section of the Plan Review Checklist (Appendix 5-1). The above does not apply to Town of Huntersville where peak control is required for the 2 and 10-year, 24-hour storms.

Table 2-3: Summary of Post-Construction Detention Requirements by Jurisdiction.

Detention Requirements	Jurisdictions & Watershed Districts (where applicable)											
	Cornelius	Davidson		Huntersville	Matthews			Mint Hill			Pineville	Mecklenburg
		Catawba	Yadkin		Catawba	Yadkin	Goose	Catawba	Clear	Goose		
High Density Treatment Threshold (% BUA)	>24	>12	>10	>12	>24	>10	N/A	≥24	≥12	(2)	>24	>24
Volume Control												
Entire volume for 1-yr, 24-hr storm	X	X	X		X	X		X	X		X	X
(a) Increase in volume for 1-yr 24-hr storm or (b) Increase in volume for 2-yr 24-hr storm				X (1)			X (a)			X (a)		
Peak Control												
<u>Residential:</u> 10-yr & 25-yr, 6-hr storms <u>or</u> perform downstream analysis <u>Commercial:</u> 10-yr & 25-yr, 6-hr storms <u>or</u> 10-yr, 6-hr storm & perform downstream analysis	X	X	X		X	X		X	X	X	X	X
2-yr & 10-yr 24-hr storms				X								

(1) (a) or (b) based on the applicable zoning district.

(2) Volume and peak control required at >10% BUA, but only volume control required at ≤10% BUA.

2.6.5 Mecklenburg County Detention Ordinance

As of July 1979, Mecklenburg County's Zoning Ordinance required development that cumulatively created more than 20,000 square feet of built-upon area to develop a drainage plan to be approved by the County Engineer. Typically, but not exclusively, the drainage plan is required for commercial development (which includes industrial, institutional, multifamily, townhome, and condominium development) and must provide peak control for runoff from the 2-yr and 10-yr storm events using either the 6-hr or 24-hr return period. When the six Towns established their Zoning ordinances, these drainage plan requirements were incorporated. The reader should note that the Town of Matthews changed the grandfathering date for built-upon area to July 10, 2000 for purposes of complying with the Detention ordinance. These drainage plan requirements are separate from the Post-Construction Ordinance requirements. Development and redevelopment projects subject to both the Detention ordinance and the Post-Construction Ordinance must comply with the ordinance that is more protective of water quality. Table 2-4 below summarizes the compliance with detention provisions of the Detention Ordinance and the Post-Construction Ordinance:

Table 2-4: Comparison of Peak Control Requirements by Ordinance

Jurisdiction	Peak Control to be Provided Per Applicable Ordinance		
	Detention Ordinance Alone	Detention Ordinance + Low Density Post-Construction	Detention Ordinance + High Density Post-Construction
Cornelius	<u>Commercial:</u>	<u>Commercial:</u>	<u>Residential:</u> 10-yr & 25-yr, 6-hr storms <u>or</u> perform downstream analysis
Davidson	2-yr & 10-yr, 6-hr or 24-hr	2-yr & 10-yr, 6-hr or 24-hr	<u>Commercial:</u> 10-yr & 25-yr, 6-hr storms <u>or</u> 10-yr,

Jurisdiction	Peak Control to be Provided Per Applicable Ordinance		
	Detention Ordinance Alone	Detention Ordinance + Low Density Post-Construction	Detention Ordinance + High Density Post-Construction
	<u>Residential*</u>	<u>Residential*</u>	6-hr storm & perform downstream analysis
Huntersville			2-yr & 10-yr, 24-hr
Matthews	<u>Commercial & Residential:</u> 2-yr & 10-yr, 6-hr or 24-hr	<u>Commercial & Residential:</u> 2-yr & 10-yr, 6-hr or 24-hr	<u>Residential:</u> 10-yr & 25-yr, 6-hr storms <u>or</u> perform downstream analysis <u>Commercial:</u> 10-yr & 25-yr, 6-hr storms <u>or</u> 10-yr, 6-hr storm & perform downstream analysis
Pineville	<u>Commercial:</u> 2-yr & 10-yr, 6-hr or 24-hr	<u>Commercial:</u> 2-yr & 10-yr, 6-hr or 24-hr	
Mecklenburg Co.	<u>Residential*</u>	<u>Residential*</u>	
Mint Hill	<u>Commercial & Residential:</u> 2-yr & 10-yr, 6-hr or 24-hr	<u>Commercial & Residential:</u> 2-yr & 10-yr, 6-hr or 24-hr	

* Peak control may be required at the discretion of the County Engineer

Please note that if a development owner desires to apply for storm water fee credits, additional peak control requirements may apply, for more information visit:

<https://www.charlottenc.gov/Services/Stormwater/Fees>.

2.6.6 Undisturbed Open Space

Undisturbed open space is the setting aside of an area of a development site to be left undisturbed thus reducing the amount of impervious area and thereby reducing storm water volume, velocity, and pollutant load. This technique is considered a nonstructural BMP for controlling storm water impacts. The undisturbed open space requirement applies to new development and not to redevelopment. Redevelopment is defined as rebuilding activity on portions of land containing built-upon area as of the effective date of the ordinance (June 30, 2007). However, if this land is subdivided after the ordinance goes into effect this rebuilding activity will be considered development and not redevelopment and the undisturbed open space requirement will apply. Disturbance of the open space is allowed with specific mitigation options as described in Section 6.0. All the Towns except for Cornelius and Huntersville have incorporated the undisturbed open space requirement into their Post-Construction Storm Water Ordinances. The Town of Huntersville has open space requirements contained in their Zoning Ordinance. The amount of undisturbed open space required varies based on the amount of built-upon area in the development. For the Towns of Davidson, Matthews and Pineville as well as Mecklenburg County the undisturbed open space requirements are as follows:

- Less than 24% built-upon area = 25% of the project site set aside for undisturbed open space.
- Greater than or equal to 24% built-upon area and less than 50% built-upon area = 17.5% of the project site set aside for undisturbed open space.
- Greater than or equal to 50% built-upon area = 10% of the project site set aside for undisturbed open space.

The undisturbed open space requirements for the Town of Mint Hill vary slightly from the other Towns and are as follows:

- Less than 20% built-upon area = 15% of the project site set aside for undisturbed open space. Although not required by the Town’s Post-Construction Ordinance it is required by Section 6.4.1 entitled Undisturbed Open Space, Trees, Screening and Landscaping of Mint Hill’s Unified Development Ordinance (UDO).
- Greater than or equal to 20% built-upon area and less than 50% built-upon area = 15% of the project site set aside for undisturbed open space.
- Greater than or equal to 50% built-upon area = 10% of the project site set aside for undisturbed open space.

2.7 Response to Session Law 2018-145

Effective December 27, 2018, Session Law 2018-145 (aka Senate Bill 469) was passed as follows: “Stormwater runoff rules and programs shall not require private property owners to install new or increased stormwater controls for (i) preexisting development or redevelopment activities that do not remove or decrease existing stormwater controls. When a preexisting development is redeveloped, either in whole or in part, increased stormwater controls shall only be required for the amount of impervious surface being created that exceeds the amount of impervious surface that existed before the redevelopment. This subsection applies to all local governments regardless of the source of their regulatory authority. Local governments shall include the requirements of this subsection in their stormwater ordinances.” In essence this new law prohibits local governments from requiring stormwater controls on preexisting impervious area when a site is redeveloped thus nullifying such requirements in existing Phase II post-construction ordinances in effect in Mecklenburg County.

Effective immediately upon ratification, County and Town staff began ensuring compliance with the new law through their plan review and permitting processes. In other words, although ordinances state that storm water controls are required for redevelopment, County and Town staff are not enforcing this requirement through their land development plan review and permitting processes and are informing the land development community of the change. On January 21, 2019, County staff contacted the N.C. Department of Environmental Quality to obtain additional guidance for compliance with the new law. Based on information provided, the following guidelines were implemented effective immediately:

- As stated in Section 26(b) of Session Law 2018-145, this new requirement applies to “all local governments regardless of the source of their regulatory authority.”
- The effective dates of applicable ordinances should be considered as the “trigger” dates for preexisting impervious area.
- Session Law 2018-145 does not apply to buffer requirements.

County staff also asked the State for a timeline for compliance with the following provision of the law: Local governments shall include the requirements of this subsection in their stormwater ordinances. State staff indicated that no timeline had been established. It was therefore decided that Mecklenburg County and the Towns would continue to ensure compliance with the new law administratively and would wait on changes to the ordinances anticipating changes in the new law within the next few years. The Towns unanimously agreed with this approach. The reason for this approach is that the County believes that requiring stormwater controls on preexisting impervious area when a site is redeveloped is essential for improving impaired surface waters in compliance with the TMDL requirement in the Phase II Permit. This preexisting impervious area is what is

causing this impairment from a stormwater perspective and until it is treated it will not be possible to restore these surface waters. A two (2) year stakeholder process was involved in the development of the post-construction ordinances in Mecklenburg County, which included significant compromises to get the redevelopment requirement included. The County realizes that if it changes its ordinances, it will be extremely difficult if not impossible to get the redevelopment provisions added back in if the session law is changed. Therefore, the County has decided to enforce the session law administratively while it attempts to have it changed. The County believes this approach to be necessary in order to ensure compliance with its Phase II Permit and the Clean Water Act.

In response to Session Law 2018-145, Charlotte-Mecklenburg Storm Water Services, based on input provided by the City Attorney's Office, has maintained its agreed upon methodology for calculating built-upon area for triggering the high-density option dating back to 2007, which for all the Towns except Cornelius and Mint Hill includes redeveloped areas where old structures are removed, and new ones constructed along with newly developed areas. This methodology is described in detail in Chapter 2 Ordinances, Sections 2.4.3 and 2.4.4 of the Charlotte-Mecklenburg SCM Design Manual at the following link: <https://www.charlottenc.gov/Services/Stormwater/Stormwater-Regulations/SCM-Design-Manual>. If the high-density option is triggered and BMPs are required, the redeveloped area of the site is not required to be treated. In addition, the redeveloped area is still counted toward the BUA cap if located in a water supply watershed. This is based on Charlotte-Mecklenburg Storm Water Services' interpretation of Session Law 2018-145 as not addressing how preexisting development area is to be considered in built-upon area calculations.

Section 3.0 Charlotte-Mecklenburg SCM Design Manual

In August 2024, the City of Charlotte, Mecklenburg County and the Towns of Cornelius, Davidson, Huntersville, Matthews, Mint Hill and Pineville began the use of a new Manual referred to as the Charlotte-Mecklenburg SCM Design Manual for compliance with the post-construction ordinance provisions of their respective stormwater Permits that is available at the following link: <https://www.charlottenc.gov/Services/Stormwater/Stormwater-Regulations/SCM-Design-Manual>. This new Manual uses most of the designs from State Manual.

Section 4.0 Presubmittal Meeting and Concept Plan

4.1 Purpose of Presubmittal Meeting and Concept Plan

The purpose of the Presubmittal Meeting and Concept Plan is to ensure the applicant understands all the documents needed to be submitted for a complete submittal and to demonstrate how a proposed development shall “in concept” comply with the Post-Construction Storm Water Ordinance requirements. The Concept Plan is not a detailed design but is meant to provide the basic information necessary for the review agency to ensure that compliance with Post-Construction Storm Water Ordinance requirements can and shall be achieved by the proposed project.

4.2 Concept Plan Application Submission and Review Process

The County and Towns have two performance goals for processing Concept Plan applications:

- Have less than 2.5 review cycles per project submittal, and
- Process each project cycle within a turn-around time of 21 days.

The following is the process to be followed in the submission, review and approval of Concept Plans.

1. Applicant shall contact Town staff to schedule a Pre-Submittal meeting. Information is available at the following link: <https://stormwaterservices.mecknc.gov/land-development>. At the conclusion of the meeting, the applicant will be given a copy of the Pre-Submittal checklist items that need to be submitted for a complete submittal.
2. Applicants shall submit a completed application form along with the required attachments into the Accela system. Information about Accela and how to upload plans can be found at the following link: <https://stormwaterservices.mecknc.gov/accela>. The application form lists the information that should be shown on the Concept Plan. The applicant must also submit a land development application fee.
3. Within two (2) working days from receipt of an application, County and Town Intake staff shall complete a review of the submittal and contact the applicant if additional information is needed. If the application is complete, Intake staff will assign review agencies based upon the application which initiates the review cycle.
4. Within 21 calendar days of the review cycle being initiated, review agencies will complete an evaluation of submitted application package for compliance with the Post-Construction Storm Water Ordinance requirements and other ordinance requirements. Review agency comments and/or approvals are electronically documented within the Accela system and notification is sent to the Applicant.
5. If a revised application package is not re-submitted into Accela within sixty (60) calendar days from the date the applicant was notified, the application shall be considered withdrawn, and a new submittal for the same or substantially the same project shall be required along with the appropriate fee. The submittal of an incomplete application shall not suffice to meet this 60-day deadline.
6. Prior to resubmittal, a review agency or applicant can require a pre-resubmittal meeting to review unclear or unresolved issues from the previous submittal. The meeting must be

attended by the review agency with unresolved issues, the applicant (consultant engineer), and the owner. Pre-resubmittal meetings are scheduled with the Town.

7. Once the applicant has received approval of the Concept Plan Application, the process for submittal of the Storm Water Management Permit Application can proceed. Refer to Section 5.3 for a description of the Storm Water Permit Application submission and review process.

4.3 Concept Plan Application Fee Schedule

The Concept Plan Application fee is a component of the Mecklenburg County Land Development fee, which covers all land development plan review costs. The amount of the fee is based on the staff resources necessary to review applications, conduct inspections and administer the storm water permit requirements. The fee must be paid with the submittal of the Concept Plan Application in order for the application to be considered complete for review. The Land Development Application Fee Schedule which includes the fee associated with the Ordinance is located at the following link: <https://mecknc.widen.net/s/8pnf2hdjtn/mc-doc-land-development-fees>.

Section 5.0 Storm Water Management Permit

5.1 Purpose of Storm Water Management Permit and Application

The purpose of the Storm Water Management Permit is to provide a mechanism for the review, approval, and inspection of the approach to be used for the management and control of storm water for a development or redevelopment site consistent with the requirements of the Post-Construction Storm Water Ordinance, whether the approach consists of structural BMPs or other techniques such as low-impact or low-density design. A Storm Water Management Permit is required for all development and redevelopment unless exempt pursuant to the Post-Construction Storm Water Ordinance (see Sections 2.3 and 2.4). No land development activity, including land clearing, grading, etc., can be initiated for such development or redevelopment until a Storm Water Management Permit has been issued by the Storm Water Administrator or designee. The content and form of the permit has been established by the Storm Water Administrator. A Storm Water Management Permit shall govern the design, installation, and construction of storm water management and control practices on the site, including structural BMPs and elements of site design for storm water management other than structural BMPs. Compliance after project construction is assured by the maintenance provision of the Post-Construction Storm Water Ordinance.

The purpose of the Storm Water Management Permit Application is to demonstrate how post-construction storm water runoff shall be controlled and managed and how the proposed project shall meet the requirements of the Ordinance. A properly submitted, reviewed, and approved Storm Water Management Permit Application is required for the issuance of a Storm Water Management Permit. The content and form of the Storm Water Management Permit Application has been established by the Storm Water Administrator. All plans submitted with the application must be prepared by a registered North Carolina professional engineer or landscape architect. The engineer or landscape architect shall perform services only in their area of competence and shall verify that the design of all storm water management facilities and practices meets the submittal requirements for complete applications, that the designs and plans are sufficient to comply with applicable standards and policies found in the Charlotte-Mecklenburg SCM Design Manual, and that the designs and plans ensure compliance with the Post-Construction Storm Water Ordinance. A Post-Construction Storm Water Ordinance Plan Review Checklist is provided in Appendix 5-1 that lists the information that must be provided on plans for compliance with ordinance requirements.

5.2 Storm Water Management Permit Application Submission and Review Process

The County and Towns have two (2) performance goals for processing Storm Water Management Permit applications:

- Have less than 2.5 review cycles per project submittal, and
- Process each project cycle within a turn-around time of 21 calendar days.

The following is the process to be followed in the submission, review and approval of the Storm Water Management Permit Application.

1. Applicant shall contact Town staff to schedule a Pre-Submittal meeting. Information is available at the following link: <https://stormwaterservices.mecknc.gov/land-development>. At the conclusion of the meeting, the applicant will be given a copy of the Pre-Submittal checklist items that need to be submitted for a complete submittal.
2. Applicants shall submit a completed application form along with the required attachments into the Accela system. Information about Accela and how to upload plans can be found at the following link: <https://stormwaterservices.mecknc.gov/accela>. The application form lists the information that should be shown on the Storm Water Management Plan. The applicant must also submit a land development application fee. The appropriate fee can be viewed at the following link: <https://mecknc.widen.net/s/8pnf2hdjtn/mc-doc-land-development-fees>.
3. Within two (2) working days from receipt of the application and attached plans, County and Town staff and contact the applicant if additional information is needed. If the application is complete, Intake staff will assign review agencies based upon the application which initiates the review cycle.
4. Within 21 calendar days of the review cycle being initiated, review agencies will complete an evaluation of submitted application package for compliance with the Post-Construction Storm Water Ordinance requirements and other ordinance requirements. Review agency comments and/or approvals are electronically documented within the Accela system and notification is sent to the Applicant.
5. The Applicant can view the agency comments within Accela and should prepare a document showing how comments were addressed and submit the document along with the re-submittal of revised plans. Either the review agency or the Applicant can request a pre-resubmittal meeting prior to a formal plan re-submission. This meeting, if requested, must be attended by the requesting agency, the applicant, and the owner and formal re-submission will not be allowed until after the meeting. The review agencies may allow slip sheeting to correct a few, minor edits without creating another review cycle.
6. Once the plans are re-submitted into Accela, another review cycle begins following the same process above. If revised plans are not re-submitted within sixty (60) calendar days from the date the applicant was notified, the application shall be considered withdrawn, and a new submittal for the same or substantially the same project shall be required along with the appropriate fee. The submittal of an incomplete application shall not suffice to meet this 60-day deadline.
7. Once the plans receive approval by all review agencies, the plans are electronically stamped by each agency and the Applicant notified of the approval of the plans and issuance of the Storm Water Management Permit. This permit conveys approval for the owner or his agent as shown on the approved plan to construct storm water management devices and implement site designs (including undisturbed open space) in accordance with the applicable Post-Construction Storm Water Ordinance and related policies. No land development activities are to occur on a site until this permit has been issued. This permit is valid until the project is complete or three (3) years from issuance of permit. If no work on the site in furtherance of the plan has commenced within the three-year period, the permit and plan approval shall become null and void and a new application shall be required to develop the site. If work on the site in furtherance of the plan has commenced that involves any utility installations or street improvements except grading, the permit and plan shall remain valid and in force and the project may be completed in accordance with the approved plan. The completion of the

project, including the installation of BMPs, may take longer than three (3) years in which case the permit shall remain in effect until the project is completed.

Section 6.0 Mitigation

6.1 Purpose of Mitigation

The purpose of mitigation is to allow flexibility in the administration of the Ordinance and reduce compliance costs while providing an equal or greater protection of water quality. The development interests on the stakeholder panel for the Post-Construction Storm Water Ordinance felt that mitigation was extremely important in that it provided the developer with options that could greatly affect the affordability of a project. Depending upon the jurisdiction, mitigation options exist for Total Phosphorus removal, Undisturbed Open Space preservation, sites less than 1 acre in size, and for Huntersville LID projects. For example, some projects may not be able to comply with Ordinance requirements such as total phosphorus reduction and undisturbed open space without incurring significant costs due to specific site constraints. However, for the same project it may be affordable to provide the total phosphorus reduction and undisturbed open space on another site where the constraints do not exist thus providing protection of water quality while allowing for reduced project costs. Some jurisdictions opted to require mitigation in the same watershed as the development site thus ensuring balanced protection of water quality. Mitigation does not apply to the Town of Cornelius since they opted to go with the minimum State requirements.

6.2 Total Phosphorus Mitigation

A 70% total phosphorus removal criteria apply in the Catawba and Yadkin Districts for the Town of Davidson and in the Yadkin District for the Town of Matthews. The BMPs necessary to achieve 70% total phosphorus removal can be expensive. The purpose of total phosphorus mitigation is to reduce the cost of these BMPs in developments exceeding 50% built-upon area while ensuring the reduction of pollution loads and achievement of the Post-Construction Storm Water Ordinance goals and objectives. There are two (2) total phosphorus mitigation options available to developments greater than or equal to 60% built-upon area, including off-site mitigation and a buy-down option as described in this Section. For developments with greater than or equal to 50% and less than 60% built-upon area, only off-site mitigation is allowed. Both off-site and buy-down mitigation shall result in the construction of retrofit BMPs designed to achieve an equivalent or greater net mass removal of total phosphorus as would be achieved by removing 70% of the total phosphorus from the proposed site. Off-site mitigation is allowed only for total phosphorus removal above 50%. On-site BMPs shall be constructed to achieve 50% removal of total phosphorus. In addition, the buy-down option is available provided projects and/or properties are available for mitigation.

6.2.1 Off-Site Mitigation Option

The off-site mitigation option is available for projects that include greater than or equal to 50% built upon area. The off-site mitigation option requires that the owner or designee construct an off-site BMP retrofit project designed to achieve an equivalent or greater net mass removal of total phosphorus as would have been removed by the BMP treating to 70% removal minus the net mass of total phosphorus that shall be removed by the BMP treating to 50% removal from the

proposed site. On-site BMP(s) shall be constructed to achieve 50% removal of total phosphorus on the proposed site.

As part of the Concept Plan review process, the Storm Water Administrator shall receive, review, approve, disapprove or approve with conditions a Total Phosphorus Mitigation Application Form completed for the off-site mitigation option. A blank application is provided in Appendix 6-1 (Form # PCO9). The Storm Water Administrator has designed this application to include all pertinent information necessary for consideration of both total phosphorus mitigation options, including Option #1 Off-Site Mitigation and Option #2 Buy-Down Mitigation. This application shall be submitted along with the Concept Plan Application. The Application/Permit Number indicated on the form is the same as the Concept Plan Application Number, except it is followed by a “TP” for total phosphorus mitigation. It is further required that a legally valid instrument be attached to the application form demonstrating that the applicant has legal title to the property. A Phase I environmental site assessment must also be attached identifying areas of concern on or immediately adjacent to the site. An Operation and Maintenance Agreement and Maintenance Plan must be attached to the application form for each BMP included in the project.

Completed Total Phosphorus Mitigation Application Forms are to be submitted attached to the Concept Plan Application as described in Section 4.3 above. Plan reviewers shall complete an evaluation of the mitigation request to determine compliance with the standards of the Post-Construction Storm Water Ordinance. The criteria for approval of off-site total phosphorus mitigation shall include but are not limited to the following:

1. BMPs included in the plans attached to the application form shall be designed in accordance with specifications contained in the Charlotte-Mecklenburg SCM Design Manual. Inspections of these BMPs upon completion shall indicate compliance with approved plans and specifications.
2. BMP(s) must be sized for the corresponding watershed area according to the Charlotte-Mecklenburg SCM Design Manual. Operation and Maintenance Agreement and Maintenance Plan must be properly completed.
3. BMP(s) must be inspected by the Storm Water Administrator and found to be in compliance with all approved plans and specifications prior to the release of occupancy permits for the mitigated site.
4. A Phase I environmental site assessment must be provided indicating that there are no areas of environmental concern on or immediately adjacent to the site.

If the Storm Water Administrator finds that the application complies with the standards of the Ordinance, the Storm Water Administrator shall approve the application and issue written notification (with approve application attached) to the applicant and Town Planner. Once signed by the Storm Water Administrator, the Total Phosphorus Mitigation Application Form signifies approval of the mitigation request, which is valid until the project is complete or three (3) years from issuance of the storm water permit, whichever comes first. The Storm Water Administrator may impose conditions of approval as needed to ensure compliance with the Post-Construction Storm Water Ordinance. The conditions shall be attached to the approved application form. The signed and approved application form and all attachments along with the written notification of approval shall be placed in the Active file for the project.

Following approval from the Storm Water Administrator, BMP(s) may be installed and credits obtained by the owner for pounds of total phosphorus removed that can be applied to future projects. These credits can be accumulated or “banked” for a period of 10 years following the date of mitigation approval. The owner must submit a written request to the Storm Water Administrator for banking total phosphorus mitigation credits. Upon approval, the Storm Water Administrator shall track these credits in an appropriate database. All BMPs constructed for off-site mitigation shall be subject to the maintenance requirements as well as installation and maintenance performance securities specified in the Post-Construction Storm Water Ordinance and this Manual.

Staff shall inspect the BMP(s) installed for off-site mitigation to certify construction in accordance with the approved plans and specifications prior to the approval of as-built plans for the project or issuance of the final approval notification for the site. Inspection protocols are described in Section 12.1. Failure to properly fulfill the off-site mitigation requirement shall constitute a violation of the Ordinance and the remedies specified in Section 12.0 shall apply. In addition, the owner of the off-site BMP shall provide to the Storm Water Administrator a copy of a recorded Operation and Maintenance Agreement and attached Maintenance Plan for the BMP as described in Section 7.0. All the inspection and maintenance requirements specified in Section 7.0 shall apply to the owner of the BMP.

If the Storm Water Administrator finds that an application does not comply with the standards of the Ordinance, the Storm Water Administrator shall disapprove the application and issue written notification (with disapprove application attached) to the applicant and Town Planner.

6.2.2 Buy-Down Mitigation Option

The owner or designee of a proposed construction site that shall include greater than or equal to 60% built upon area may “buy-down” the 70% phosphorus removal requirement to no less than 50%. On-site BMPs must be installed to remove the remaining total phosphorus load at a 50% removal efficiency. The buy-down money shall be used by the jurisdiction where the mitigation occurred to construct BMP retrofit projects designed to achieve an equivalent or greater net mass removal of total phosphorus as would be achieved by removing between 50% and 70% of the total phosphorus from the proposed site. In the Town of Davidson, the buy-down mitigation money may also be used to purchase undisturbed open space or to make infrastructure repairs.

The amount of the buy-down payment shall be determined on a site-by-site basis using the four (4) criteria specified below.

1. Use the Site Evaluation Tool (SET) to calculate the annual loading for total phosphorus from the developed areas of the site at build-out. SET was developed for compliance with the Huntersville Low Impact Development Ordinance and is available at the following website: <http://stormwater.charmeck.org> (Select Regulations; Select Huntersville; Select Manuals and Guidelines; Select Mecklenburg County Site Evaluation Tool).
2. Determine the total pounds of total phosphorus per year to be “bought-down” (total phosphorus loading from #1 above at 50% reduction minus loading at 70% reduction) and multiply by 20 years (reasonable BMP lifespan).

3. Multiply the resulting total pounds of total phosphorus by \$1,000/pound (established buy-down rate) to obtain the buy-down payment.
4. Add \$4,400 per acre of construction area to cover the operation and maintenance costs of the retrofit BMP.
5. Add 12% to the overall buy-down payment to cover administrative costs.

The \$1,000/pound buy down rate was determined through analysis of BMP construction costs. Essentially, land-uses with less than 70% imperviousness exhibit BMP costs of roughly \$1,000 per pound of total phosphorus removed. Table 6-1 provides an example of total phosphorus buy-down costs per acre for a heavy commercial development.

Table 6-1: Estimated Cost Using the Buy-Down Option for a 1-acre Heavy Commercial Development.

1	TP loading without BMP (from SET) =	2.8 lb./ yr.
2	TP loading at 70% reduction (row 1 x 0.3) =	0.8 lb./yr.
3	TP loading 50% reduction (row 1 x 0.5) =	1.4 lb./yr.
4	TP loading difference (row 3 – row 2) =	0.6 lb./yr.
5	TP loading difference over 20 years (row 4 x 20) =	12 lb.
6	Buy-down rate (loading difference over 20 years x \$1,000/lb. mitigated) (row 5 x \$1,000) =	\$12,000
7	Buy-down rate + \$4,400 for operation & maintenance fee (row 6 + \$4,400) =	\$16,400
8	Buy down rate + fee increased by 12% for administrative costs (row 7 x 1.12) =	\$18,368
9	Total Cost of Buy-Down (same as row 8) =	\$18,368

Completed Total Phosphorus Mitigation Application Forms are to be submitted attached to the Concept Plan Application as described in Section 4.3 above. A blank application is provided in Appendix 6-1 (Form #PCO9). The Storm Water Administrator has designed this application to include all pertinent information necessary for consideration of both total phosphorus mitigation options, including Option #1 Off-Site Mitigation and Option #2 Buy-Down Mitigation. The Application/Permit Number indicated on the form is the same as the Concept Plan Application Number followed by TP for total phosphorus mitigation. Complete applications shall be assigned for plan review along with the completed Concept Plan Application. The date and time the notification is received must be indicated on the form by the plan reviewer. Plan reviewers shall complete an evaluation of the mitigation request to determine compliance with the standards of the Post-Construction Storm Water Ordinance. The criteria for approval of the buy-down total phosphorus mitigation option by the Storm Water Administrator shall include but not be limited to the following:

1. Projects and/or properties are available for mitigation, including BMP construction, BMP maintenance, BMP rehabilitation and stream restoration.
2. There is no time frame for spending the buy-down mitigation money; however, the Towns shall strive to spend the money in a timely and efficient manner such that a net improvement in water quality results. If the Towns cannot reasonably be expected to fulfill this expectation, the total phosphorus buy-down mitigation shall not be approved.

3. All projects constructed by the Towns as part of this mitigation option shall be maintained by the Towns into perpetuity. If the Towns cannot reasonably be expected to fulfill this expectation, the total phosphorus buy-down mitigation shall not be approved.

If the Storm Water Administrator finds that the application complies with the standards of the Post-Construction Storm Water Ordinance, the Storm Water Administrator shall approve the application and issue written notification (with approved application attached) to the applicant and Town Planner that the Buy-Down Mitigation request has been approved. Once signed by the Storm Water Administrator, the Buy-Down Mitigation Application Form signifies approval of the mitigation request, which is valid until the project is complete or three (3) years from issuance of the storm water permit, whichever comes first. The Storm Water Administrator may impose conditions of approval as needed to ensure compliance with the Ordinance. The conditions shall be attached to the approved application form. The signed and approved application form and all attachments along with the written notification of approval shall be placed in the Active file for the project.

Within 30 calendar days of receipt of notification of approval of the Concept Plan Application, the applicant shall submit a check for the full Buy-Down Mitigation amount as indicated on the approved application form made payable to jurisdiction where the development is to occur. The check shall be mailed to the attention of the Mecklenburg County Storm Water Administrator at the Land Use and Environmental Services Agency, 2145 Suttle Avenue, Charlotte, N.C. 28208-5237. Failure to receive the mitigation payment within 30 calendar days shall nullify this mitigation option and full compliance with the Post-Construction Storm Water Ordinance shall be required. Mecklenburg County shall forward all mitigation payments to the appropriate jurisdiction upon receipt. If the Storm Water Administrator finds that an application does not comply with the standards of the Ordinance, the Storm Water Administrator shall disapprove the application and issue written notification to the applicant and Town Planner.

6.3 Development and Redevelopment Mitigation

To reduce the financial impact of compliance with Post-Construction Storm Water Ordinance requirements, certain types of development and redevelopment are exempt from compliance with Ordinance requirements provided a Mitigation Fee is paid to the jurisdiction. This form of mitigation is applied to development and redevelopment on lots less than one (1) acre in size provided they are not part of a larger common plan of development or sale as well as to redevelopment in distressed business districts and transit station areas provided certain specific criteria are met as specified in the Ordinance. This is considered a “by-right” mitigation and does not require approval by the Storm Water Administrator; however, notification that this right is being exercised must be made at the time of the submittal of the Concept Plan Application. A blank notification form is provided in Appendix 6-2 (Form #PCO13). The Storm Water Administrator has designed this notification form to include all the pertinent information necessary for proper notification that the Development and Redevelopment Mitigation Option is being exercised. The Application/Permit Number indicated on the form is the same as the Concept Plan Application Number followed by a “D” for development mitigation. Complete applications shall be assigned for plan review along with the completed Concept Plan Application. The date and time the notification is received must be indicated on the form by the

plan reviewer. If an application is found to be incomplete, it shall be returned to the applicant within two (2) working days of receipt along with written notification as to why the application is considered incomplete. All complete notification forms shall be placed in the Active file for the project.

The amount of the Mitigation Fee shall be determined on a site-by-site basis using the five (5) criteria specified below. The concept behind the establishment of the amount of the Mitigation Fee is that sufficient money should be obtained to construct a BMP elsewhere within the jurisdiction to remove the same sediment load as would have been removed by a BMP constructed at the mitigated site over a 20-year period (life span of a typical BMP) at an 85% removal efficiency.

1. Use the Site Evaluation Tool (SET) to calculate the annual sediment loading from the developed areas of the site at build-out. SET was developed for compliance with the Huntersville Low Impact Development Ordinance and is available at the following website: <http://stormwater.charmeck.org> (Select Regulations; Select Huntersville; Select Manuals and Guidelines; Select Mecklenburg County Site Evaluation Tool).
2. Determine the tons of sediment that would be removed over a 20-year period (BMP life expectancy) if a BMP were installed on the site with an 85% removal efficiency.
3. Multiply the resulting tons of sediment that would be removed in 20 years by \$1,000/ton (established Mitigation Fee Rate).
4. Add \$4,400 per acre of site area for operation and maintenance costs of the retrofit BMP.
5. Add 12% to the overall buy-down payment to cover administrative costs.

The \$1,000/ton buy down rate was determined through analysis of BMP construction costs.

Table 6-2 provides an example of Mitigation Fees for a 0.9-acre commercial development with 75% impervious coverage.

Table 6-2: Mitigation Fee Calculated for a 0.9 Acre Commercial Development.

1	Total sediment loading from mitigated site at build-out (from SET) =	0.3 tons / yr.
2	Sediment removed at 85% removal efficiency (row 1 x .85) =	0.25 tons / yr.
3	85% loading reduction calculated over 20 years (row 2 x 20) =	5 tons
4	Mitigation Fee (row 3 x \$1,000) =	\$5,000
5	Mitigation Fee + \$4,400/acre for Operation & Maintenance Fee (row 4 + (\$4,400 x 0.9))	\$8,960
6	Mitigation Fee + Maintenance Fee increased by 12% for administrative costs (row 5 x 1.12)	\$10,035.20
7	Total Mitigation Fee =	\$10,035.20

The calculations in Table 6-2 above shall be performed for the mitigated site and shown on the Development and Redevelopment Mitigation Notification Form in the table provided. The standard project information must also be included on this form as indicated. In addition, a copy of the SET spreadsheet showing all calculations as discussed above shall be attached to the form in order for it to be considered complete. Total payment shall be received by the Storm Water Administrator within 30 calendar days of receipt of notification of approval of the Concept Plan Application in the amount indicated on row #7 of Table 6-2 above. Checks should be made payable to the jurisdiction where the project is located. Failure to receive such payment shall nullify this mitigation option and full compliance with the Post-Construction Storm Water

Ordinance shall be required. The check shall be mailed to the attention of the Mecklenburg County Storm Water Administrator at the Land Use and Environmental Services Agency, 2145 Suttle Avenue, Charlotte, N.C. 28208-5237. Mecklenburg County shall forward all mitigation payments to the appropriate jurisdiction upon receipt. The mitigation is valid until the project is complete or three (3) years from issuance of the storm water permit, whichever comes first.

As specified in their Post-Construction Storm Water Ordinances, the jurisdictions shall use the Mitigation Fee to install water quality enhancement measures including but not limited to BMPs as well as to purchase undisturbed open space, restore stream channels and purchase and plant trees. In addition, the Town of Davidson has specified in their Ordinance that the Mitigation Fee can be used to repair infrastructure, including roads when water quality is impacted. All BMPs constructed by the jurisdictions as part of this mitigation option shall be constructed in accordance with Charlotte-Mecklenburg SCM Design Manual criteria and shall be maintained by the jurisdiction into perpetuity. The amount of time that the jurisdictions have to spend the mitigation monies varies from two (2) to five (5) years as specified in the Ordinance.

6.4 Undisturbed Open Space Mitigation

The purpose of Undisturbed Open Space Mitigation is to reduce the cost of complying with the Undisturbed Open Space requirement of the Post-Construction Storm Water Ordinance while ensuring the reduction of pollution loads and achievement of the Ordinance objectives. Undisturbed Open Space Mitigation allows for the designated open space area on a project required by the Post-Construction Storm Water Ordinance to be disturbed provided this disturbance is off-set by an allowable form of mitigation, including on-site and off-site mitigation or payment-in-lieu.

6.4.1 On-Site Mitigation Option

On-site mitigation shall allow the disturbance of designated Undisturbed Open Space area on a project with the fulfillment of the following criteria on the project site:

1. 50% increase in total Undisturbed Open Space area specified by the Ordinance, except when the Undisturbed Open Space area qualifies as a “grass field” (as defined in the Post-Construction Storm Water Ordinance) in which case the size of the required Undisturbed Open Space area remains unchanged. The portion of the Undisturbed Open Space area that is a grass field, whether or not disturbed, must be replanted with trees as specified in #3 below.
2. Establishment of a minimum of six (6) inches of topsoil to the disturbed Open Space area following the completion of construction activities. This material may be obtained from on-site when available.
3. Planting of a minimum of 36 trees per acre of Undisturbed Open Space area as follows:
 - Trees shall have a minimum caliper of 1.5 inches.
 - Trees shall be of a quality set forth by the American Standard for Nursery Stock and shall be selected from the list in Appendix 6-3 (Form #PCO14).
 - Planted trees shall contain a mix of at least three (3) different species in roughly equal proportions.

- Trees shall be warranted for a minimum of two (2) years following planting and any dead or diseased trees must be replaced.
- The area around and between trees must be stabilized using vegetative ground cover and mulch.
- The slope of any graded or disturbed area that is dedicated for Undisturbed Open Space cannot exceed 3 to 1.
- The flow of water across the Undisturbed Open Space area must be controlled to prevent soil erosion or mulch disturbance.

The Storm Water Administrator shall receive, review, approve, disapprove or approve with conditions an Undisturbed Open Space Mitigation Application Form completed for the on-site mitigation option. A blank application is provided in Appendix 6-4 (Form #PCO15). The Storm Water Administrator has designed this application to include all pertinent information necessary for consideration of all three (3) undisturbed open space mitigation options, including Option #1 On-Site Mitigation, Option #2 Off-Site Mitigation and Option #3 Payment-In-Lieu. This application shall be submitted along with the Concept Plan Application. The Application/ Permit Number indicated on the form is the same as the Concept Plan Application Number followed by an "O" for open space mitigation. The form requires that the applicant provide an explanation as to how all reasonable efforts have been undertaken to fulfill Undisturbed Open Space requirements on the site. The application form also requires the submittal of written specifications for the planting of trees and groundcover and a written warranted statement for the replacement of dead or diseased trees over a minimum of two (2) years following planting. Complete applications, including all attachments, shall be assigned for plan review along with the completed Concept Plan Application. The criteria for approval of on-site mitigation shall include but not be limited to the following:

1. Size of the on-site mitigation area as indicated on the front of the form complies with Ordinance requirements as described in criteria #1 above.
2. Topsoil complies with Ordinance requirements as described in criteria #2 above.
3. Number of trees to be planted complies with Ordinance requirements as described in criteria #3 above.
4. Planting plan indicates that all criteria specified in criteria #3 above shall be met.

If the Storm Water Administrator finds that the application complies with the standards of the Ordinance, the Storm Water Administrator shall approve the application and issue written notification (with approved application attached) to the applicant and Town Planner. Once signed by the Storm Water Administrator, the Undisturbed Open Space Mitigation Application Form signifies approval of the mitigation request, which is valid until the project is complete or three (3) years from issuance of permit, whichever comes first. The Storm Water Administrator may impose conditions of approval as needed to ensure compliance with the Post-Construction Storm Water Ordinance. The conditions shall be attached to the approved application form. The signed and approved application form and all attachments along with the written notification of approval shall be placed in the Active file for the project.

Staff shall inspect the project site to certify that on-site mitigation is properly completed in accordance with the approved application and attached planting plan prior to the approval of as-built plans or issuance of the final approval notification for the site. Inspection protocols are

described in Section 12.1. Failure to properly fulfill the on-site mitigation requirement shall constitute a violation of the Ordinance and the remedies specified Section 12.0 shall apply.

If the Storm Water Administrator finds that an application does not comply with the standards of the Ordinance, the Storm Water Administrator shall disapprove the application and issue written notification (with disapproved application attached) to the applicant and Town Planner.

6.4.2 Off-Site Mitigation Option

On a case-by-case basis and at the sole discretion of the Storm Water Administrator, jurisdictions may allow Undisturbed Open Space disturbance and off-site mitigation through the acceptance for ownership or conservation easement properties for the protection of Undisturbed Open Space, provided the result shall be an increased protection of water quality over what would be attained through preservation of Undisturbed Open Space or on-site mitigation. This off-site mitigation shall be located in the same delineated watershed as the project site if specified as such in the Post-Construction Storm Water Ordinance for the jurisdiction.

The Storm Water Administrator shall receive, review, approve, disapprove or approve with conditions an Undisturbed Open Space Mitigation Application Form completed for the off-site mitigation option. A blank application is provided in Appendix 6-4 (Form #PCO15). The Storm Water Administrator has designed this application to include all pertinent information necessary for consideration of all three (3) undisturbed open space mitigation options, including Option #1 On-Site Mitigation, Option #2 Off-Site Mitigation and Option #3 Payment-In-Lieu. This application shall be submitted along with the Concept Plan Application. The Application/Permit Number indicated on the form is the same as the Concept Plan Application Number followed by an "O" for open space mitigation. The form requires that the applicant provide an explanation as to how all reasonable efforts have been undertaken to fulfill Undisturbed Open Space requirements on the site. It is further required that a legally valid instrument be attached to the application form demonstrating that the applicant has legal title to the property for transfer to the jurisdiction. A Phase I environmental site assessment must also be attached identifying areas of concern on or immediately adjacent to the site. Complete applications, including all attachments, shall be assigned for plan review along with the completed Concept Plan Application. The criteria for approval of off-site mitigation by the Storm Water Administrator shall include but are not limited to the following:

1. Size of the off-site mitigation area as indicated on the front of the form must comply with Ordinance requirements.
2. For Mecklenburg County and the Town of Pineville, the mitigation area must be located in the same delineated creek system as the project site. In the Town of Davidson, the two (2) areas must be located in the same named river basin (Catawba or Yadkin). The Towns of Matthews and Mint Hill allow for off-site mitigation of open space; however, there is no requirement regarding the location of the mitigation area. The open space requirements for the Town of Huntersville are not associated with their Post-Construction Storm Water Ordinances; therefore, this approach to off-site mitigation does not apply.
3. The proposed off-site mitigation must result in an increased protection of water quality over what would be attained through the preservation of Undisturbed Open Space on the project site or through on-site mitigation. This shall require a comparison of the project site to the

proposed mitigation site with regard to site area, existing vegetation, topography and surface waters running through the site. The proposed mitigation site must cover at least as much area as the required Undisturbed Open Space for the project site. The mitigation site must also be more heavily vegetated than the project site. In addition, the amount of surface water on the mitigation site must be greater and the topographic relief more extreme for approval to be granted. Higher points shall also be given to a mitigation site if it lies in an impaired watershed area (303(d) listed stream).

4. A legally valid instrument must be provided demonstrating that the applicant has legal title to the property for transfer to the jurisdiction.
5. A Phase I environmental site assessment must be provided indicating that there are no areas of environmental concern on or immediately adjacent to the site.
6. The jurisdiction or County must be agreeable to accepting the property for conservation easement and/or ownership. This must be confirmed by the plan reviewer contacting the jurisdiction or Real Estate Services with the County prior to approval of the mitigation option.

If the Storm Water Administrator finds that the application satisfies numbers 1 through 6 above and complies with the standards of the Post-Construction Storm Water Ordinance, the Storm Water Administrator shall approve the application and issue written notification (with approved application attached) to the applicant and Town Planner. Once signed by the Storm Water Administrator, the Undisturbed Open Space Mitigation Application Form signifies approval of the mitigation request, which is valid until the project is complete or three (3) years from issuance of permit, whichever comes first. The Storm Water Administrator may impose conditions of approval as needed to ensure compliance with the Ordinance. The conditions shall be attached to the approved application form. The signed and approved application form and all attachments along with the written notification of approval shall be placed in the Active file for the project.

Ownership of the approved off-site mitigation property shall be legally transferred to the jurisdiction within 90 calendar days following approval of the Storm Water Management Permit Application. Failure to properly transfer property title within the 90 calendar days shall constitute a violation of the Ordinance and the remedies specified Section 12.0 shall apply.

If the Storm Water Administrator finds that an application does not comply with the standards of the Ordinance, the Storm Water Administrator shall disapprove the application and issue written notification (with disapproved application attached) to the applicant and Town Planner.

6.4.3 Payment-In-Lieu Mitigation Option

The Payment-In-Lieu Mitigation Option for Undisturbed Open Space dedication is only allowed for industrial and commercial developments and multi-family projects that are in excess of 50% built upon area. Payment-in-lieu shall only be allowed to the extent an approved disturbance cannot be offset by on-site mitigation as determined by the Storm Water Administrator. The following criteria shall be fulfilled for the payment-in-lieu option:

1. A fee shall be paid to Mecklenburg County based on the following formula: $1.25 \times$ (appraised value of subject property including intended use without improvements). The appraised value of the subject property shall be determined by a licensed, independent real

estate appraiser retained by the developer or owner. Mecklenburg County may accept the appraised value or at its discretion obtain its own appraisal. In the event the parties cannot agree on the appraised value, the two appraised values shall be averaged together to determine the final appraised value to be used in the formula above.

2. Payment shall be accepted by Mecklenburg County prior to land disturbing activities.

The Storm Water Administrator shall receive, review, approve, disapprove or approve with conditions an Undisturbed Open Space Mitigation Application Form completed for the payment-in-lieu mitigation option. A blank application is provided in Appendix 6-4 (Form #PCO15).

The Storm Water Administrator has designed this application to include all pertinent information necessary for consideration of all three (3) undisturbed open space mitigation options, including Option #1 On-Site Mitigation, Option #2 Off-Site Mitigation and Option #3 Payment-In-Lieu. This application shall be submitted along with the Concept Plan Application. The Application/Permit Number indicated on the form is the same as the Concept Plan Application Number followed by an "O" for open space mitigation. The form requires that the applicant provide an explanation as to how all reasonable efforts have been undertaken to fulfill Undisturbed Open Space requirements on the site. Complete applications, including all attachments, shall be assigned for plan review along with the completed Concept Plan Application. The criteria for approval of payment-in-lieu mitigation shall include but are not limited to the following:

1. The applicant must effectively demonstrate on the application form that all reasonable efforts have been undertaken to fulfill Undisturbed Open Space requirements on the site.
2. All other mitigation options must be exhausted before payment-in-lieu can be considered for approval.

If the Storm Water Administrator finds that the application complies with the standards of the Ordinance, the Storm Water Administrator shall approve the application and issue written notification (with approved application attached) to the applicant and Town Planner. Once signed by the Storm Water Administrator, the Undisturbed Open Space Mitigation Application Form signifies approval of the mitigation request, which is valid until the project is complete or three (3) years from issuance of permit, whichever comes first. Total payment shall be received by the Storm Water Administrator within 30 calendar days of receipt of notification of approval of the Concept Plan Application. Failure to receive such payment shall nullify this mitigation option and full compliance with the Post-Construction Storm Water Ordinance shall be required. All checks shall be made payable to the jurisdiction where the project is located. The check shall be mailed to the attention of the Mecklenburg County Storm Water Administrator at the Land Use and Environmental Services Agency, 2145 Suttle Avenue, Charlotte, N.C. 28208-5237. Mecklenburg County shall forward mitigation payments to the appropriate jurisdiction upon receipt. The signed and approved application form and all attachments along with the written notification of approval and a copy of payment check shall be placed in the active file for the project.

If the Storm Water Administrator finds that an application does not comply with the standards of the Ordinance, the Storm Water Administrator shall disapprove the application and issue written notification (with disapproved application attached) to the applicant and Town Planner.

As specified in their Post-Construction Storm Water Ordinances, the jurisdictions shall use the payment-in-lieu to purchase open space to be left undisturbed into perpetuity except for

greenway trails, new Charlotte-Mecklenburg Utility lines and channel work/maintenance activities by Charlotte-Mecklenburg Storm Water Services. This property purchase must occur in the same named stream or delineated watershed. Other utility work may be allowed in the Undisturbed Open Space area provided it will not result in loss of Undisturbed Open Space as approved by the jurisdiction. Mecklenburg County and the Towns of Matthews, Mint Hill and Pineville are required by their Ordinances to use their payment-in-lieu money within a maximum of two (2) years of the end of the calendar year from the receipt of the payment. In their Ordinance, the Town of Davidson extended this time period out to 5 years. The Town of Huntersville does not have this form of mitigation. As an option, Mecklenburg County and the Towns of Pineville and Mint Hill may elect to use up to 10 percent of the payment to purchase and plant trees. The Town of Davidson increased this allowance in its Ordinance to up to 50 percent. The payment may also be used in the Town of Davidson to repair infrastructure in the Town, including road repairs when water quality is impacted. The Town of Matthews also allows for the option of spending the payment on trees but no percentage limit is set. For Mecklenburg County and the Towns of Pineville and Mint Hill, the payment-in-lieu must be applied in the same delineated creek system as the project site. In the Town of Davidson, the two (2) areas must be located in the same named river basin (Catawba or Yadkin). The Town of Matthews does not specify where the payment-in-lieu is to be applied. The Town of Cornelius does not have an Undisturbed Open Space requirement as part of their Post-Construction Storm Water Ordinance; therefore, they do not have an open space mitigation option.

6.4.4 Pre-Approved Undisturbed Open Space Mitigation

The following is pre-approved for on-site mitigation and does not require the submittal of an application to the Storm Water Administrator; however, these mitigation areas must be described in the Concept Plan Application and on the attached plans showing the location of undisturbed open space areas.

1. Residential, Commercial and Multifamily Uses: 25% of the required Undisturbed Open Space area is pre-approved for on-site mitigation provided the size of mitigation area is 150% of the disturbed area.
2. Industrial Uses: 100% of the required Undisturbed Open Space area is pre-approved for on-site mitigation with no increase in total required Undisturbed Open Space area.

6.5 Mitigation Options for the Town of Huntersville

The Huntersville Post-Construction Ordinance allows two (2) types of mitigation, including LID Mitigation for new developments with greater than or equal to 50% impervious area and Development and Redevelopment Mitigation. LID Mitigation allows a development to substitute Conventional BMPs for LID BMPs on the development site. Two (2) LID Mitigation options are available, including off-site and buy-down mitigation. Both options will result in the construction of retrofit projects in the same river basin (Catawba or Yadkin) as the development site for the purpose of removing the increased pollutants discharged to surface waters at the development site as a result of the use of Conventional instead of LID BMPs. Off-site mitigation requires the developer or their designee to construct and maintain the mitigation project. Buy-down mitigation requires the developer to provide funding to the jurisdiction toward the construction and maintenance of a mitigation project for up to 20 years. The methodologies for

calculating the pollutant load required for off-site mitigation as well as the LID Buy-Down Mitigation Cost are described in Sections 6.5.1 and 6.5.3, respectively. These methodologies were selected as the best available approach for performing these calculations. Some of the values represented in these methodologies are not absolute; however, for the purpose intended they are considered adequate.

Two (2) Development and Redevelopment Mitigation options are available, including an option for lots less than one (1) acre that applies to the entire jurisdiction and an option for projects located in the Town Center Zoning District. Development and redevelopment projects on lots less than one (1) acre are allowed by right to forego meeting the requirements of the Huntersville Post-Construction Ordinance when mitigation requirements are fulfilled as described in Section 6.5.4, provided the following criteria are met:

1. The lot has been described by metes and bounds in a recorded deed or shown on a recorded plat prior to July 1, 2007;
2. Development and redevelopment on the lot are not part of a larger common plan of development or sale, even though multiple, separate or distinct activities take place at different times on different schedules;
3. Stream Buffer requirements are fulfilled as described in Section 8.25 of the Huntersville Post-Construction Ordinance; and

Redevelopment projects in the Town Center Zoning District are allowed by right to forego meeting the requirements of the Ordinance when mitigation requirements are fulfilled as described in Section 6.5.4, provided the stream buffer requirements are fulfilled. If there is no net increase in existing built-upon area, including built-upon area that is removed as part of the redevelopment, and there is no decrease in existing storm water controls, then there is no limit on the amount of disturbed area. If either of these provisions is not satisfied, then the amount of total disturbed area on the site must be less than one (1) acre. These provisions exist to ensure compliance with minimum State requirements for post-construction storm water controls.

6.5.1 Pollutant Load Required for LID Mitigation

The Huntersville Post-Construction Ordinance requires that all BMPs be designed to achieve an average annual 85% Total Suspended Solids (TSS) removal for the first one (1) inch of rainfall from the developed area of the site. LID BMPs or a combination of LID and Conventional BMPs can be used to meet this requirement. It is estimated that a combination of LID and Conventional BMPs will achieve an average annual 85% TSS and 60% Total Phosphorus (TP) removal efficiency whereas Conventional BMPs alone achieve an estimated 85% TSS and 50% TP removal efficiency. For both mitigation options, a Conventional BMP must be constructed on the development site and mitigation must be provided to achieve a net mass removal of TP greater than or equal to the TP load associated with the difference between LID versus Conventional BMPs at the development site treating runoff from the first one (1) inch of rainfall. As described above, this is the difference between 60% and 50% TP removal, which is 10%. To calculate the TP load associated with this 10% removal efficiency, identify the TP load in lbs./acre/year associated with the land use applicable to the development site in Table 6-3 below. If a combination of land uses exists at the development site, use the land use from the table that has the highest pollutant load.

Table 6-3: TP Loading Rates for Selected Land Uses

Land Use	TP Load (lb./ac/year)
Multi-Family High (70% impervious)	1.83
Commercial – High (85% impervious)	2.85
Office-Industrial High (70% impervious)	1.86
Industrial (65% impervious)	2.39
Mixed Use (60% impervious)	2.24
High Density Mixed Use (70% impervious)	2.49
Ultra-Mixed Use (90% impervious)	2.97

The TP load associated with the applicable land use for the development site from Table 6-3 is multiplied by the total number of acres for the site to obtain a total TP load for the site. This total TP load is then multiplied by 10% to obtain the pollutant load required for mitigation. Table 6-4 below provides an example calculation for a one-acre ultra-mixed-use development.

Table 6-4: Example Pollutant Load Calculations for One Acre Ultra Mixed-Use Development

1	Onsite Drainage Area	1.00 acre
2	Total Phosphorus Loading (select value from Table 6-3)	2.97 lbs./acre/yr.
3	Total Phosphorus Loading for the Site (Row 1 x Row 2)	2.97 lbs./year
4	Pollutant Load Required for Mitigation (Row 3 x 10%)	0.297 lbs.

6.5.2 Criteria for Off-Site LID Mitigation Option

The Storm Water Administrator shall receive, review, approve, disapprove or approve with conditions a “Town of Huntersville Mitigation Application Form” with the Off-Site Mitigation Option selected (see Section 6.5.5). The application shall be submitted for review along with the Concept Plan Application. It is further required that a legally valid instrument be attached to the application form demonstrating that the applicant has legal title to the property. A Phase I environmental site assessment must also be attached identifying areas of concern on or immediately adjacent to the site. At the discretion of the Storm Water Administrator, the requirement for a Phase I environmental site assessment may be waived. An Operation and Maintenance Agreement and Maintenance Plan must be attached to the application form for each BMP included in the mitigation project. The criteria for approval of an Application for LID Mitigation using the Off-Site Mitigation Option are provided below. Failure to satisfy these conditions will result in disapproval and at the discretion of the Storm Water Administrator approval can be granted with specific conditions attached.

1. Conventional BMP(s) shall be designed, constructed, and maintained on the development site to achieve an average annual 85% Total Suspended Solids (TSS) removal for the developed area of the site in accordance with the criteria and specifications in the Huntersville Water Quality Design Manual.
2. The development site shall achieve full compliance with the Performance Criteria contained in Section 8.17.12(b) 1, 2, 3, 5, 6, and 7 of the Huntersville Post-Construction Ordinance.
3. LID BMP(s) shall be designed, constructed, and maintained on property other than the development site to at a minimum achieve the pollutant load required for mitigation (see Section 6.5.1) using the methodology described in Table 6-5.

4. BMP(s) shall be sized for the corresponding watershed area according to the design standards in the Huntersville Water Quality Design Manual.
5. BMP(s) shall be inspected by the Storm Water Administrator and found to be in compliance with all approved plans and specifications prior to the release of occupancy permits for the development site.
6. All off-site mitigation BMPs shall be subject to the maintenance requirements as well as installation and maintenance performance securities specified in the Huntersville Post-Construction Ordinance and the Administrative Manual.

Table 6-5: Example Calculations for Showing TP Reduction from Off-Site BMP

1	Project Site Drainage Area (acres)	1
2	Phosphorus Loading at Project Site (lbs./acre/year) (select value from Table 6-3)	2.85
3	Total Phosphorus Loading at Project Site (lbs./year) (Row 1 x Row 2)	2.85
4	Pollutant Load Required for Mitigation (lbs./year) (Row 3 x 10%)	0.285
6	Mitigation Site Drainage Area (acres)	0.25
7	Phosphorus Loading at Mitigation Site (lbs./acre/year) (select value from Table 6-3)	1.83
8	Total Phosphorus Loading at Mitigation Site (lbs./year) (Row 6 x Row 7)	0.4575
9	Total Phosphorus Removal Efficiency of BMP at Mitigation Site (%)	70
10	Total Phosphorus Loading Reduced by Mitigation Site (lbs./year) (Row 8 x Row 9)	0.32025
11	Pollutant Load Mitigated (%) ((Row 10 / Row 4) x 100)	112

6.5.3 Criteria for Buy-Down LID Mitigation Option

Table 6-6 provides the Huntersville LID buy-down mitigation costs per acre based on land use type. This cost is applied by selecting the cost applicable to land use type and multiplying by the number of acres to be treated. For example, for 10 acres of multi-family development (70% impervious) to be treated the rate of \$25,438.83 is multiplied by 10 to arrive at a mitigation cost of \$254,388.30.

Table 6-6. Huntersville LID Buy-Down Cost per Acre for Select Land Uses

Land Use	TP Load (lb./ac/year)	LID Buy-Down Cost/Acre
Multi-Family High (70% impervious)	1.83	\$25,438.83
Office-Industrial High (70% impervious)	1.86	\$34,036.45
Mixed Use (60% impervious)	2.24	\$25,691.70
Industrial (65% impervious)	2.39	\$30,159.09
High Density Mixed Use (70% impervious)	2.49	\$28,894.74
Commercial – High (85% impervious)	2.85	\$31,002.00
Ultra-Mixed Use (90% impervious)	2.97	\$35,047.94

The LID buy-down mitigation costs by land use type described in Table 3.2 are based on the estimated cost for the construction, maintenance, and administration of an LID SCM (bioretention system) over its anticipated 20 year life span that is designed to remove the pollutant load required for mitigation as described in Table 3.1 for an ultra-mixed use development at 90% impervious. This example was selected because it represents the highest LID construction, maintenance and administrative costs that will occur in the Town of

Huntersville. It is important to note that the cost for the land necessary to construct the bioretention system is not included in this calculation. For this analysis, it was estimated that a one acre ultra-mixed use development at 90% impervious would generate 2,793.6 ft³ of runoff from a one (1) inch rain event (required design storm), which established the water quality volume or Wave. The Ordinance requires that the first 50% of this runoff be treated with a bioretention system or other LID measure, which equates to a volume of 1,396.8 ft³. Based on the standard in the N.C. SCM Design Manual, 1,397 ft² of bioretention area would be required to treat this volume. The cost to construct bioretention in Mecklenburg County is estimated at \$16/ft² of the surface area of the bioretention device. The estimated cost to construct 1,397 ft² of bioretention area is therefore \$22,352 (1,397ft² x \$16/ft²). As described in Section 3.2 above, mitigation must be provided to achieve a net mass removal of TP greater than or equal to the TP load associated with the difference between LID versus Conventional SCMs at the development site, which is estimated at 10%. The buy-down mitigation cost for all land use types is set at \$3,763/lb./acre that was established by dividing the estimated construction cost of \$22,352 by the 20-year total pollutant load for the required 10% TP mitigation load for ultra-mixed use shown in Table 3.1 ($\$22,352 \div (0.297 \times 20)$). This set mitigation rate of \$3,763/lb./acre is multiplied by the required 10% TP mitigation load for the different land use types provided in Table 3.1 multiplied by 20 to establish the bioretention per acre cost for each land use type. This cost is added to an annual maintenance cost of 32 cents a square foot of bioretention surface are times 20 years ((1,397 ft² x 0.32) x 20) for a total of \$8,940.80/acre plus a 12% administrative fee to arrive at the totals presented in Table 6-6.

The criteria for approval of an Application for LID Mitigation using the Buy-Down Mitigation Option are provided below. Failure to satisfy these conditions will result in disapproval and at the discretion of the Stormwater Administrator approval can be granted with specific conditions attached.

1. Projects and/or properties shall be available for mitigation at the time the “Application for LID Mitigation” is received.
2. Conventional SCM(s) shall be designed, constructed, and maintained on the development site to achieve an average annual 85% Total Suspended Solids (TSS) removal for the developed area of the site in accordance with the criteria and specifications in the Manual.
3. The development site shall achieve full compliance with the Performance Criteria contained in Section 8.17.12(b) 1, 2, 3, 5, 6, and 7 of the Ordinance.
4. Payment shall be made to the Town of Huntersville prior to the issuance of the Stormwater Management Permit based on the developments predominant land use and the associated LID Buy-Down Cost per acre illustrated in Table 3.2. On a case-by-case basis, the Stormwater Administrator may allow an LID Buy-Down Cost to be calculated for a unique land use using the criteria described above and forgo the use of the established costs provided in Table 3.2. However, this calculation will be based on the TP loading rates established by the Stormwater Administrator for this unique land use and not the rates contained in Table 3.1.

The Town of Huntersville shall use money accrued through buy-down mitigation payments to install structural SCMs and/or perform stream restoration projects. The Stormwater Administrator has the discretion to allow buy-down mitigation payments to be applied to other projects. All projects paid for with buy-down mitigation funds shall be designed and installed to remove a pollutant load equal to or greater than the increased load allowed to discharge from the

development site as a result of the mitigation option. Projects should occur in the same watershed (Yadkin or Catawba) as the development that was allowed the mitigation option to the extent practicable as determined by the Stormwater Administrator. There is no time constraint for the Town of Huntersville to spend mitigation money; however, the Town shall strive to spend buy-down monies in a timely and efficient manner such that a net improvement in water quality results. In addition, all projects constructed by the Town of Huntersville as part of this mitigation option shall be maintained by the Town of Huntersville or its designee into perpetuity.

6.5.4 Criteria for Development and Redevelopment Mitigation Options

The process for requesting approval of the Development and Redevelopment Mitigation Option for a proposed development begins with the submittal to the Storm Water Administrator of a “Town of Huntersville Mitigation Application Form” with the Development and Redevelopment Mitigation Option selected (see Section 6.5.5). The application shall be submitted for review along with the Concept Plan Application. The Storm Water Administrator shall consider the information provided in the application and approve, disapprove or approve with conditions. One (1) of the following three (3) criteria must be fulfilled to satisfy the mitigation requirement for development and redevelopment projects on less than one (1) acre and for redevelopment in the Town Center Zoning District as described in Section 6.5. Failure to satisfy one (1) of these conditions will result in disapproval and at the discretion of the Storm Water Administrator approval can be granted with specific conditions attached.

1. Storm Water Quality Treatment requirements met on site as described in Section 8.17.12(b)(3), (4) and (5) of the Ordinance with LID or Conventional BMPs allowed;
2. Storm Water Volume and Peak Control requirements met on site as described in Section 8.17.12(b)(6) and (7) of the Ordinance; or
3. The Town is paid a mitigation fee prorated at \$60,000 per acre for all projects except single-family residential that will be prorated at \$45,000 per acre for the untreated post-project built-upon-area. This fee shall be used to cover the cost for installation by the Town or its designee of a mitigation project(s) capable of achieving a net mass removal of pollutants greater than or equal to the pollutant removal that would have been achieved by BMPs installed at the development site in full compliance with Ordinance requirements. The mitigation project(s), as determined by the Town, must be located in the same named lake or stream watershed that is receiving storm water discharge from the development site, including Lake Norman, Mountain Island Lake, McDowell Creek, Gar Creek, Ramah Creek, and Clarke Creek. An exception can be made if the Storm Water Administrator determines there are no viable mitigation projects in that watershed.

6.5.5 Administration

The Storm Water Administrator or designee is responsible for approving and tracking all Mitigation Applications as well as working with the Town of Huntersville to spend the monies received on viable water quality projects that comply with the intent of the Ordinance. A blank application is provided in Appendix 6-5. The Storm Water Administrator has designed this application to include all pertinent information necessary for consideration of the two (2) LID Mitigation Options, including Option 1 Off-Site Mitigation and Option 2 Buy-Down Mitigation as well as the three (3) Development and Redevelopment Mitigation Options, including Storm

Water Quality Treatment, Storm Water Volume and Peak Control and Mitigation Fee. The application must be completed in full and all applicable plans, calculations and documents described on page 2 must be attached before the application will be considered complete and accepted for review. Applications should be submitted at the time Concept Plans are submitted for review. All Mitigation Applications received will be issued an application/permit number that consists of the year followed by a number issued chronologically as follows: 2017-1; 2017-2; 2017-3. Application approval will occur in conjunction with the Concept Plan review and approval process.

Section 7.0 Operation and Maintenance Agreement

7.1 Purpose of Operation and Maintenance Agreement

An Operation and Maintenance Agreement is required for all BMPs. This requirement applies to all BMPs used for water quality control as well as for those BMPs used for the control of water quantity, peak, and volume. The purpose of this agreement is to ensure that each BMP receives adequate maintenance so that it can function as designed. The agreement also designates the responsible party who shall be responsible for maintaining the BMP, outlines maintenance requirements for each BMP, and serves as a legal document to ensure routine maintenance.

7.2 Description of Operation and Maintenance Agreement

Prior to final approval of any BMP design plans and the issuance of the Storm Water Management Permit, an Operation and Maintenance Agreement must be submitted in the Accela system along with the other documents required as part of the Storm Water Permit Application, approved by the Storm Water Administrator, and recorded at the Mecklenburg County Register of Deeds. The Operation and Maintenance Agreement template (Covenant) can be found in Appendix 7-1 (Form #PCO19). The proper template must be filled out and the applicable jurisdiction inserted.

A BMP Maintenance Plan is attached as Exhibit A to the Operation and Maintenance Agreement which identifies the specific BMPs covered by the plan, maintenance activities to be performed, inspection and reporting activities to be performed, and an estimated annual budget for maintenance and replacement. A spreadsheet for estimating the maintenance and replacement budget is provided as Appendix 7-3, Form #PCO42. The agreement must be signed by the owner and notarized, signed by the Storm Water Administrator, recorded at the Mecklenburg County Register of Deeds Office, and an electronic copy of the recorded document submitted into the Accela system prior to approval of the Storm Water Management Permit.

7.3 Description of Maintenance Requirements

The Operation and Maintenance Agreement requires that each BMP be inspected by a qualified registered North Carolina professional engineer or landscape architect on an annual basis in all Phase II jurisdictions with the exception of the Town of Huntersville. The Town of Huntersville requires a qualified professional to perform annual inspections. A “qualified professional” is defined as a registered North Carolina professional engineer, registered landscape architect, or a person certified by North Carolina State University’s BMP Inspection and Maintenance Certification program. Proof of certification will be required in the form of a seal or a certification document. Staff will verify credentials through the following websites:

- North Carolina Professional Engineers: <https://www.membersbase.com/ncbels-vs/public/searchdb.asp>
- North Carolina Landscape Architects: <http://www.ncbola.org/>
- NCSU BMP Inspection & Maintenance Certification: <https://www.bae.ncsu.edu/workshops-conferences/>.

An annual compliance inspection report must be completed for each BMP indicating the status of each item inspected and any maintenance that was conducted. The inspection report must be completed on the required form that is available at the following website:

<http://stormwater.charmeck.org> (Select Surface Water Quality; Select Protection; Select Maintenance of Best Management Practices; Select BMP Inspection Report Form). The first inspection report is due within one (1) year from the date of as-built certification and each year thereafter. The annual compliance inspections shall occur within 45 days prior to the anniversary date of the as-built certification. The Mecklenburg County inspector has the flexibility to change the annual compliance inspection date for specific BMPs. For example, in situations where a multiple BMPs within a subdivision have different annual inspection dates, the Mecklenburg County inspector can select one inspection date for all BMPs to make it easier for owners to keep track of the annual inspections. The inspector shall certify on the Maintenance and Inspection Checklist that the BMP has been inspected and that at the time of the inspection the BMP was performing properly and was in compliance with the terms and conditions of the approved Operation and Maintenance Agreement and Maintenance Plan required by the Post-Construction Storm Water Ordinance.

Based upon the results of the inspection, the Mecklenburg County inspector may elect to perform a follow-up inspection. The owner of the BMP shall keep records of inspections, maintenance, and repairs for at least five (5) years from the date of creation of the record and shall submit the same upon reasonable request to:

Mecklenburg County Land Use and Environmental Services (LUESA)
Attention: Storm Water Administrator
2145 Suttle Avenue
Charlotte, N.C. 28208-5237

7.4 Transfer of Maintenance Responsibilities to Jurisdiction

Mecklenburg County and all the Towns except Cornelius and Huntersville shall accept maintenance responsibility of structural BMPs that are installed pursuant to the Post-Construction Storm Water Ordinance following a warranty period of two (2) years from the date of the final approval of the BMP, provided the BMP:

1. Only serves a single-family detached residential development or townhomes all of which have public street frontage;
2. Is satisfactorily maintained during the two-year warranty period by the owner or designee;
3. Meets all the requirements of the applicable Post-Construction Storm Water Ordinance and the Charlotte-Mecklenburg SCM Design Manual; and
4. Includes adequate and perpetual access and sufficient area, by easement or otherwise, for inspection, maintenance, repair or reconstruction.

The owner of the BMP shall still be responsible for routine maintenance of the easement area. The routine maintenance activities that will be retained by the owner include:

- grass cutting,
- trash removal, and
- landscaping.

The following procedure shall be followed regarding the transfer of maintenance responsibilities:

1. After the two (2) year warranty period has expired and assuming the BMP meets the criteria above, the owner may complete the Transfer of Maintenance Responsibilities Form (Appendix 7-4, Form #PCO22) and submit to the Storm Water Administrator, along with any attached Exhibits to the following address: Storm Water Administrator, Water Quality Program, 2145 Suttle Avenue, Charlotte, N.C. 28208-5237.
2. Upon receiving the above form, the Storm Water Administrator or designee shall conduct an inspection of the subject BMP.
3. The inspector shall conduct a thorough inspection in accordance with Section 12.1 below and the Mecklenburg County BMP Inspection Procedures. Any deficiencies detected during the inspection shall be noted. An inspection report with instructions for correcting the deficiencies shall be mailed to the owner within five (5) working days of the inspection.
4. Upon notification by the owner that the deficiencies have been corrected, the inspector shall re-inspect the BMP. If the BMP is found to be in satisfactory condition and meets the criteria for BMP Transfer of Maintenance Responsibilities, then the Transfer of Maintenance Responsibilities Form shall be signed by the Storm Water Administrator and returned to the owner. The owner shall record the completed form at the Mecklenburg County Register of Deeds Office.
5. The original recorded document shall be provided to the Town and an approved copy provided to the Mecklenburg County Storm Water Administrator at the address in Section 7.3 above. Maintenance and/or warranty bonds shall not be released until this recorded document has been received.
6. Upon receipt of the certified copy of the Transfer of Maintenance Responsibilities Form, the jurisdiction becomes responsible for the non-routine maintenance activities of the BMP.
7. Mecklenburg County shall update the BMP Database to indicate that the BMP has been accepted for maintenance and electronically attach a copy of the recorded document to the project within the BMP Database.

7.5 Maintenance Access

Adequate access must be provided into all BMP areas for inspection, maintenance, and landscaping upkeep. A 20-foot wide permanent maintenance access easement from a public right-of-way must be provided for all BMPs and recorded on final plats. Driveways can serve as the 20-foot maintenance access for BMPs provided the owner of the driveway and BMP are one in the same. The cleared access area within this easement must have a minimum stabilized width of 12 feet, maximum longitudinal grade of 15 percent, and maximum cross slope of 5 percent. In addition, a 10-foot wide permanent maintenance access easement must be provided around the perimeter of all BMPs to allow for adequate maintenance and repair.

Section 8.0: Final Plat Recordation

8.1 Purpose of a Final Plat

Enforceable restrictions on property usage are required to run with the land to ensure that future development and redevelopment maintains the site in compliance with Ordinance requirements. This is achieved through specific notations on final plats as described below, which shall be reviewed and approved by Mecklenburg County Land Development prior to recordation. The surveyor shall include applicable restrictions from the recorded final plat on each lot survey, which is provided to the purchaser at the time of closing. In this way the new property owner is made aware of the restrictions and the measures necessary to ensure compliance with the Ordinance.

8.2 Plat Application Submission and Review Process

The County and Towns have two performance goals for processing applications for Plats:

- Have less than 2.5 review cycles per project submittal, and
- Process each project cycle within a turn-around time of 14 calendar days.

The following is the process to be followed in the submission, review and approval of Plat.

1. Applicants shall submit a completed application form along with the required attachments into the Accela system at the following link:
<https://stormwaterservices.mecknc.gov/news/land-development-application-submittals-Accela>. The application form lists the information that should be shown on the Plat. The applicant must also submit a plat review fee.
2. Within two (2) working days from receipt of an application, County and Town Intake staff shall complete a review of the submittal and contact the applicant if additional information is needed. If the application is complete, Intake staff will assign review agencies based upon the application which initiates the review cycle. Please note that if infrastructure remains to be installed within the boundary of the plat, then a surety/bond is required as described in Section 9.0.
3. Within 14 calendar days of the review cycle being initiated, review agencies will complete an evaluation of submitted application package for compliance with the Post-Construction Storm Water Ordinance requirements and other ordinance requirements. Review agency comments and/or approvals are electronically documented within the Accela system and notification is sent to the Applicant.
4. If a revised application package is not re-submitted into Accela within sixty (60) calendar days from the date the applicant was notified, the application shall be considered withdrawn, and a new submittal for the same or substantially the same project shall be required along with the appropriate fee. The submittal of an incomplete application shall not suffice to meet this 60-day deadline.
5. Prior to resubmittal, a review agency or applicant can require a pre-resubmittal meeting to review unclear or unresolved issues from the previous submittal. The meeting must be attended by the review agency with unresolved issues, the applicant (consultant engineer), and the owner. Pre-resubmittal meetings are scheduled with the Town.

6. Once the applicant has received approval of the plat within Accela, the applicant should secure the signatures of appropriate agencies (typically LUESA staff and Town staff) and the document recorded at the Register of Deeds Office.
7. After recordation, a digital copy of the approved, signed, recorded plat shall be provided to LUESA staff. If infrastructure remains to be installed within the boundary of the plat, then a surety/bond is required as described in Section 9.0.

Section 9.0: Surety Requirements

9.1 Purpose of a Surety

The purpose of a surety is to provide Mecklenburg County with financial resources to complete required public improvements in the event of developer default. For the Post-Construction Storm Water Ordinance, these sureties are primarily used for BMPs and associated infrastructure. There are two (2) basic categories of sureties for BMPs, including those used to ensure their installation and those used to ensure their maintenance. There are three (3) methods of securing sureties used by Mecklenburg County, including:

- **Surety Bond:** A contract among at least three (3) parties, including the principal (developer), obligee (Mecklenburg County) and the surety (bonding company) who ensures that the principal's obligations shall be performed.
- **Letter of Credit:** A document issued mostly by a financial institution which provides an irrevocable payment undertaking to a beneficiary against complying documents as stated in the credit. The letter of credit is issued through a credited, full service bank within Mecklenburg County.
- **Cash Bond:** A certified check made out to Mecklenburg County or a Company Check made out to Mecklenburg County.

9.2 Sureties for Installations

Certificates of occupancy and/or final plat approval are oftentimes requested before the BMPs for a project are completed. In such situations, the developer is first required to obtain a surety. This surety is meant to provide Mecklenburg County with sufficient funds to complete the required infrastructure (including trees, landscaping, roadways, pavement, sidewalk, storm drainage infrastructure, and BMPs) should the developer fail to do so.

Blank surety application forms for guaranteeing the installation of BMPs are provided in on the following link: [Bond Administration | Storm Water Services](#). This type of surety must be posted for all BMPs on each plat before certificates of occupancy can be released or the plat approved prior to the completion of BMPs. All plats, with a few exceptions, must have a surety posted before Mecklenburg County shall approve the plat. One such exception is with individual commercial property where all work is typically completed prior to the release of certificates of occupancy and/or approval of the plat, therefore a surety is not necessary. However, at the discretion of the inspector, a surety for individual commercial property shall be allowed provided the developer completes as much work as possible and provides a surety for the remaining improvements before the occupancy hold is released and/or plat is signed.

The process for obtaining a surety for a BMP is described at the following link: <https://stormwaterservices.mecknc.gov/land-development/bond-administration>.

In general, the steps are:

1. The applicant requests a bond estimate by submitting via email to the Bonds Administrator an inspection request form and a Bond Estimate form.

2. The Bonds Administrator confirms the amount of the bond by comparing the approved plat and potentially the results of a field inspection to the bond request and contacts the applicant with instructions for securing the bond.

Sureties shall not be released until as-built plans have been received and approved and it has been determined by the LUESA staff through an on-site inspection that all infrastructure has been installed and the project is in full compliance with approved plans and specifications and the requirements of the Post-Construction Storm Water Ordinance. The Bond Administrator will provide the applicant instructions for release of the infrastructure bond. A Maintenance Bond must be received for all BMPs before the original surety can be released.

9.3 Sureties for Maintenance

BMP Maintenance Bonds are required for all structural BMPs installed for both residential and commercial developments. BMP Maintenance Bonds are not required for BMPs installed for public facilities. The purpose of these bonds is to ensure that funds are secured to maintain BMPs if the owner should fail to do so in which case Mecklenburg County would cash the bond to obtain the money to perform the necessary maintenance. The value of the bond shall be determined by the Bonds Administrator in consultation with the Towns. The owner is responsible for all repairs and/or material replacement required to ensure the operation of the BMP in accordance with approved plans and specifications. After the two (2) year warranty period, the owner may request that the Bond Administrator release the bond. Before the bond is released, the inspector shall conduct a field evaluation of the BMP to ensure proper operation and maintenance. If this field evaluation reveals that the BMP is not being maintained, the inspector may choose to extend the maintenance bond for an additional year. If it is confirmed that the BMP is being properly maintained, the Bond Administrator will contact the owner with instructions on releasing the bond. If a BMP is to be maintained by the jurisdiction, a recorded copy of the Transfer of Maintenance Responsibility Form (see Appendix 7-4, Form #PCO22) must be accepted by the Storm Water Administrator before Maintenance Bond shall be released.

9.4 Sureties for Public Entities

Public entities are not required to obtain sureties for either the installation or maintenance of water quality BMPs provided a letter signed by the manager or director of the project provides suitable assurances that the necessary improvements will be installed and maintained in accordance with ordinance requirements. Public entities shall include but not be limited to Charlotte-Mecklenburg Schools, City of Charlotte, Charlotte-Mecklenburg Utilities, Charlotte-Mecklenburg Storm Water Services, Mecklenburg County and all the Towns as well as the State and Federal government. The letter of assurance shall be addressed to the Storm Water Administrator and upon his approval the surety requirement will be waived and all holds/approvals for the project released.

Section 10.0 As-Built Surveys

10.1 Purpose of As-Built Surveys

The purpose of the as-built survey is to document the design of the project following its construction. The as-built survey is used by Mecklenburg County to determine if the project has been built in accordance with approved plans and specifications as required by the Post-Construction Storm Water Ordinances. The Ordinances specify that the responsible party, as identified in the Storm Water Management Permit, must submit an “as-built” survey documenting the lay-out and design of post-construction ordinance compliance measures within 30 calendar days following project completion. The as-built survey and a final inspection and approval by the Storm Water Administrator are required before a project is determined to be in compliance with the Ordinance. At the discretion of the Storm Water Administrator, certificates of occupancy and the release of sureties may be withheld pending receipt of as-built surveys and the completion of a final inspection and approval of a project.

10.2 As-Built Survey Submittal Requirements

As-built survey must be prepared by a land surveyor licensed in North Carolina and must show the final design specifications for all BMPs, including the field location, size, depth, etc. The as-built survey must also show the location and size of all Undisturbed Open Space areas and water quality buffers as well as storm drain inlets and outlets. A checklist summarizing all the requirements for as-built surveys is provided in Appendix 10-1 (Form #PCO27). As-built surveys must be reviewed and approved by the design engineer who must certify, under seal, that the surveys are in compliance with approved plans and specifications and with the requirements of the Post-Construction Storm Water Ordinance by completing the Post-Construction Storm Water Ordinance Compliance Certification provided in Appendix 12-1. The design engineer should note that other inspections prior to and during construction are required by the certification as described in Section 12.1. Mylar is not required.

All as-built surveys and the completed Post-Construction Storm Water Ordinance Compliance Certification must be submitted to the Land Development Gatekeeper at the following location within 30 calendar days following project completion:

LUESA- Land Development
2145 Suttle Avenue
Charlotte, N.C. 28208-5237
Attention: Land Development Gatekeeper

10.3 As-Built Survey Approval Process

The County and Towns have two performance goals for processing As-Built Survey applications:

- Have less than 2.5 review cycles per project submittal, and
- Process each project cycle within a turn-around time of 21 days.

The following is the process to be followed in the submission, review and approval of an As-Built Survey:

1. A completed form along with the required attachments must be submitted into the Accela system at the following link: <https://stormwaterservices.mecknc.gov/land-development/bond-administration>. The application form lists the information that should be shown on the As-Built Survey. In addition, the applicant must submit a Post-Construction Storm Water Compliance Certification (Appendix 12-1) that is sealed by a professional engineer certifying compliance of the final BMP. The applicant will be required to submit a land development application fee for an As-Built Survey.
2. Within two (2) working days from receipt of an application, County and Town Intake staff shall complete a review of the submittal and contact the applicant if additional information is needed. If the application is complete, intake staff will assign review agencies based upon the application which initiates the review cycle. Within 21 calendar days of the review cycle being initiated, review agencies will complete an evaluation of submitted application package for compliance with the Post-Construction Storm Water Ordinance requirements and other ordinance requirements. As part of the review, inspectors may conduct a field evaluation to ensure undisturbed open space areas, buffers, built-upon area, and BMPs are accurately depicted on the as-built survey. Review agency comments and/or approvals are electronically documented within the Accela system and notification is sent to the Applicant.
3. If a revised application package is not re-submitted into Accela within sixty (60) calendar days from the date the applicant was notified, the application shall be considered withdrawn, and a new submittal for the same or substantially the same project shall be required along with the appropriate fee. The submittal of an incomplete application shall not suffice to meet this 60-day deadline.
4. Once the As-Built Survey receives approval by all agencies and the Post-Construction Storm Water Compliance Certification (Appendix 12-1) is completed, the surveys are electronically stamped by each agency and the Applicant notified of the approval of the submittal.

At the discretion of the Storm Water Administrator, certificates of occupancy may be withheld pending receipt of as-built surveys and the completion of a final inspection and approval of a project. All approved as-built surveys for BMPs shall be maintained in Accela.

Section 11.0 Digital Records

11.1 Purpose of Digital Records

The purpose of digital records is to provide the County with a digitized version of approved plans, surveys, and plats that can be used as:

1. Compliance documentation for the Post-Construction Ordinance planning and design requirements, and
2. Reference documentation of the original design for use by inspectors.

11.2 Maintaining Digital Files

All digital submittals of plans, as-built surveys, etc. are submitted for approval through the County's Accela system and maintained within that system.

Section 12.0 Inspection Process

12.1 Owner Inspection Protocols

As part of ensuring compliance with the Ordinance, the owner (or owner's representative) is responsible for conducting project inspections throughout project construction, prior to final project and BMP approval, and conducting annual BMP compliance inspections thereafter.

Final BMP Construction Inspection

Prior to obtaining final project approval, the design engineer must complete and seal the Post-Construction Storm Water Ordinance Compliance Certification form located in Appendix 12-1. This form must be approved prior to release of certificate of occupancy and provides certification of:

1. Attendance at pre-construction erosion control meeting
2. Attendance at the BMP pre-installation meeting
3. Inspection of BMPs at key construction phases
4. Inspection of storm drain system to ensure sediment is flushed/cleaned from system prior to BMP construction
5. Inspection of BMP outlet structures and pipes to ensure appropriate watertight seals /collars are used
6. Inspection of final project construction to ensure as-built surveys accurately reflect required buffers, undisturbed open space areas, built-upon areas, and BMP dimensions and elevations.

Annual BMP Compliance Inspections

Annual structural BMP compliance inspections are required to be performed by a qualified registered North Carolina professional engineer or landscape architect as described in Section 7.3 in all Phase II jurisdictions with the exception of the Town of Huntersville. The Town of Huntersville requires a qualified professional to perform annual inspections. The inspection report must be completed on the required form that is available at the following website: <http://stormwater.charmeck.org> (Select Surface Water Quality; Select Protection; Select Maintenance of Best Management Practices; Select BMP Inspection Report Form). The annual compliance inspections shall occur annually after the date of the as-built certification. If multiple BMPs within a project are completed at different dates, the County BMP Inspector has the flexibility to set one inspection date for all BMPs within the project to simplify scheduling BMP Inspections. The purpose of the annual inspection is to ensure that the BMPs are being maintained and functioning properly.

12.2 Staff Inspection Protocols

The provisions of the Ordinance shall be enforced by the Storm Water Administrator, his or her designee, or any authorized agent of Mecklenburg County. The Storm Water Administrator or designee shall have the authority, upon presentation of proper credentials, to enter and inspect any land, building, structure, or premises to ensure compliance with the Post-Construction Storm Water Ordinance, or rules or orders adopted or issued pursuant to the Ordinance, and to determine whether the activity is being conducted in accordance with the Ordinance and the

approved storm water management plan, Charlotte-Mecklenburg SCM Design Manual and Administrative Manual and whether the measures required in the plan are effective. No person shall willfully resist, delay, or obstruct the Storm Water Administrator while the Storm Water Administrator is inspecting or attempting to inspect an activity under the Ordinance. The Storm Water Administrator shall also have the power to require written statements, or the filing of reports under oath as part of an investigation.

12.3 Notice of Violation / Penalty Assessment Process

When the Storm Water Administrator finds that any building, structure, or land is in violation of the Ordinance, the Storm Water Administrator shall issue a notice of violation (NOV) to the responsible person/entity. The NOV shall indicate the nature of the violation and contain the address or other description of the site upon which the violation occurred or is occurring and order the necessary action to abate the violation. The notice shall specify a date by which the responsible person/entity must comply with the Ordinance and advise that the responsible person/entity is subject to remedies and/or penalties. In determining the measures required and the time for achieving compliance, the Storm Water Administrator shall take into consideration the technology and quantity of work required and shall set reasonable and attainable time limits. The Storm Water Administrator may deliver the notice of violation and correction order personally, by certified or registered mail, return receipt requested, or by any means authorized for the service of documents by Rule 4 of the North Carolina Rules of Civil Procedure.

A violation of any of the provisions of the Ordinance may subject the violator to a civil penalty. A civil penalty may be assessed from the date the violation occurs. No penalty shall be assessed until the alleged violator has been notified of the violation except in situations where a delay in correcting a violation would seriously threaten the effective enforcement of the Ordinance or pose an immediate danger to the public health, safety, or welfare. In such cases, the Storm Water Administrator may order the immediate cessation of a violation. Any Person so ordered shall cease any violation immediately. The Storm Water Administrator may seek immediate enforcement, without prior written notice, through any remedy or penalty allowed by the Ordinance as described below. Refusal to accept a notice or failure to notify the Storm Water Administrator of a change of address shall not relieve the violator's obligation to comply with the Ordinance or to pay such a penalty.

The maximum civil penalty for each violation of the Ordinance varies per jurisdiction. Refer to the PCO for each individual town. Each day of continuing violation shall constitute a separate violation. The Storm Water Administrator is authorized to vary the amount of the per diem penalty based on relevant mitigating and aggravating factors including, but not limited to, the effect, if any, of the violation; the degree and extent of harm caused by the violation; the cost of rectifying the damage; whether the violator saved money through noncompliance; whether the violator took reasonable measures to comply with the Ordinance; whether the violation was committed willfully; whether the violator reported the violation to the Storm Water Administrator; and the prior record of the violator in complying or failing to comply with the Ordinance or any other ordinance or law. Civil penalties collected pursuant to the Ordinance shall be credited to the applicable jurisdiction's general fund as non-tax revenue.

Other remedies available to the Storm Water Administrator for the correction of violations of the Ordinance include the following:

1. Withholding of Certificate of Occupancy: The Storm Water Administrator or other authorized agent may refuse to issue a certificate of occupancy for the building or other improvements constructed or being constructed on the site and served by the storm water practices in question until the applicant or other responsible person has taken the remedial measures set forth in the notice of violation or has otherwise cured the violations described therein.
2. Disapproval of Subsequent Permits and Development Approvals: As long as a violation of the Ordinance continues and remains uncorrected, the Storm Water Administrator or other authorized agent may withhold, and disapprove, any request for permit or development approval or authorization provided for by the Ordinance or the zoning, subdivision, and/or building regulations, as appropriate for the land on which the violation occurs.
3. Injunctions and Abatements: The Storm Water Administrator, with the written authorization of the County Manager, may institute an action in a court of competent jurisdiction for a mandatory or prohibitory injunction and order of abatement to correct a violation of the Ordinance. Any person violating the Ordinance shall be subject to the full range of equitable remedies provided in the General Statutes or at common law.
4. Correction as Public Health Nuisance and Costs as Lien: If the violation is deemed dangerous or prejudicial to the public health or public safety as provided in North Carolina General Statute 153A-140, the Storm Water Administrator, with the written authorization of the County Manager, may cause the violation to be corrected and the costs to be assessed as a lien against the property.
5. Restoration of Areas Affected by Failure to Comply: By issuance of an order of restoration, the Storm Water Administrator may require a Person who engaged in a land development activity and failed to comply with the Ordinance to restore the waters and land affected by such failure so as to minimize the detrimental effects of the resulting pollution. This authority is in addition to any other civil penalty or injunctive relief authorized under the Ordinance.
6. Criminal Penalties: Violation of the Ordinance may be enforced as a misdemeanor subject to the maximum fine permissible under North Carolina law.

The Ordinance allows for issuance of immediate penalties for the following:

1. Failure to submit a storm water management plan.
2. Performing activities without an approved storm water management plan.
3. Obstructing, hampering or interfering with an authorized representative who is in the process of carrying out official duties.
4. Willful violation of the Ordinance.
5. Failure to install or maintain best management practices per the approved plan.
6. A repeated violation for which a notice was previously given on the same project and to the same responsible person/entity responsible for the violation.

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

When an immediate penalty is to be assessed, a notice of violation with immediate penalty (NOVP) letter shall be issued. The NOVP contains the same information as the NOV except it indicates that a penalty shall be assessed once it has been determined that the site is in compliance. The NOVP shall further indicate that the penalty amount shall be determined based upon aggravating and mitigating circumstances, including the violator's willingness and urgency toward implementing corrective actions. All NOVPs are signed by the Storm Water Administrator.

If a violation is not corrected within a reasonable period of time, as provided in the notification, the Storm Water Administrator may assess penalties or administer other remedies (apply occupancy or permit holds) as necessary to correct and abate the violation and to ensure compliance with the Ordinance. In these situations, a continuing notice of violation (CNOV) shall be issued. The CNOV contains the same information as the NOV except it indicates that the violations are of a continuing nature and a penalty is being considered. Additionally, if a bond, letter of credit or other such security has been posted, then such security may be forfeited at the request of the Storm Water Administrator because of the continuing violation.

A responsible person/entity who receives a NOV or NOVP as described above, or the owner of the land on which the violation occurs, may submit to the Storm Water Administrator a written request for an extension of time for correction of the violation. Such an extension request shall not be considered for a CNOV. On determining that the request includes enough information to show that the violation cannot be corrected within the specified time limit for reasons beyond the control of the responsible person/entity requesting the extension, the Storm Water Administrator may extend the time limit as is reasonably necessary to allow timely correction of the violation, up to, but not exceeding 60 days. The Storm Water Administrator may grant 30-day extensions in addition to the foregoing extension if the violation cannot be corrected within the permitted time due to circumstances beyond the control of the responsible person/entity violating the Ordinance. The Storm Water Administrator may grant an extension only by written notice of extension. The notice of extension shall state the date prior to which correction must be made, after which the violator shall be subject to the penalties described in the notice of violation and correction order.

Once compliance with the Ordinance has been achieved, the Storm Water Administrator shall determine the amount of the civil penalty based on criteria contained in the Penalty Assessment Guide. The Penalty Assessment Worksheet shall be completed and attached to the Penalty Assessment Guide as documentation of the factors taken into consideration in setting the penalty amount. The Storm Water Administrator shall compile a file of penalty information following the Penalty Assessment Checklist. Written notice shall be issued to the violator that compliance has been confirmed and a penalty assessed, including the amount of the penalty and the reason for assessing the penalty. A notice of compliance with penalty or NOCP shall serve as the standard form for providing this notice. This notice shall be served by certified mail or other means authorized under North Carolina General Statute 1A-1, Rule 4 and shall direct the violator to either pay the assessment or file an appeal within 30 days of receipt of the notice.

If a violator does not pay a civil penalty within 30 days after it is due, or does not request a hearing, the Storm Water Administrator shall request the initiation of a civil action to recover the

amount of the assessment. The civil action shall be brought in Mecklenburg County Superior Court or in any other court of competent jurisdiction. A civil action must be filed within three (3) years of the date the assessment was due. An assessment that is appealed is due at the conclusion of the administrative and judicial review of the assessment.

12.4 Process for Appealing a Remedy or Penalty

The issuance of a notice of compliance with penalty (NOCP) shall entitle the responsible party or entity to an appeal before the Charlotte-Mecklenburg Storm Water Advisory Committee (SWAC) if such Person submits written demand for an appeal hearing to the Clerk of SWAC within 30 days of the receipt of such notice. The demand for an appeal shall be accompanied by a filing fee of \$100 as established by SWAC. The appeal of an order of restoration and/or notice of assessment of a civil penalty shall be conducted as described in Section 13.

Section 13.0 Appeals and Variances

13.1 Charlotte-Mecklenburg Storm Water Advisory Committee (SWAC)

In all the jurisdictions except the Towns of Huntersville and Cornelius, the Charlotte-Mecklenburg Storm Water Advisory Committee, hereinafter referred to as SWAC, has been delegated the following powers and duties:

1. **Administrative Review:** To hear and decide appeals according to the procedures set forth in this Section, where it is alleged there is an error in any order, decision, determination, or interpretation made by the Storm Water Administrator in the enforcement of the Ordinance, including assessments of remedies and/or penalties.
2. **Variances:** To grant variances in specific cases from the terms of the Ordinance according to the standards and procedures herein.

In the Towns of Huntersville and Cornelius, the Zoning Board of Adjustment has been delegated these powers and duties and their appeal and variance processes are described in their Zoning Ordinances.

SWAC is established by joint resolutions of the Charlotte City Council, Mecklenburg County Board of Commissioners and the Towns of Cornelius, Davidson, Huntersville, Matthews, Mint Hill and Pineville, together with any amendments thereto. SWAC serves to review and recommend to the City Council and Board of County Commissioners storm water management policies, policy changes, long-range plans, and their budgetary and rate impacts. The recommendations are to conform, in nature, to the successful operation of a single storm water utility in Mecklenburg County and provide consistent guidelines and design principles for the community. In addition, SWAC is authorized by applicable ordinances to hear appeals and variances for the Charlotte-Mecklenburg Soil Erosion and Sedimentation Control Ordinance and the Post-Construction Storm Water Ordinances for the Towns and County (except the Towns of Huntersville and Cornelius). SWAC consists of nine (9) representatives from the following categories:

- Schools, colleges, hospitals, or churches – 1 member (individual to be employed full time by the institution or be a board member or officer of the institution);
- Industry, manufacturing, or commercial – 1 member (individual to be employed full time in the management and/or operation of industrial, manufacturing, or commercial property);
- Environmental organizations – 1 member (individual to be a member of a generally recognized organization involved in environmental issues);
- Financial, accounting, or legal professional – 1 member (individual to be employed full time in providing financial, accounting or legal services);
- Developer or land development design professional – 1 member (individual to be employed full time in land development or the design of buildings or land improvements);
- General contractor – 1 member (individual to be employed full time as a construction contractor); and
- Residential neighborhoods – 3 members (individuals shall not qualify for one of the other categories).

The members serve staggered, three-year terms such that three (3) members are appointed each year. Members are appointed as follows:

- 3 members by the Charlotte City Council;
- 3 members by the Mecklenburg Board of County Commissioners;
- 1 member by the towns in the northern part of Mecklenburg County as determined by the northern towns;
- 1 member by the towns in the southern part of Mecklenburg County as determined by the southern towns;
- 1 member by the eight previously appointed members above.

13.2 Appeal Process

An appeal may be initiated by any aggrieved person affected by any decision, order, requirement, or determination relating to the interpretation or application of the Post-Construction Storm Water Ordinance. A notice of appeal shall be filed with the Storm Water Administrator contesting any order, decision, determination or interpretation within 30 working days of the day of the order, decision, determination or interpretation made or rendered by the Storm Water Administrator in the enforcement of the Ordinance, including assessments of remedies and penalties. SWAC may waive or extend the 30-day deadline only upon determining that the person filing the notice of appeal received no actual or constructive form of notice of the order, decision, determination or interpretation being appealed. The notice filed with the Storm Water Administrator shall be accompanied by a nonrefundable filing fee of \$100 established by SWAC as well as a list of adjoining properties including tax parcel numbers and the name and address of each owner. Failure to timely file such notice and fee shall constitute a waiver of any rights to appeal under the Ordinance. Appendix 13-1 (Form #PCO37) contains the procedures and forms for filing a notice of appeal.

Upon receipt of a notice of appeal, the Storm Water Administrator shall transmit to SWAC copies of all administrative papers, records, and other information regarding the subject matter of the appeal, including a form letter containing the names, addresses, tax parcel numbers, etc. of adjoining property owners. The filing of such notice shall stay any proceedings in furtherance of the contested action, except the Storm Water Administrator may certify in writing to SWAC that because of facts stated in the certificate, a stay imposes an imminent peril to life or property or would seriously interfere with the enforcement of the Ordinance. SWAC shall then review such certificate and may override the stay of further proceedings. SWAC shall, in accordance with the rules adopted by it for such purposes, hold public hearings on any notice of appeal which comes before it. SWAC shall, at least 10 days prior to the hearing, mail written notice of the time, place and subject of the hearing to the person or persons filing the notice, to the owners of the subject property and to the owners of property adjacent to the subject property. The hearing shall be conducted in the nature of a quasi-judicial proceeding with all findings of fact supported by competent, material evidence. Section 13.4 describes the process to be followed in conducting public hearings for appeals.

SWAC bylaws shall determine the number of concurring votes needed to grant an appeal. SWAC shall reverse or modify the order, decision, determination or interpretation under appeal only upon finding an error in the application of the Ordinance on the part of the Storm Water Administrator. In modifying the order, decision, determination or interpretation, SWAC shall have all the powers of the Storm Water Administrator from whom the appeal is taken. If SWAC

finds that a violation of the Ordinance has occurred, but that in setting the amount of the penalty the Storm Water Administrator has not considered or given appropriate weight to either mitigating or aggravating factors, SWAC shall either decrease or increase the per day civil penalty within the range allowed by the Ordinance. Any decision of SWAC that modifies the amount of a civil penalty shall include, as part of the findings of fact and conclusions of law, findings as to which mitigating or aggravating factors exist and the appropriate weight that should have been given to such factors by the Storm Water Administrator in setting the amount of the civil penalty levied against the Petitioner.

13.3 Variance Process

A petition for variance from the requirements of the Ordinance may be initiated by the owner of the affected property, an agent authorized in writing to act on the owner's behalf, or a person having written contractual interest in the affected property. A petition for variance, in the form prescribed by SWAC, shall be filed with the Storm Water Administrator accompanied by a nonrefundable \$100 filing fee established by SWAC as well as a list of adjoining properties including tax parcel numbers and the name and address of each owner. Appendix 13-2 (Form #PCO38) contains the procedures and forms for filing a variance petition.

Upon receipt of a variance petition, the Storm Water Administrator shall transmit to SWAC copies of all information regarding the variance. SWAC shall, in accordance with the rules adopted by it for such purposes, hold public hearings on any variance petition which comes before it. SWAC shall, prior to the hearing, mail written notice of the time, place and subject of the hearing to the person or persons filing the petition, to the owners of the subject property and to the owners of property adjacent to the subject property. The hearing shall be conducted in the nature of a quasi-judicial proceeding with all findings of fact supported by competent, material evidence.

13.4 Appeal and Variance Hearings Before SWAC

13.4.1 Hearing Procedures

The following provisions shall be applicable to any hearing conducted by SWAC:

1. At the hearing, the Petitioner and the staff of Mecklenburg County shall have the right to be present and to be heard, to be represented by counsel, and to present evidence through witnesses and competent testimony relevant to the issue(s) before the Committee.
2. Rules of evidence shall not apply, and the Committee may give probative effect to competent, substantial and material evidence.
3. At least seven (7) days before the hearing, the parties shall exchange a list of witnesses intended to be present at the hearing and a copy of any documentary evidence intended to be presented. The parties shall submit a copy of this information to the Clerk for SWAC. Additional witnesses or documentary evidence may not be presented except upon consent of both parties, or upon a majority vote of the Committee.
4. Witnesses shall testify under oath or affirmation to be administered by the Court Reporter or another duly authorized official.

5. The procedure at the hearing shall be such as to permit and secure a full, fair and orderly hearing and to permit all relevant, competent, substantial and material evidence to be received therein. A full record shall be kept of all evidence taken or offered at such hearing. Both the representative for the County and for the Petitioner shall have the right to cross-examine witnesses.

The order of the hearing is as follows:

1. All parties and witnesses who plan to give testimony concerning the matter on appeal are sworn in.
2. County staff present their case, which includes location of project site, relevant project history and explanation of the action or decision of staff that is being appealed.
3. The Committee may question the staff member(s).
4. Petitioner may question the staff member(s) at this time or wait until his/her case is presented.
5. Petitioner presents his/her case.
6. The Committee may question Petitioner(s).
7. The staff member(s) may question Petitioner or wait until rebuttal time.
8. Witnesses for Petitioner may testify and be subject to questioning from County staff or the Committee.
9. Other interested parties wishing to speak about the matter on appeal shall be given a reasonable time to present sworn testimony.
10. Rebuttal by County staff.
11. Rebuttal by Petitioner.
12. Brief closing statements by County and Petitioner.

It is the expectation of SWAC that hearings shall be heard by the Committee during the next regularly scheduled meeting of SWAC following the filing of a complete application package for a notice of appeal. In the event that a conflict is known at the time the hearing is scheduled, the Clerk has the authority to reschedule the appeal hearing for the next date for which there is no conflict. If a conflict arises between the time of initial scheduling and the hearing date, the appellant must file a written request for continuance with the Clerk, stating the nature of the conflict. The Clerk, in consultation with the Chairman of SWAC, may reschedule the hearing for good cause.

Requests for a continuance on the day of the scheduled hearing must be made to SWAC in person by Petitioner or his agent. A continuance shall be granted only upon a majority vote of the SWAC members present for the meeting. If Petitioner or his/her agent does not appear to make the request, or if the request is denied, the hearing shall proceed in accordance with the notice given by the Clerk.

13.4.2 Appeal Hearings

At the conclusion of the hearing, the Committee shall render its decision regarding the appeal based on the evidence submitted.

1. If, after considering the evidence presented at the hearing, the Committee concludes by a preponderance of the evidence that the grounds for the actions by Storm Water Administrator

(including the amount assessed as a civil penalty) with regard to either disapproving or modifying a proposed Plan, issuing a notice of violation, assessing a civil penalty or ordering restoration are true and substantiated, the Committee shall uphold the action on the part of the Storm Water Administrator.

2. If, after considering the evidence presented at the hearing, the Committee concludes by a preponderance of the evidence that the grounds for the actions by the Storm Water Administrator (including the amount assessed as a civil penalty) are not true and substantiated, the Committee shall, as it sees fit either reverse or modify any order, requirement, decision or determination of Storm Water Administrator. The Committee Bylaws shall determine the number of concurring votes needed to reverse or modify any order, requirement, decision or determination of the Storm Water Administrator. If the Committee finds that the violation has occurred, but that in setting the amount of a penalty the Storm Water Administrator has not considered or given appropriate weight to either mitigating or aggravating factors, the Committee shall either decrease or increase the per day civil penalty within the range allowed by the Ordinance.

Any decision of the Committee which modifies the amount of the civil penalty shall include, as part of the findings of fact and conclusions of law, findings as to which mitigating or aggravating factors exist and the appropriate weight that should have been given to such factors by the Storm Water Administrator in setting the amount of the civil penalty levied against the Petitioner. SWAC may increase a civil penalty if the Committee finds that the violation has occurred, but that in determining the amount of the penalty the Storm Water Administrator has not considered or given appropriate weight to the aggravating factors.

13.4.3 Variance Hearings

Before granting a variance, SWAC shall have made all the following findings:

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

SWAC bylaws shall determine the number of concurring votes needed to grant a request for variance. SWAC may impose reasonable and appropriate conditions and safeguards upon any variance it grants. SWAC shall grant or deny the variance or shall reverse, affirm or modify the order, decision, determination or interpretation under appeal by recording in the minutes of the meeting the reasons that SWAC used, and the findings of fact and conclusions of law made by SWAC to reach its decision. SWAC shall refuse to hear an appeal or variance petition which has been previously denied unless it finds there have been substantial changes in the conditions or circumstances relating to the matter.

Every decision of SWAC shall be subject to Superior Court review by proceedings in the nature of certiorari. Petition for review by the Superior Court shall be filed with the Clerk of Superior Court within thirty (30) days after the later occurring of the following:

1. The decision of SWAC is filed; or
2. A written copy thereof is delivered to every aggrieved party who has filed a written request for such copy with SWAC at the time of its hearing of the case.

Section 14.0 Definitions

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

1. Administrative Manual

A manual developed by the Storm Water Administrator and distributed to the public to provide information for the effective administration of this ordinance, including but not limited to application requirements, submission schedule, fee schedule, maintenance agreements, criteria for mitigation approval, criteria for recordation of documents, inspection report forms, requirements for submittal of bonds, a copy of this ordinance, and where to obtain the Charlotte-Mecklenburg SCM Design Manual.

2. Best Management Practices (BMPs)

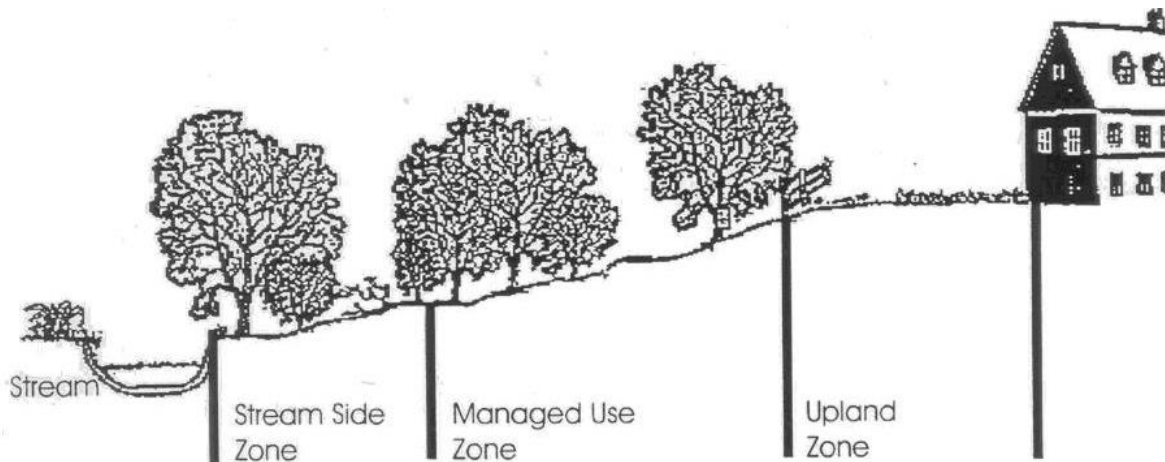
A structural management facility used singularly or in combination for storm water quality and quantity treatment to achieve water quality protection goals.

3. Buffer

A natural or vegetated area through which storm water runoff flows in a diffuse manner so that the runoff does not become channelized and which provides for infiltration of the runoff and filtering of pollutants.

4. Buffer Zones

The amount of disturbance allowed in the buffer differs in each zone.



5. Buffer Widths

Viewed aerially, the stream buffer width is measured horizontally on a line perpendicular to the surface water, landward from the top of the bank on each side of the stream.

6. Built-Upon Area (BUA)

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

7. Certified Professional

For the purposes of the post-construction storm water ordinances, a certified professional includes a person who is a licensed Professional Wetland Scientist or a person who has successfully passed the written and field tests for training in “Intermittent and Perennial Stream Identification For Riparian Buffer Rules” sponsored by the N.C. Division of Water Quality (NCDWQ).

8. Charlotte-Mecklenburg SCM Design Manual

The BMP design manual shall be approved for use in the jurisdiction by the NC Department of Environmental Quality and shall be at least as stringent as the BMP design manual approved for use in Phase II jurisdictions by the Department for the proper implementation of the requirements of the federal Phase II storm water program. All references herein to the Charlotte-Mecklenburg SCM Design Manual are to the latest published edition or revision.

9. Commercial Development

Any development that is not residential development as defined herein.

10. Development

New development created by the addition of built upon area to land void of built upon area as of the effective date of this ordinance.

11. Disturbance

Any use of the land by any person or entity which results in a change in the natural cover or topography of the land.

12. Drainage Area

That area of land that drains to a common point on a project site.

13. Floodplain

The low, periodically flooded lands adjacent to streams. For land use planning purposes, the regulatory floodplain is usually viewed as all lands that would be inundated by the Regulatory Flood.

14. Grass Field

Land on which grasses and other herbaceous plants dominate and trees over six feet in height are sparse or so widely scattered that less than 5% of the land area is covered by a tree canopy.

15. Industrial Uses

Land used for industrial purposes only. Commercial (or other non-industrial) businesses operating on industrially zoned property shall not be considered an industrial use.

16. Larger common plan of development or sale

Any contiguous area where multiple separate and distinct construction or land disturbing activities shall occur under one plan. A plan is any announcement or piece of documentation (including but not limited to public notice or hearing, drawing, permit application, zoning request, or site design) or physical demarcation (including but not limited to boundary signs, lot stakes, or surveyor markings) indicating that construction activities may occur on a specific plot.

17. Low Impact Development (LID)

The integration of site ecology and environmental goals and requirements into all phases of urban planning and design from the individual residential lot level to the entire watershed.

18. Mitigation

Actions taken either on-site or off-site as allowed by this ordinance to offset the impacts of a certain action.

19. Multifamily

A group of two or more attached, duplex, triplex, quadruplex, or multi-family buildings, or a single building of more than 12 units constructed on the same lot or parcel of land under single ownership, and planned and developed with a unified design of buildings and coordinated common open space and service areas in accordance with the requirements of Chapter 9 (of the Zoning Ordinance) for the zoning district in which it is located.

20. Non-Point Source (NPS) Pollution

Forms of pollution caused by sediment, nutrients, organic and toxic substances originating from land use activities and carried to lakes and streams by surface runoff.

21. Open Space

Land that consists of natural areas containing trees and other natural shrubs consisting of either undisturbed areas or disturbed areas that have been replanted in accordance with the criteria established in this ordinance.

22. Owner

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

23. Person(s)

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.

24. Redevelopment (This definition was amended from the ordinance definition for clarification)

Redevelopment is considered to be rebuilding activity on a parcel of land which, as of the effective date of the Ordinance, was described by metes and bounds in a recorded deed and which contained built upon area. Building activity on a parcel of land that has new metes and bounds established following the adoption of the Ordinance cannot be considered redevelopment. All building activity that does not satisfy the above definition for “redevelopment” is considered “development” for the purpose of this Ordinance.

25. Residential Development

A development containing dwelling units with open yards on at least two sides where land is sold with each dwelling unit.

26. Storm Water Administrator

The position (such as “Water Quality Program Manager”) that has been designated by the jurisdiction to administer and enforce the Post-Construction Storm Water Ordinance.

27. Storm Water Advisory Committee (SWAC)

The Charlotte-Mecklenburg Storm Water Advisory Committee as established by joint resolutions of the Charlotte City Council, Mecklenburg County Board of Commissioners and the Towns of Cornelius, Davidson, Huntersville, Matthews, Mint Hill and Pineville, together with any amendments thereto.

28. Storm Water Management Permit

A permit required for all development and redevelopment unless exempt pursuant to this ordinance, which demonstrates compliance with this ordinance.

29. Top Of Bank

The landward edge of the stream channel during high water or bankfull conditions at the point where the water begins to overflow onto the floodplain.

30. Topsoil

Natural, fertile soil capable of sustaining vigorous plant growth that is of uniform composition throughout with an admixture of subsoil, has an acidity range of pH 5.5 - 7.0.

31. Total Phosphorus (TP)

A nutrient that is essential to the growth of organisms but when it occurs in high enough concentrations it can negatively impact water quality conditions. Total phosphorus includes both dissolved and suspended forms of reactive phosphorus, acid hydrolyzable phosphorus and organic phosphorus as measured by Standard Method 4500-P.

32. Total Suspended Solids (TSS)

Total suspended matter in water which includes particles collected on a filter with a pore size of 2 microns as measured by Standard Method 2540-D, which is commonly expressed as a concentration in terms of milligrams per liter (mg/l) or parts per million (ppm).